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Matters for consideration or action by the Conference of the Parties: mercury and the Kunming-Montreal Global Biodiversity Framework

Contribution of the Minamata Convention to the Kunming-Montreal Global Biodiversity Framework

Note by the secretariat

I. Introduction

1. In its decision MC-4/12, the Conference of the Parties to the Minamata Convention on Mercury took note of the study entitled "Interlinkages between the chemicals and waste multilateral environmental agreements and biodiversity"[1] while emphasizing that the implementation of the Convention contributed to the achievement of the Sustainable Development Goals and to addressing the triple planetary crisis of pollution, biodiversity loss and climate change.

2. In the same decision, the Conference of the Parties requested the secretariat to continue gathering knowledge about, raising awareness of and demonstrating the contribution of the implementation of the Minamata Convention to other relevant international regulations and policies, including those related to biodiversity, and to prepare a report on how the Convention could contribute to the post-2020 global biodiversity framework, once adopted, for consideration by the Conference of the Parties at its fifth meeting.

3. Accordingly, the present note summarizes the efforts made by the secretariat in response to those requests. Section II presents a brief overview of the Kunming-Montreal Global Biodiversity Framework. Section III provides a summary of key messages from a report prepared by the secretariat on how the Convention and the Kunming-Montreal Global Biodiversity Framework can be implemented in a mutually supportive manner.[2] Section IV and annex I put forward proposed action for consideration by the Conference of the Parties. Annex II contains examples of opportunities to generate co-benefits from the implementation of the Minamata Convention on Mercury and the Kunming-Montreal Global Biodiversity Framework.

II. Kunming-Montreal Global Biodiversity Framework

4. The Kunming-Montreal Global Biodiversity Framework was adopted by the Conference of the Parties to the Convention on Biological Diversity at its fifteenth meeting, in December 2022, in

* UNEP/MC/COP.5/1.

[1] UNEP/MC/COP.4/INF/13.

[2] The full report is available in document UNEP/MC/COP.5/INF/27.

decision 15/4. It sets out an ambitious pathway to reach the global vision of a world living in harmony with nature where "by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people".

5. The Global Biodiversity Framework seeks to respond to the *Global Assessment Report of Biodiversity and Ecosystem Services* issued by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the fifth edition of the *Global Biodiversity Outlook* issued by the secretariat of the Convention on Biological Diversity, among other publications, which provided ample evidence that, despite ongoing efforts, biodiversity is deteriorating worldwide at rates unprecedented in human history. The IPBES report identifies pollution, including that caused by mercury and other heavy metals, as one of the five main drivers of biodiversity loss, along with changes in land and sea use, direct exploitation of organisms, climate change and invasion of alien species. The *Global Biodiversity Outlook* notes that mercury and many of its compounds are toxic and can have a range of impacts on species, ecosystems and human health.

6. The implementation of the Global Biodiversity Framework will be guided by 23 action-oriented global targets for urgent action by 2030 and four outcome-oriented goals for 2050. Targets 1 to 8 are focused on reducing threats to biodiversity, targets 7 to 13 are focused on meeting people's needs through sustainable use and benefit-sharing and targets 14 to 23 are focused on tools and solutions for implementation and mainstreaming.

7. The Global Biodiversity Framework will be further supported through a comprehensive package of associated decisions adopted by the Conference of the Parties to the Convention on Biological Diversity at its fifteenth meeting. The package includes decisions on the monitoring framework for the Global Biodiversity Framework; planning, monitoring, reporting and review; resource mobilization; capacity-building and development and technical and scientific cooperation; and cooperation with other conventions and international organizations. An overview of the provisions of the decisions that are relevant to the Minamata Convention is provided in the following subsections.

A. Monitoring framework

8. A detailed monitoring framework, adopted in decision 15/5, will provide the tools to measure how progress is being made in terms of achieving the goals and targets of the Kunming-Montreal Global Biodiversity Framework. The monitoring framework includes headline indicators recommended for national, regional and global monitoring, and more detailed optional component and complementary indicators. An ad hoc technical expert group was established in the same decision to provide guidance on the further development and operationalization of the indicators for the monitoring framework.

B. Mechanisms for planning, monitoring, reporting and review

9. At the national level, national biodiversity strategies and action plans are expected to be a key component of the enhanced planning, monitoring, reporting and review mechanism for the Kunming-Montreal Global Biodiversity Framework. Guidance for revising or updating national biodiversity strategies and action plans to align with the Global Biodiversity Framework is provided in annex I to decision 15/6.

C. Resource mobilization

10. Information on the financial resources needed for implementation of the Global Biodiversity Framework was adopted in decision 15/7. The decision, among other things, recognized the urgency of increasing international biodiversity finance and requested the Global Environment Facility to establish, in 2023, a special trust fund to support the implementation of the Kunming-Montreal Global Biodiversity Framework, to complement existing support and scale up financing to ensure its timely implementation.[3]

11. In response to the decision, the Global Environment Facility Council, at its sixty-fourth meeting, held in Brasilia from 26 to 29 June 2023, established the Global Biodiversity Framework

[3] The programming directions of the eighth replenishment of the Global Environment Facility trust fund (for the period 2022–2026), which was already in place at the time when the Kunming-Montreal Global Biodiversity Framework was adopted, provides financial support to countries through focal areas on biodiversity, climate change and international waters, as well as through 11 integrated programmes that address multiple environmental threats at once.

Fund. The Council also approved the programming directions for the fund, setting forth the principles by which fund resources will be allocated. To achieve strategic complementarity, the programming directions will focus on eight thematic action areas. Specifically on chemicals, the action areas will provide complementarity and scaling-up support to address and reduce pollution risks to levels that are not harmful to biodiversity and ecosystem functions and services, including support for national policy development. That and other fund action areas may provide countries with opportunities to enhance the contribution of the Minamata Convention to the Global Biodiversity Framework, and vice versa.

D. Cooperation

12. In its decision 15/13, on cooperation with other conventions and international organizations, the Conference of the Parties to the Convention of Biological Diversity welcomed the contributions of other biodiversity-related conventions, multilateral agreements and international organizations and processes to enhancing synergies in the implementation of the Kunming-Montreal Global Biodiversity Framework and encouraged the strengthening of cooperation and synergies among relevant conventions and multilateral agreements.

13. The decision invited the governing bodies of relevant multilateral environmental agreements, among others, to formally endorse the Global Biodiversity Framework through their own governance processes, as appropriate, in order to support its operationalization and contribute to the transparency and monitoring of progress in its implementation, and to contribute to the implementation and monitoring of the Global Biodiversity Framework, in particular by further strengthening cooperation at the global level within their respective mandates and enhancing synergies among themselves, to encourage mutually supportive decisions, to coordinate their own strategies with the Global Biodiversity Framework and to propose key issues for thematic discussions facilitated by the Liaison Group of Biodiversity-related Conventions, taking into account, where appropriate, the conclusions of the Bern II workshop.[4]

III. Opportunities for enhancing mutually supportive implementation

14. Pursuant to paragraph 7 of decision MC-4/12, the secretariat engaged a consultant to prepare a report, including recommendations, on how Minamata Convention and the Kunming-Montreal Global Biodiversity Framework can contribute to and benefit from each other in a mutually supportive manner. The full report is set out in document UNEP/MC/COP.5/INF/27.

15. The report looks at past and present experiences of parties to the Convention on Biological Diversity in integrating mercury-related control measures into their national biodiversity strategy and action plans[5] and national reports,[6] as well as how parties to the Minamata Convention have included biodiversity-relevant measures in their national action plans for artisanal and small-scale gold mining under article 7 of the Convention, initial assessments under article 20 and national reports under article 21. The report also includes a review of scientific literature on the interlinkages between mercury and biodiversity.

16. The report showed that 20 per cent of parties to the Convention on Biological Diversity had provided information related to mercury in their sixth national reports and 16 per cent had done so in their national biodiversity strategies and action plans.[7] Most of the information provided in those documents focused on the impacts of mercury from gold mining, mostly artisanal and small-scale, on biodiversity and ecosystems, including freshwater, oceans, coastal areas, soil, air, forests and marshes. Other information provided related to monitoring of mercury in animals and the environment, the use of mercury-related indicators, contamination of the food chain and creation of protected areas or forested “buffer zones” around lakes and watersheds to reduce the amount of mercury being released into waterbodies, among other topics.

17. The report also found that mercury-related risks and impacts for biodiversity and ecosystem services were mentioned in 68 per cent of the national action plans for artisanal and small-scale gold mining. The impacts mentioned included deforestation caused by clearing of vegetated areas and erosion, deterioration of watercourses and aquatic life, land degradation, wildlife decline and undermining of conservation efforts, primarily as a result of artisanal and small-scale gold mining and

[4] CBD/SBI/3/10.

[5] Available at https://www.cbd.int/nbsap/.

[6] Available at https://www.cbd.int/reports/.

[7] These figures do not include national reports and national biodiversity strategies and action plans that merely mentioned that the ratification of the Minamata Convention, as the focus of the analysis was on substantive rather than procedural aspects of implementation.

mercury emissions and releases. In regard to national reports under article 21 of the Convention, the term "biodiversity" is rarely used but various components of biodiversity are addressed, in particular species in connection with monitoring activities in the context of article 19.

18. The analysis of information reported by the respective parties to the Minamata Convention and Convention on Biological Diversity could be useful in identifying best practices or promising approaches that could be scaled up to contribute to biodiversity efforts, reduce mercury pollution and generate co-benefits across the agendas of the two conventions. For example, a socioeconomic cost-benefit analysis of artisanal and small-scale gold mining using mercury conducted as part of one party's Minamata Initial Assessment can be a useful tool for scaling up co-benefits.

A. Entry points for generating co-benefits

19. Next, the report analysed each target of the Kunming-Montreal Global Biodiversity Framework to identify opportunities for contribution through the implementation of the Minamata Convention. The report showed that nearly all the targets provide important entry points for the Minamata Convention to contribute to the Framework's goals. Unsurprisingly, many of the targets also provide opportunities for the implementation of the Kunming-Montreal Global Biodiversity Framework to contribute to the objective of the Minamata Convention.

20. Among the targets aimed at reducing threats to biodiversity (targets 1–8), target 7 is focused on pollution from all sources. Its aim of reducing the overall risk posed by highly hazardous chemicals by at least half provides a straightforward entry point for contribution by and to the Minamata Convention. Target 2 focuses on restoration of degraded ecosystems, including terrestrial, inland water and marine and coastal ecosystems, which represents another opportunity for contribution by and to the implementation of the Minamata Convention, as restoration can result in lower mercury mobility and toxicity.

21. Opportunities to generate co-benefits across biodiversity and mercury action were also identified among the targets focused on meeting people's needs through sustainable use and benefit-sharing (targets 7–13) and on tools and solutions for implementation and mainstreaming (targets 14–23). Examples of targets with potential for contribution by and to the Minamata Convention include target 11, on actions related to maintaining air and water quality; target 14, on the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, strategic environmental assessments, environmental impact assessments within and across all levels of government and across all sectors; target 18, on actions to progressively phase out or reform incentives that harm biodiversity; and target 22, on ensuring the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making and access to justice and information related to biodiversity by Indigenous Peoples and local communities.

22. Furthermore, the report identifies possible indicators for monitoring the contribution of the Minamata Convention to the Global Biodiversity Framework and vice-versa. The report notes that the work being undertaken by the Open-ended Scientific Group[8] to support the effectiveness evaluation, as well as other ongoing initiatives, such as national reporting under article 21, will generate information that could contribute to monitoring progress against the targets of the Global Biodiversity Framework. Because the processes through which the information will be generated are already established, collecting the information would not be expected to impose an additional burden on parties.

23. An overview of the possible entry points for harnessing the mutual contribution and co-benefits arising from the implementation of the Minamata Convention and the Global Biodiversity Framework, along with possible indicators for monitoring that contribution, is provided in annex II to the present note.

B. Knowledge gaps and barriers to generating co-benefits

24. With regard to monitoring to measure progress towards the targets of the Kunming-Montreal Global Biodiversity Framework, the report notes that it is essential for the metrics chosen to be flexible and comprehensive, in order to encompass the full range of actions that can contribute meaningfully to each target. In that regard, the report also notes that although target 7 concerns pollution from all sources, including highly hazardous chemicals, the "headline indicators" (highest indicator level) for monitoring target 7, as adopted by the Conference of the Parties to the Convention on Biological Diversity, only focus on pollution caused by nitrogen and pesticides, while the

[8] Established in decision MC-4/11 to support the first effectiveness evaluation of the Convention.

"component indicators" and "complementary indicators" (optional medium and lower indicator levels, respectively) are only marginally relevant to mercury pollution.

25. Furthermore, the report identified gaps in knowledge, financial resources and capacity of parties in relation to assessing the impacts of mercury on biodiversity and ecosystem functions and services; promoting integration of mercury- and biodiversity-related priorities to support the development and implementation of coherent policies across sectors; preventing artisanal and small-scale gold mining and the use of mercury in areas where the activity is illegal under national legislation; and monitoring mercury levels and impact in vulnerable populations, including Indigenous Peoples and local communities, as well as in threatened species likely to be exposed to high levels of mercury through their diet.

C. Conclusions and recommendations

26. Through their implementation, the Minamata Convention and the Kunming-Montreal Global Biodiversity Framework have the potential to be mutually supportive and generate co-benefits. Most of the targets of the Global Biodiversity Framework provide entry points for the implementation of the Minamata Convention to contribute to the Framework and, conversely, many actions expected during the implementation of the Global Biodiversity Framework can contribute to the objective of the Minamata Convention.

27. In order to support integration and coherence between mercury and biodiversity action at the subnational, national and international levels, the report recommends the development of an action plan or road map under the Minamata Convention that outlines and prioritizes impact-driven actions that support the objective of the Minamata Convention and the goals and targets of the Global Biodiversity Framework. The road map could focus and build on existing and planned actions to reduce the risk of mercury use in artisanal and small-scale gold mining and its impact on biodiversity and ecosystem services; mainstream biodiversity and mercury control measures into coherent policy development and implementation; improve research on the impact of mercury on biodiversity and ecosystem services; monitor the impact of mercury on biodiversity and health by utilizing and adapting existing monitoring programmes; restore degraded land and water bodies; and implement sound waste management.

28. Additional indicators for monitoring progress in achieving target 7 and other targets would be needed to enable parties, other governments and relevant stakeholders who wish to do so to fully capture the contribution by and to the Minamata Convention. To that end, the report identified possible indicators for demonstrating the contribution of mercury control measures. The report recommends that the ad hoc technical expert group mandated by the Conference of the Parties to the Convention on Biological Diversity to revise the indicators for monitoring the Kunming-Montreal Global Biodiversity Framework consider adding one or more indicators related to the amount of highly hazardous chemicals entering the environment (as a headline indicator) and the amount of mercury entering the environment from anthropogenic sources and mercury levels in people and animals (as optional component indicators).

29. The report recommends that the Global Environment Facility play an important role in maximizing synergies across biodiversity and mercury control at the national level by promoting integrated and innovative solutions, including for reducing or eliminating the use of mercury in artisanal and small-scale gold mining in areas of high biodiversity value, as well as piloting solutions to reduce the amount of mercury entering waterbodies and utilizing the knowledge of Indigenous Peoples and local communities in efforts to monitor mercury in the environment.

30. Furthermore, the report recommends that the secretariat cooperate with other biodiversity-related multilateral environmental agreements and intergovernmental organizations and support the thematic discussions facilitated by the Liaison Group of Biodiversity-related Conventions, including those facilitated by the Bern process[9] and other relevant processes.

IV. Suggested action by the Conference of the Parties

31. The Conference of the Parties may wish to take note of the information provided in the present note and adopt a decision along the lines of the draft decision set out in annex I.

[9] Refers to the consultation workshops of biodiversity-related conventions on the post-2020 global biodiversity framework held in Bern in June 2019 (Bern I) and in January–February 2021 (Bern II).

Annex I

Draft decision MC-5/[--]: Mercury and the Kunming-Montreal Global Biodiversity Framework

The Conference of the Parties,

Reaffirming the objective of the Minamata Convention on Mercury to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds,

Recognizing that mercury pollution impacts ecosystems as a direct driver and underlying cause of global loss of biodiversity, and that parties, through the implementation of the Minamata Convention, can significantly contribute to global efforts to conserve and sustainably use biodiversity,

Recognizing also the opportunities for the implementation of the Minamata Convention and that of the Kunming-Montreal Global Biodiversity Framework to be mutually supportive and to contribute to the achievement of the objective of the Convention and the goals and vision of the Framework,

Recognizing further the value of working across sectors and scales to generate co-benefits for the Minamata Convention and broader environmental goals,

1. *Welcomes* the adoption of the Kunming-Montreal Global Biodiversity Framework by the Conference of the Parties to the Convention on Biological Diversity, in its decision 15/4;

2. *Takes note* of the report prepared by the secretariat on how the Minamata Convention and the Kunming-Montreal Global Biodiversity Framework can be implemented in a mutually supportive manner[1] and welcomes the efforts undertaken by the secretariat to give effect to paragraphs 6 and 7 of decision MC-4/12;

3. *Encourages* parties, through their operational focal points of the Global Environment Facility, to integrate mercury action into projects developed under the biodiversity focal area and integrated programmes of the eighth replenishment of the Global Environment Facility trust fund, as well as through the new Global Biodiversity Framework Fund;

4. *Also encourages* parties and invites other Governments and local and subnational governments, as well as relevant organizations and stakeholders, as appropriate, to:

(a) Promote research on the impacts of mercury on biodiversity and ecosystem functions and services;

(b) Reflect national mercury reduction and control targets in their revised or updated national biodiversity strategies and action plans to align with the Kunming-Montreal Global Biodiversity Framework;

(c) Share the experience gained to promote coordination and integration of biodiversity- and mercury-related priorities through policy development and implementation, including lessons learned and challenges faced;

(d) Disseminate information on actions that can generate co-benefits for the Minamata Convention and the Kunming-Montreal Global Biodiversity Framework;

5. *Notes* the absence in the monitoring framework for the Kunming-Montreal Global Biodiversity Framework of indicators against which progress towards reducing the overall risk from highly hazardous chemicals could be measured and invites the Ad Hoc Technical Expert Group on Indicators for the Kunming-Montreal Global Biodiversity Framework to include, under target 7, a headline indicator related to highly hazardous chemicals and a component indicator related to mercury;

6. *Requests* the secretariat to continue supporting the relevant processes to improve coherence among multilateral environmental agreements, including the Liaison Group of Biodiversity-related Conventions;

[1] UNEP/MC/COP.5/INF/27.

7. *Also requests* the secretariat, subject to the availability of resources, to support parties and other stakeholders in sharing their experience, as per paragraph 4 above, and to compile and synthesize the information gathered and prepare a draft road map, including possible actions and indicators, to support parties in demonstrating and maximizing the co-benefits arising from the implementation of the Minamata Convention and the Kunming-Montreal Global Biodiversity Framework, for consideration by the Conference of the Parties at its sixth meeting.

Annex II

Emerging opportunities for generating co-benefits from the implementation of the Minamata Convention on Mercury and the Kunming-Montreal Global Biodiversity Framework

Mapping the interlinkages between the Kunming-Montreal Global Biodiversity Framework and the implementation of the Minamata Convention[1]

Targets of the Kunming-Montreal Global Biodiversity Framework (in numerical order)	*Relevance of and to the implementation of the Minamata Convention*	*Actions that could generate co-benefits for the Minamata Convention and the Kunming-Montreal Global Biodiversity Framework*	*Relevant articles/sections of the Minamata Convention*	*Indicative possible joint indicators*
Target 1. Ensure that all areas are under participatory, integrated and biodiversity-inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of Indigenous Peoples and local communities.	• Mercury emissions and releases to air, land and water can have a direct impact on vulnerable ecosystems, including areas of high biodiversity importance, as well as ecosystems of high ecological integrity. • Integrated biodiversity-inclusive spatial planning can be an entry point for mainstreaming efforts to protect human health and the environment from the adverse effects of mercury into broader environmental conservation policies. • Working together with Indigenous Peoples and local communities to effectively manage areas of high biodiversity importance will generate co-benefits across the Minamata Convention and the Framework.	• Identify areas of high-biodiversity value that also act as sources of methylmercury production and export as priorities for integrated and biodiversity-inclusive spatial planning. • Focus efforts on controlling emissions and releases from sources of mercury that pose risks to areas of high biodiversity importance. One approach could involve creating “buffer areas” that are more closely monitored. • Cooperate with Indigenous Peoples and local communities to effectively prevent, control and avoid adverse effects of mercury in areas of high biodiversity importance. • Integrate mercury control measures into national biodiversity strategies and action plans that are revised and updated and aligned with the Framework’s goals and targets, in accordance with decision 15/6. • Integrate biodiversity-positive action into the development and implementation of national action	• Article 7, paragraph 2, which requires parties with artisanal and small-scale gold mining and processing to take steps to reduce, and where feasible eliminate, the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from, such mining and processing • Annex C, which identifies measures that can help reduce or eliminate mercury use in ASGM, such as the regulation and formalization of the sector • Articles 8 and 9, which require parties to control and, where feasible, reduce emissions and releases of mercury and mercury compounds	• Number of areas identified that favour conversion to methylmercury • Number of zoning regulations and land use planning that take into account potential effects of mercury emissions on biodiversity • Number of measures implemented to control emissions and releases of mercury in areas of high biodiversity importance • Number of partnerships established with Indigenous Peoples and local communities • Number of revised national biodiversity strategies and action plans that integrate mercury control measures • Number of national action plans on ASGM that include and implement biodiversity-positive action

[1] This table provides an overview of interlinkages between the targets of the Kunming-Montreal Global Biodiversity Framework and the implementation of the Minamata Convention. There may be other relevant interlinkages that are not included in the table. Relevant interlinkages were not identified for targets 13 and 17 concerning, respectively, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization and the Cartagena Protocol on Biosafety.

Targets of the Kunming-Montreal Global Biodiversity Framework (in numerical order)	*Relevance of and to the implementation of the Minamata Convention*	*Actions that could generate co-benefits for the Minamata Convention and the Kunming-Montreal Global Biodiversity Framework*	*Relevant articles/sections of the Minamata Convention*	*Indicative possible joint indicators*
		plans on artisanal and small-scale gold mining (ASGM) in accordance with article 7 and Annex C.		
Target 2. Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under **effective restoration**, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.	• Mercury pollution affects a number of ecosystem functions and services, as well as ecological integrity. • New technological developments in the field of remediation of mercury-contaminated sites and measures to reduce use, emissions and releases can contribute to the restoration of degraded ecosystems, while reducing emissions and releases will minimize the need for future restoration. • Similarly, the restoration of degraded ecosystems will help reduce the amount of mercury that (re)circulates through air, land, water and animals. • Wetlands, for example, provide numerous ecosystem services and, under certain conditions, are also important sources of methylmercury production and export, which can have implications for ecosystem health.	• Implement mercury control measures, including but not limited to those under article 12, and demonstrate the benefits of restoration of mercury-contaminated sites for biodiversity and ecosystem functions and services, as well as how achievements under target 2 of the Framework can contribute to the objective of the Minamata Convention. • Identify suitable and cost-effective methods for scaling up restoration of contaminated sites (e.g., through phytoremediation that uses natural processes and the abilities of plants to absorb and remove contaminants). • Reduce stress on reproductive success caused by mercury exposure in relevant species (e.g., by creating mercury-free nesting areas for threatened turtles). • Ensure that priority mercury-contaminated ecosystems, such those that act as sources of methylmercury and are of high biodiversity importance (e.g., wetlands), are identified and restored. • Train and create incentives for ASGM miners to rehabilitate abandoned mining sites.	• Article 12, paragraph 1, which requires parties to endeavour to develop appropriate strategies for identifying and assessing sites contaminated by mercury • Article 12, paragraph 2, which adds that any actions to reduce the risks posed by such sites shall be performed in an environmentally sound manner	• Number of activities and measures to restore mercury-contaminated sites, including examples of co-benefits for mercury- and biodiversity-positive action through the implementation of article 12.2 of the Minamata Convention and target 2 of the Framework • Number of studies demonstrating the feasibility of new technologies for remediation of mercury-contaminated sites (e.g., through the use of native plants for phytoremediation) • Number of training opportunities and incentives provided to ASGM miners for rehabilitation of abandoned mining sites • Number and area of mercury contaminated sites restored or rehabilitated

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Target 3. Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially **areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed** through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, **recognizing Indigenous and traditional territories**, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, **recognizing and respecting the rights of Indigenous Peoples and local communities, including over their traditional territories**.	• When healthy, ecosystems such as forests and peatlands capture high amounts of particulate and gaseous mercury from the atmosphere. Effective ecosystem conservation and management contributes to sequestering mercury, thus reducing mercury re-emission and atmospheric cycling. • ASGM activities often take place in areas of particular importance for biodiversity and ecosystem functions and services, and pose a threat to endangered species due to deforestation, land degradation, mine tailings and other negative impacts of ASGM. At the same time, ASGM is the only or main source of income for millions of people, including Indigenous Peoples and local communities. • Coherent implementation of the Minamata Convention and the Framework in support of the Sustainable Development Goals, particularly in areas of importance for biodiversity and ecosystem functions and services, while recognizing and respecting the rights of Indigenous Peoples and local communities, can help minimize harm to both people and nature.	• Assess the extent of ASGM activities in which mercury is used and combine phasing out of mercury use in ASGM with activities that enhance the conservation and sustainable use of areas of particular importance for biodiversity and ecosystem functions and services. • Mainstream mercury control measures into conservation policies to improve the sound management of the ASGM sector. • Use airborne and satellite monitoring techniques to assess the extent of ASGM activities, including associated deforestation. • Conduct biodiversity risk assessments to determine which areas and species are most at risk from mercury pollution. • Uphold the right of vulnerable populations, including Indigenous Peoples and local communities, to an environment free of pollution and enforce legislation to prevent and combat ASGM activities taking place on Indigenous territories without the consent of the affected Indigenous communities.	• Article 7, paragraph 2, which requires parties that have artisanal and small-scale mining and processing using mercury to take steps to reduce, and where feasible eliminate, the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from, such mining and processing	• Extent of protected areas in the ASGM belt that are effectively managed through coherent implementation of the Minamata Convention and the Framework • Number of countries with legislation enacted to protect Indigenous and traditional territories that are at risk from external ASGM activities • Number of hectares of Indigenous and traditional territories that are regularly monitored for the presence of mercury above thresholds that are deemed safe
Target 4. Ensure urgent management actions to **halt human-induced extinction of known threatened species and for the recovery and conservation of species**, in	• Mercury pollution impacts wildlife across various taxa, including amphibia, reptiles, fish, birds and mammals. Although the extent to which mercury contributes to the extinction of species is unknown, it	• Increase monitoring of species impacted by mercury to inform the development of possible management action to mitigate the effects of mercury.	• Article 19, which contains several provisions relevant to target 4, including paragraph 1 (b), which refers to modelling and geographically representative monitoring of levels of mercury in	• Number of management actions taken to mitigate the negative impact of mercury on wildlife, in particular threatened species

Targets of the Kunming-Montreal Global Biodiversity Framework (in numerical order)	*Relevance of and to the implementation of the Minamata Convention*	*Actions that could generate co-benefits for the Minamata Convention and the Kunming-Montreal Global Biodiversity Framework*	*Relevant articles/sections of the Minamata Convention*	*Indicative possible joint indicators*
particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.	is clear that its physiological, behavioural and reproductive effects impact some populations and may put additional pressure on species already under threat from other stressors, such as polar bears, some whales and other top predators. • Control measures applied throughout the life cycle of mercury can help reduce the pressure on threatened species impacted by exposure to high levels of mercury. For example, mercury reduces the hatching success of turtles, but its impact can be alleviated through the creation of turtle nesting grounds.	• Support coherent national- and subnational-level implementation of the Minamata Convention and other relevant multilateral environmental agreements, as appropriate, such as: (a) The Convention on Biological Diversity, on relevant programmatic areas and in the monitoring of the Framework's targets; (b) The International Convention for the Regulation of Whaling, on the monitoring of mercury levels in cetacean species; (c) The Convention on the Conservation of Migratory Species of Wild Animals, on the impact of mercury on migratory species and on how animal migration contributes to the global transport of mercury; (d) The Convention on Wetlands of International Importance especially as Waterfowl Habitat, to map wetlands of international importance that are at increased risk of mercury pollution.	vulnerable populations and in environmental media, including biotic media such as fish, marine mammals, sea turtles and birds • Additional relevant provisions in article 14, on capacity-building, technical assistance and technology transfer; article 17, on information exchange; and article 18, on public information, awareness and education	• Number of initiatives at the national and subnational levels that support and demonstrate coherent implementation of relevant multilateral environmental agreements
Target 5. Ensure that the **use, harvesting and trade of wild species is sustainable, safe and legal**, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by	• Mercury threatens the ability of people, including many Indigenous Peoples and local communities, to safely harvest wild species, including fish and other aquatic animals, due to increased risk of mercury exposure through traditional food. The proximity of Indigenous Peoples and local communities to contaminated sites, mercury-containing waste and	• Support efforts to assess mercury exposure pathways and the impact on vulnerable populations, including Indigenous Peoples and local communities, that rely on the sustainable use, harvesting and trade of wild species to support decision-making that better protects their health and livelihoods. • Raise awareness among vulnerable populations of the risk of mercury	• The Minamata Convention as a whole, which is aimed at protecting human health and the environment from mercury of anthropogenic origin • Article 16, which addresses various aspects of human health, including by encouraging parties to promote the development and implementation of strategies and programmes to identify and protect	• Level of awareness among Indigenous communities of the impacts of mercury • Number of policies and regulations on the interconnections between people, animals and their shared environment that include mercury control measures

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Indigenous Peoples and local communities.	ASGM activities further increases their vulnerability to mercury in the food chain.	toxicity from the consumption of certain wild species. • Integrate mercury control measures into approaches aimed at achieving optimal health outcomes, recognizing the interconnection between people, animals and their shared environment (e.g., the One Health approach). • Conduct socioeconomic studies to assess the impact of mercury pollution (e.g., for communities that rely on artisanal fisheries for their livelihoods).	populations at risk, particularly vulnerable populations, as well as educational and preventive programmes on occupational exposure • Article 19, paragraph 1 ©, which states that parties shall endeavour to cooperate to develop and improve assessments of the impact of mercury and mercury compounds on human health and the environment, in addition to social, economic and cultural impacts, particularly in respect of vulnerable populations	• Number of studies on the socioeconomic impacts of mercury
Target 6. Eliminate, minimize, reduce and/or mitigate the **impacts of invasive alien species on biodiversity and ecosystem services** by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and **eradicating or controlling invasive alien species, especially in priority sites, such as islands**.	• Some invasive fish and other aquatic species are known to accumulate more mercury than native species. This can significantly increase the risk of exposure to mercury by people who eat large amounts of fish and other aquatic species, such as many people living on islands. • Efforts to control or eradicate invasive alien species often include the consumption of such species by humans or farmed animals. This type of action is not advisable for invasive alien species that accumulate high levels of mercury. • Invasive aquatic species, such as mussels, can force native species to change their feeding habits, alter food web composition and influence the health and survival of native species. This can potentially put more pressure on species, in particular those at high trophic	• Monitor the level of mercury in fish and other invasive species that may lead to increased mercury exposure in humans, especially before any eradication and control efforts that promote consumption of invasive species by humans or farmed animals are put in place. • Promote and support research on the impacts of invasive alien species on methylmercury production and food webs.	• Article 19, paragraph 1 (b), which refers to modelling and geographically representative monitoring of levels of mercury and mercury compounds in vulnerable populations and in environmental media, including biotic media such as fish, marine mammals, sea turtles and birds, as well as collaboration in the collection and exchange of relevant and appropriate samples	• Number of studies on the impacts of invasive alien species on mercury methylation and accumulation in food webs • Number of monitoring programmes that include segregated data on the levels of mercury in invasive species

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	levels already threatened by other drivers of biodiversity loss. • Invasive species may alter hydrology, biogeochemistry and microbial processes that control site-specific methylmercury production, facilitating subsequent bioaccumulation.			
Target 7. Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a) by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by **reducing the overall risk from pesticides and highly hazardous chemicals by at least half**, including through integrated pest management, based on science, taking into account food security and livelihoods; (c) by preventing, reducing and working towards eliminating plastic pollution.	• Mercury has serious and wide-ranging negative impacts on biodiversity and ecosystem services, including physiological and behavioural changes that can lead to reduced survival and reproductive success. Mercury also affects a number of ecosystem functions and services, such as the provision of food, clean water, air and enjoyment of nature. • Most countries have banned the production and use of mercury-containing pesticides, which is an example of how mercury control measures can generate global co-benefits for people and nature. • Mercury enters the environment from various anthropogenic sources and processes, such as coal burning and industrial and artisanal and small-scale gold mining. The Minamata Convention addresses the full life cycle of mercury and thus reduces the overall risk to ecosystems. • Regulations and concerted action to reduce mercury emissions and releases can decrease the risk of human and wildlife exposure and	• Support full implementation of the control provisions of the Minamata Convention and undertake the actions described throughout document UNEP/MC/COP.5/20, all of which are relevant to the achievement of target 7. • Align monitoring efforts under the Minamata Convention and the Framework by including, in the Framework's monitoring framework, a component indicator related to mercury under a headline indicator related to highly hazardous chemicals. • Report on the implementation of strategies to reduce and eliminate the emissions and releases of mercury into the environment, with a focus on the main polluting sources and processes (e.g., by reducing mercury use in ASGM and mercury-added products) and improving recovery and environmentally sound disposal of by-product mercury (e.g., from large-scale mining, coal burning and other industrial processes). • Promote research on the risks and impact of mercury on ecosystem functions and services and the impact	• Articles 3 through 12, which contain provisions relevant to reducing the risk of mercury from anthropogenic sources throughout its life cycle • Article 21, on national reporting, and article 22, on effectiveness evaluation	• Levels of mercury in the environment and other findings on the impacts of mercury, including those from the Open-ended Scientific Group established to support the first effectiveness evaluation of the Convention • Other information gathered through the effectiveness evaluation of the Convention • Number of publications on the risks and impacts of mercury on ecosystem functions and services, as well as on the impact of ecosystem degradation on mercury cycling

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	safeguard the environment and human health from the impacts of mercury from anthropogenic sources. • Reporting on measures to implement the Minamata Convention under article 21 and information gathered through the effectiveness evaluation of the Convention can provide crucial insights to monitor progress towards target 7. However, the absence of suitable indicators in the Framework's monitoring framework to measure progress in reducing the risks of mercury may limit the ability to demonstrate the effectiveness of such efforts.	of degraded ecosystems on mercury cycling. • Promote and support research on wildlife toxicology and mercury monitoring to better predict and assess the risks of mercury pollution to biodiversity and inform the development of policy to reduce emissions and releases. • Contribute and support the effectiveness evaluation of the Minamata Convention, including through the development of temporal trends of mercury in the environment and the development of risk modelling. • Conduct risk assessments on the cumulative effects of mercury and other highly hazardous chemicals.		
Target 8. Minimize the **impact of climate change and ocean acidification on biodiversity** and increase its resilience through mitigation, adaptation and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.	• Reducing mercury use in specific industrial applications, including chlor-alkali and vinyl chloride monomer production, will also reduce greenhouse gas emissions from those sectors. • Control of mercury emissions from Annex D sources (coal-fired power plants, coal-fired industrial boilers, cement production, non-ferrous metals production, and waste incineration) can be undertaken in ways that maximize climate co-benefits. • Interlinkages between climate change and ocean acidification, mercury cycling, long-range transport and fate, and biodiversity loss are complex and not well understood but evidence shows that	• Support full implementation of control provisions of the Minamata Convention with respect to mercury use in industrial processes and mercury emissions control, with direct relevance to and co-benefits for climate change. • Promote research and cooperation to improve understanding of, and identify possible mitigation actions for, the impacts of climate change and ocean acidification on mercury cycling, long-range transport and environmental fate, and the associated contribution to biodiversity loss.	• Article 5 and Annex B, on mercury use in industrial processes • Article 8 and Annex D, on mercury emissions • Article 19, paragraph 1 (b), which refers to modelling and geographically representative monitoring of levels of mercury in vulnerable populations and in environmental media, including biotic media such as fish, marine mammals, sea turtles and birds • Article 19, paragraph 1 (c), which refers to assessments of the impact of mercury on human health and the environment, in addition to social, economic and cultural impacts, particularly in respect of vulnerable populations	• Number of countries implementing new measures to reduce the use of mercury in industrial processes • Levels of mercury emissions as shown in national inventories • Studies and reports on the interlinkages between climate change and ocean acidification, mercury levels in the environment, and biodiversity

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	they reinforce each other and cause further damage to human health and the environment. • Research suggests a surge in mercury pollution as terrestrial deposits of old mercury pollution are released by climate change. As global temperatures continue to rise, the thawing of permafrost is accelerating and mercury trapped in the frozen ground is now being released.			
Target 9. Ensure that the **management and use of wild species are sustainable**, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and **protecting and encouraging customary sustainable use by Indigenous Peoples and local communities**.	• ASGM is often associated with areas of high biodiversity importance. The direct and indirect impacts of mercury use in ASGM can pose challenges to sustainable development and the conservation of wild species. While ASGM is often the only livelihood option for millions of people, including Indigenous Peoples and local communities, it also leads to a range of negative impacts beyond those on human health and biodiversity, such as land-use change, habitat degradation and unsustainable harvesting of wild species. • Indigenous Peoples and local communities are highly dependent on biodiversity and are particularly vulnerable to mercury contamination from ASGM near or in their territories. Indigenous Peoples and local communities, who are often also miners, can and must play an important role in reforming the ASGM sector. They can also play an important role in	• Mainstream coherent mercury and biodiversity action into national policies. • Engage Indigenous Peoples and local communities in reforming the ASGM sector and, where appropriate, combating illegal ASGM activities to improve the sustainable management and use of wild species while enhancing the social, economic and environmental benefits for people. Examples of initiatives include the development of alternative livelihoods that enhance biodiversity and sustainable development, formalization of miners, multi-actor cooperation to combat illegal trade of mercury and prevent the diversion of mercury from both foreign and domestic sources for use in ASGM, and promotion of the mercury-free gold supply chain (e.g., through certification schemes or recycling of gold).	• The preamble of the Minamata Convention, which recognizes the vulnerability of Indigenous communities to the effects of mercury • Article 7 and Annex C, which contain measures to reduce, and where feasible eliminate, the use of mercury in artisanal and small-scale gold mining and processing, including the development of national action plans and periodic reviews of the progress made in meeting obligations	• Number of reports and other information indicating a reduction in unsustainable hunting and use of wild species associated with ASGM activities • Percentage increase of degraded ASGM sites restored or rehabilitated • Number of activities to emphasize the essential role of Indigenous Peoples and local communities in reforming the ASGM sector and combating illegal ASGM activities on their lands and territories • Examples of measures to make the ASGM sector more sustainable, promote and scale up sustainable biodiversity-based activities and alternative livelihoods based on products and services that enhance biodiversity, and improve the gold supply chain

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	supporting relevant authorities to combat illegal ASGM operations that take place on their lands and territories without their consent.			
Target 10. Ensure that areas under **agriculture, aquaculture, fisheries and forestry are managed sustainably**, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity-friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and **long-term efficiency and productivity of these production systems and to food security**, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.	• Forestry can contribute to mercury releases through leaching of mercury from soil, in particular due to the use of heavy machinery in forests and clear-cutting. • Accumulation of mercury in fish and other species, including species of economic value, can have adverse environmental and socioeconomic impacts, including threatening the food security of millions of people. • Some agricultural practices, such as controlled flooding and drying, can increase production of methylmercury and increase the risk of exposure of people, local wildlife and downstream ecosystems. Additionally, feeding farmed fish with feed containing high levels of mercury can lead to increased exposure for humans.	• Incorporate the impact of mercury on fish stocks, including threatened species, into the considerations for supporting the sustainable management of fisheries. • For sustainable agriculture, aquaculture and forestry, take into account practices that reduce mercury methylation, bioaccumulation in the food chain, leaching from soil and export through waterbodies, and potential opportunities for activities with co-benefits within the chemicals and waste cluster.	• Article 19, paragraph 1 (c), which states that parties shall endeavour to cooperate to develop and improve assessments of social, economic and cultural impacts of mercury and mercury compounds, particularly in respect of vulnerable populations	• Number of mercury interlinkages and effects on agriculture, aquaculture, fisheries and forestry are mapped, identified and marked clearly • Number of mercury monitoring activities carried out in the context of agriculture, aquaculture, fisheries and forestry
Target 11. Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for	• Mercury pollution jeopardizes the ability of ecosystems to provide clean air and water, among other ecosystem services. • When healthy, ecosystems such as forests and peatlands capture high amounts of particulate and gaseous mercury from the atmosphere. Healthy soils also sequester mercury and act as sinks.	• Consider and demonstrate how national and global monitoring of mercury in air and water under the Minamata Convention could contribute to the Framework's target 11 indicators. • Use ecosystem-based approaches such as natural capital assessment to factor atmospheric mercury measurements into national air emissions accounts.	• Article 19, paragraph 1 (e), which states that parties shall endeavour to cooperate to develop and improve, taking into account their respective circumstances and capabilities, information on the environmental cycle, transport (including long-range transport and deposition), transformation and fate of mercury and mercury compounds in a range of ecosystems	• Number of national programs to monitor mercury in the air and water • Number of national accounting systems (e.g., national air emissions accounts) that reflect the cost of mercury pollution

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the benefit of all people and nature.				
Target 12. Significantly increase the area and quality, and connectivity of, access to, **and benefits from green and blue spaces in urban and densely populated areas sustainably**, by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature, and contributing to inclusive and sustainable urbanization and to the provision of ecosystem functions and services.	• Urban centres are important sources of atmospheric mercury emissions, originating mostly from fossil fuel combustion, metal manufacturing, cement production and medical and industrial waste discharges but also from the processing of artisanally mined gold. • Open burning of waste, which often contains discarded mercury-added products, impacts urban centres that lack sound waste management systems. • City procurement and construction policies, such as those with respect to cement, lighting and health care products, can support mercury pollution control. • The effectiveness evaluation of the Convention relies on accurate quantitative mercury emissions inventories. The emissions inventories of most countries are based on emissions from point sources; however, emissions from diffuse sources, which remain poorly characterized, can make up a large share of the overall emissions. • Lakes and freshwater bodies in urban and densely populated areas are important for human well-being and connection to nature, yet the energy and industrial sectors are among the largest contributors to	• Disseminate approaches to reducing mercury use and emissions in urban areas in conjunction with the implementation of Minamata Convention control articles. • Establish pollution standards for mercury in air and water and develop improved methods for comprehensive inventories of mercury emissions and releases in urban areas that include diffuse sources and currently unknown point sources. • Share up-to-date information from emissions inventories to support the effectiveness evaluation of the Convention and contribute to the Framework. • Improve methods for determining mercury concentration in surface waters in urban and densely populated areas.	• Article 4, which controls the manufacture, import and export of mercury-added products listed in part I of Annex A • Article 7, covering the processing of artisanally-mined gold, which often takes place in urban centres • Article 8, which contains provisions for controlling and, where feasible, reducing emissions of mercury and mercury compounds • Article 22, on the process and timeline for evaluating the effectiveness of the Convention	• Number of pollution standards for emissions and releases that include mercury • Number of comprehensive mercury emission and release inventories for urban and other densely populated areas • Number of actions to address gold processing articulated in ASGM national action plans and urban planning decisions • Number of actions to support management of discarded mercury-added products at the city level • Findings and conclusions of the Open-ended Scientific Group pertaining to trends in emissions and releases in urban and densely populated areas • Examples of the mainstreaming of mercury and biodiversity into urban planning • Number of studies on mercury in surface waters in urban and densely populated areas

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	mercury pollution in freshwater bodies.			
Target 14. Ensure the full **integration of biodiversity** and its multiple values **into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments** and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities and fiscal and financial flows with the goals and targets of this framework.	• Mercury enters the environment from various anthropogenic sources and processes across sectors and can have a significant impact on biodiversity. For example, gold mining, both industrial and artisanal and small-scale, leads to deforestation and defaunation, low soil carbon, loss of ecosystem services, removal of fine sediments and mercury contamination of soil, water and air. • Integration of coherent biodiversity and mercury action in policies and regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments and environmental impact assessments can generate multiple co-benefits.	• Promote coherent development and implementation of national plans for biodiversity and mercury action. • Mainstream mercury- and biodiversity-positive action across various levels of government (e.g., national and subnational) and across all sectors. • Ensure that rigorous environmental impact assessments of activities and processes that can lead to high emissions and releases of mercury are conducted before permits are issued, and monitor for and redress mercury contamination of watercourses or terrestrial areas.	• Article 3, paragraphs 3 and 4, which require the banning of mercury mining within given time frames • Article 7, paragraph 2, which requires parties with artisanal and small-scale mining and processing using mercury to take steps to reduce, and where feasible eliminate, the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from, such mining and processing	• Number of countries that have coherently mainstreamed mercury- and biodiversity-positive action across government levels and sectors • Examples of barriers removed to promote mercury- and biodiversity-positive action in a coherent manner
Target 15. Take **legal, administrative or policy measures to encourage and enable business**, and in particular to ensure **that large and transnational companies and financial institutions:** (a) Regularly monitor, assess and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions, along their operations, supply and value chains and portfolios;	• Mercury emissions are among the risks, dependencies and impacts on biodiversity of businesses, particularly in the energy, mining and manufacturing sectors. • Policy reforms can set the requirements for large and transnational companies and financial institutions to reduce and monitor mercury emissions along their operations, supply and value chains and portfolios and to provide information that promotes sustainable consumption patterns.	• Ensure that mercury is factored into regular monitoring, assessment and disclosure of risks, dependencies and impacts on biodiversity of large and transnational companies and financial institutions.	• Part I of Annex B, on manufacturing processes in which mercury or mercury compounds are used, which provides phase-out dates for certain processes, including chlor-alkali production (2025) and acetaldehyde production using mercury catalysts (2018) • Part II of Annex B, which list processes in which the use of mercury must be restricted (e.g., vinyl chloride monomer production and production of polyurethane using mercury containing catalysts)	• Number of large and transnational companies that disclose their mercury emissions • Instances where the adverse effects of mercury on biodiversity are considered or accounted for in investment decisions

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(b) Provide information needed to consumers to promote sustainable consumption patterns; (c) Report on compliance with access and benefit-sharing regulations and measures, as applicable; in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.			• Annex D, which lists point sources of mercury emissions (e.g., coal-fired power plants, non-ferrous metal production and waste incineration facilities) • Article 7, which provides an opportunity for financial sector actors to undertake due diligence in the gold supply chain	
Target 16. Ensure that **people are encouraged and enabled to make sustainable consumption choices**, including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and, by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.	• Sustainable consumption choices can drive a reduction in demand for raw materials responsible for mercury emissions and releases, including non-ferrous metals (e.g., gold, lead, zinc and copper), cement and coal, as well as mercury-containing products (e.g., batteries, fluorescent lamps, cosmetics, pesticides, thermometers and dental amalgams). • Gold certification may help to guide more sustainable consumer choices and provide fair compensation to certified small-scale miners who comply with environmental requirements to obtain the certification. • Mercury-added cosmetics, such as skin-lightening creams, are still widely available in spite of their 2020 global phase-out date. In addition to being a health concern,	• Conduct tailored, wide-reaching awareness campaigns on the impact of mercury on the environment and human health to enable consumers to make sustainable consumption choices. • Facilitate the development of certification programmes that ensure that gold is sourced responsibly, with or without reduced amounts of mercury, while supporting the development of ASGM communities and respecting the rights of Indigenous Peoples and local communities. • Raise awareness about the risk of mercury in cosmetics and improve the capacity of health agencies to monitor and detect products available in the market.	• Annex D, which lists point sources of mercury emissions (e.g., coal-fired power plants, non-ferrous metal production and waste incineration facilities)	• Number of ASGM miners participating in certification programmes that reduce mercury use, emissions and releases in mining • Number of Indigenous Peoples, local communities and other relevant stakeholders indicating that their needs and priorities with regard to the use of mercury in ASGM are being addressed • Awareness campaigns and surveys regarding the use of mercury-added cosmetics

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	they increase environmental risk due to unsafe disposal of mercury-containing waste and illegal trade in mercury.			
Target 18. Identify by 2025, and **eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity**, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least $500 billion per year by 2030, starting with the most harmful incentives, and **scale up positive incentives for the conservation and sustainable use of biodiversity**.	• Some of the government subsidies that are most harmful to biodiversity also support the emission of large amounts of mercury into the atmosphere. They include subsidies for fossil fuels, such as coal, oil and gas. • Positive incentives can help mainstream biodiversity- and mercury-positive action to eliminate primary mercury mining, reform the mining of non-ferrous metals, including industrial and artisanal and small-scale gold mining, and reduce emissions from other industrial processes that use or produce mercury.	• Measure the reduction in mercury emissions and releases that results from the phasing out of harmful incentives for fossil fuels. • Provide adequate resources and incentives to achieve reduction or elimination of mercury use in ASGM (e.g., standards for marketing gold from mercury-free artisanal and small-scale mining and processing), promote alternative sources of income, improve the supply chain for and access to the alternative products (e.g., agricultural produce, eco-tourism) and facilitate access to financial incentives that support mercury- and biodiversity-positive action. • Provide other positive incentives that can generate co-benefits for mercury control and biodiversity.	• Articles 8 and 9, which contain provisions to reduce the emissions and releases of mercury from various sources • Article 7 and Annex C, which contain measures to reduce, and where feasible eliminate, the use of mercury in artisanal and small-scale gold mining and processing, including the development of national action plans and periodic reviews of the progress made in meeting obligations • Article 21, on national reporting, and article 22, on the effectiveness evaluation, which provide opportunities to demonstrate the benefits of positive incentives	• Incentives provided for the promotion of economic alternatives to ASGM and techniques to reduce mercury use in ASGM
Target 19. Substantially and **progressively increase the level of financial resources** from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention [on Biological Diversity], to implement national biodiversity strategies and action plans, mobilizing at least $200 billion per year by 2030 […].[a]	• Given that mercury is closely connected to ecosystem degradation and biodiversity loss, strategic investments can support the coherent implementation of the Minamata Convention and the Framework to generate co-benefits for the reduction of mercury pollution and the reversal of biodiversity loss.	• Develop and implement projects that seek to improve coherence across biodiversity and chemicals action, focusing on building on countries' existing experiences and priorities (e.g., the Global Environment Facility project on strengthening the enabling framework for biodiversity mainstreaming and mercury reduction in ASGM in Guyana). • Increase public and private sector financing and co-financing of activities to obtain co-benefits.	• Article 13, which articulates provisions for financial resources and the financial mechanism	• Financial resources channelled to projects that promote biodiversity- and mercury-positive action, through the Global Environment Facility, the Specific International Programme to support Capacity-Building and Technical Assistance and other sources • Programming directions for the ninth replenishment of the Global Environment Facility

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				trust fund that support coherent implementation of the Framework and the Minamata Convention
Target 20. Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the Framework.	• Capacity-building can play an important role in implementing the Minamata Convention and the Framework in a mutually supportive manner. For instance, ASGM miners typically lack the capacity to diversify their economic activities, minimize the amount of mercury that is emitted to the air, such as during the burning of mercury-gold amalgam, or remediate degraded lands after mining has ceased.	• Include capacity-building as a cross-cutting feature that can be applied in areas where interlinkages have been identified, such as by: (a) promoting the adoption of mercury-free alternatives and control methods in the ASGM sector (supporting Framework targets 2, 3, 7 and 14); (b) developing capacity to monitor mercury levels and impacts on biota and wildlife to inform the reduction of risks (supporting Framework target 7); (c) developing and promoting sustainable diversified livelihoods, particularly in ASGM regions, in accordance with the national action plan guidance pursuant to article 7 and the biodiversity focal area strategy for the eighth replenishment of the Global Environment Facility.	• Article 14, on capacity-building, technical assistance and technology transfer	• Capacity support provided to monitor mercury levels and impacts on biota and wildlife to inform risk reduction • Capacity support provided for the adoption of environmentally friendly mining and remediation techniques • Sustainable and diversified sources of income adopted by mining communities • Minamata Convention financial mechanism projects funded under the Specific International Programme that include activities that support the Framework's goals and targets
Target 21. Ensure that the best **available data, information and knowledge are accessible to decision-makers, practitioners and the public** to guide effective and equitable governance and integrated and participatory management of biodiversity and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices	• Given that mercury is closely connected to ecosystem degradation and biodiversity loss, awareness-raising and education should consider addressing the challenges jointly.	• Integrate public awareness and education efforts to enhance understanding among stakeholders about the interconnections between biodiversity and mercury pollution and lead to more informed decision-making and engagement.	• Article 18, paragraph 1 (b), which requires parties, within their capabilities, to promote and facilitate education, training and public awareness related to the effects of exposure to mercury on human health and the environment in collaboration with relevant intergovernmental and non-governmental organization and vulnerable populations	• Activities taken to demonstrate and emphasize the interconnections between biodiversity loss and mercury pollution

Targets of the Kunming-Montreal Global Biodiversity Framework (in numerical order)	*Relevance of and to the implementation of the Minamata Convention*	*Actions that could generate co-benefits for the Minamata Convention and the Kunming-Montreal Global Biodiversity Framework*	*Relevant articles/sections of the Minamata Convention*	*Indicative possible joint indicators*
and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, in accordance with national legislation.				
Target 22. Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources and traditional knowledge, as well as by women and girls, children and youth and persons with disabilities, and ensure the full protection of environmental human rights defenders.	• Indigenous Peoples and local communities are particularly vulnerable to the effects of mercury pollution originating both from point sources and long-range transport. • Enhancing the participation of Indigenous Peoples and local communities in the implementation of the Minamata Convention will also contribute to the Framework's goals and targets.	• Ensure that Indigenous Peoples and local communities, as well as other vulnerable populations, especially women and children, have responsive representation and participation in decision-making and access to justice and information related to the impacts of mercury on biodiversity, including traditional sources of food. • Include, in national action plans, strategies to prevent the exposure of vulnerable populations, particularly children and women of child-bearing age, especially pregnant women, to mercury used in ASGM. • Ensure effective engagement of Indigenous Peoples, local communities and other relevant stakeholders in the development and implementation of national action plans.	• The preamble of the Convention, which highlights the particular vulnerabilities of Arctic ecosystems and Indigenous communities because of the biomagnification of mercury and contamination of traditional foods, and concerns about Indigenous communities more generally with respect to the effects of mercury • Article 16, articulating measures to reduce the risks to human health and the environment from the release of mercury and its compounds to the environment; article 18, on public information, awareness and education; article 19, on research, development and monitoring; and article 22, on effectiveness evaluation, all of which also refer to the needs of vulnerable populations • Annex C, which identifies measures to reduce, and where possible eliminate, mercury use in ASGM • Article 13 establishes a financial mechanism for supporting developing-country parties and parties with economies in transition in implementing their obligations under the Minamata Convention.	• Activities and programmes that engage Indigenous Peoples and local communities • National action plans and article 7 reviews that demonstrate effective participation of Indigenous Peoples, local communities and other relevant stakeholders • Mercury monitoring and awareness-raising programmes for Indigenous Peoples and local communities • Gender indicators in financial mechanism projects • Gender indicators based on the gender action plan to be discussed by the Conference of the Parties at its fifth meeting

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			Both entities comprising the financial mechanism have provisions for mainstreaming gender in the implementation of the Convention	
Target 23. Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention [on Biological Diversity], including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.	• Women and girls are particularly vulnerable to the effects of mercury pollution originating both from point sources and long-range transport.	• Ensure that the application of a gender-responsive approach takes into consideration risks related to mercury-contaminated soil and water in efforts to ensure equal rights and access to land and natural resources. • Enhance training on incorporating gender aspects into project proposal development and project implementation.	• The preamble of the Minamata Convention highlights health concerns, especially in developing countries, resulting from exposure to mercury of vulnerable populations, especially women and children and, through them, future generations. • Annex C, paragraph 1 (i), which specifies that national action plans must include strategies to prevent the exposure of vulnerable populations, particularly children and women of child-bearing age, especially pregnant women, to mercury used in ASGM	• Activities and programmes that recognize the equal rights of women and their informed participation and leadership at all levels of action, engagement, policy and decision-making related to mercury- and biodiversity-positive action • National action plans and article 7 reviews that demonstrate effective participation of women and children • Gender indicators based on the gender action plan to be discussed by the Conference of the Parties at its fifth meeting • Mercury monitoring and awareness-raising programmes for women and girls
Section J: Responsibility and transparency. The successful implementation of the Framework requires responsibility and transparency, which will be supported by effective mechanisms for planning, monitoring, reporting and review, forming an agreed, synchronized and cyclical system. This includes the following elements: (a) national biodiversity strategies and action plans, revised or	• The Minamata Convention and other multilateral environmental agreements have provisions for the development of thematic national action plans (e.g., national biodiversity strategies and action plans under the Convention on Biological Diversity, national action plans under the Minamata Convention) and for reporting on implementation at the national level. National action plans and national reports on implementation	• Identify areas for alignment of the development of national action plans. • Identify areas in national reports that are of relevance to the Minamata Convention and other multilateral environmental agreements and promote the exchange of information. • Identify areas for aligning data collection and monitoring efforts and exchanging related knowledge.	• Article 20, which states that parties may develop and execute an implementation plan. • Article 21, which provides for parties to report on the measures they take to implement the provisions of the Convention.	• Collaboration between national focal points of relevant multilateral environmental agreements in the preparation of national action plans and national reports • National biodiversity strategies and action plans and other biodiversity-related national action plans that include mercury control measures

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updated in alignment with the Framework and its goals and targets as the main vehicle for implementation of the Framework, including national targets communicated in a standardized format; (b) national reports, including the headline and, as appropriate, other indicators in the monitoring framework of the Framework; […]	can provide opportunities to demonstrate the added value of implementing the Minamata Convention and the Framework in a coherent and mutually supportive manner.	• Improve communication among national focal points and government agencies responsible for the biodiversity and chemicals and waste agendas.		

Abbreviation: ASGM – artisanal and small-scale gold mining.

[a] The full text of target 19 is available at https://www.cbd.int/gbf/targets/.