

Improving coherence between mercury and biodiversity action





**INTERLINKAGES BETWEEN
THE CHEMICALS AND WASTE
MULTILATERAL ENVIRONMENTAL
AGREEMENTS AND BIODIVERSITY:
KEY INSIGHTS**

Key recommendation

Increased integration and engagement of the chemicals and biodiversity sectors at the national, regional and international levels, leading to an increased awareness and actions for the global sound management of mercury throughout its life cycle.

COP-4 requested the secretariat to prepare a report, including possible recommendations, on how the Convention could contribute to the post-2020 global biodiversity framework for consideration by COP-5.

Explainer: COP15, the biggest biodiversity conference in a decade

An updated guide to the intergovernmental negotiations taking place in December 2022 in Montreal, Canada, that have a crucial role to play in halting biodiversity loss and restoring nature.



It is 100 days until Cop15 - and the omens are good for a global plan to protect nature

Explainer

What is Cop15 and why does it matter for all life on Earth?

Once-in-a-decade plans to protect the natural world and halt its destruction will be decided in Canada in December

- It is 100 days until Cop15 - and the omens are good for a global plan to protect nature | John Vidal



Global Biodiversity Framework – 4 goals & 23 targets



Four overarching goals

- A. Halt loss, restore nature
- B. Use lands & seas sustainably
- C. Share benefits and services
- D. Mobilize necessary resources

to be met by 2050

Mercury & Target 7 – pollution



IPBES Global Assessment

Pollution as one of the main drivers of biodiversity loss. **Heavy metals** identified as one of the “big 5” pollutants.



Zero draft post-2020 GBF

Target 7 to “**reduce pollution from all sources...**” but did not mention mercury or heavy metals.



First draft post-2020 GBF

Target 7 now mentions “pollution from all sources, [**including mercury and other heavy metals**]...”



Expert meeting in Montreal

Removal of mercury from Target 7



Adoption of the Kunming-Montreal GBF

Target 7: Reduce pollution risks and the negative impact of pollution from all sources, by 2030, [...] reducing the overall risk of **highly hazardous chemicals** by at least half...



Modulators of mercury risk to wildlife and humans in the context of rapid global change




Collin A. Eagles-Smith, Ellen K. Silbergeld, Niladri Basu, Paco Bustamante, Fernando Diaz-Barriga, William A. Hopkins, Karen A. Kidd, Jennifer F. Nyland



The bigger the fish, in this instance a lake trout, the greater the accumulation of methylmercury in the filets of the fish. All five Great Lakes have fish consumption advisories in effect because the contaminant poses a disproportionate risk to the health of children and pregnant women. Image courtesy of Sarah Erickson, director of Learning and Engagement, Great Lakes Aquarium









Invasive crayfish as vectors of mercury in freshwater food webs of the Pacific Northwest

Environmental Toxicology and Chemistry

By: Branden L. Johnson, James J. Willacker, Collin A. Eagles-Smith , Christopher A. Pearl , and M. J. Adams 

<https://doi.org/10.1002/etc.2727>

Toxicity of mercury and post-exposure recovery in *Corbicula fluminea*: Neurotoxicity, oxidative stress and oxygen consumption

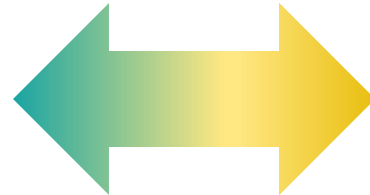
Patrícia Oliveira^{a b}  , Ana Virgínia Lírio^c  , Cristina Canhoto^c  , Lúcia Guilhermino^{a b}  

Aquatic Invasive Species Are Short-Circuiting Benefits From Mercury Reduction in the Great Lakes

Co-benefits from coherent biodiversity and mercury action



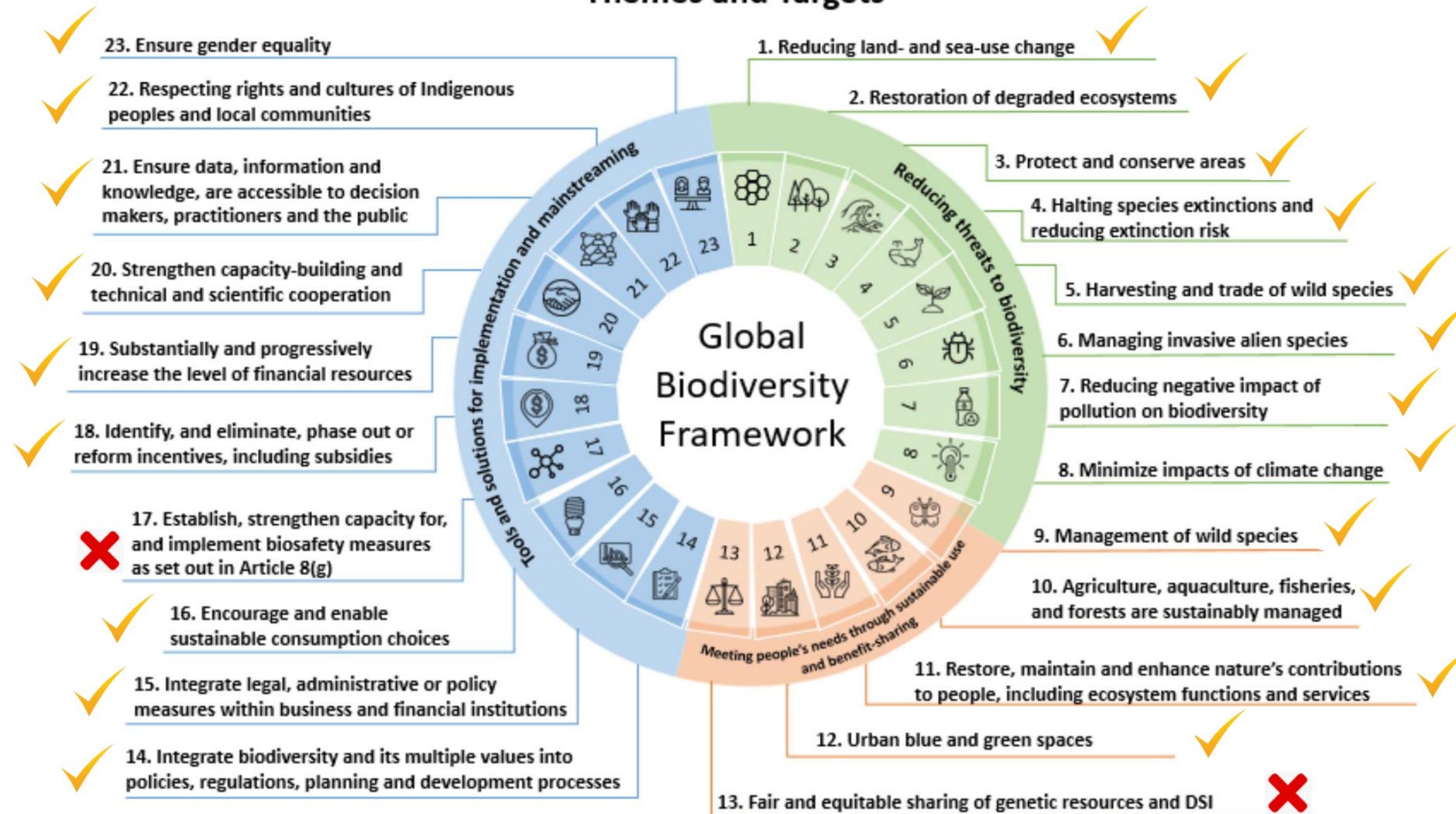
MINAMATA
CONVENTION
ON MERCURY



Kunming - Montreal
Global Biodiversity
Framework

Entry points GBF <-> Minamata Convention: 21 out of 23 targets

Kunming-Montreal Global Biodiversity Framework Themes and Targets



National level opportunities



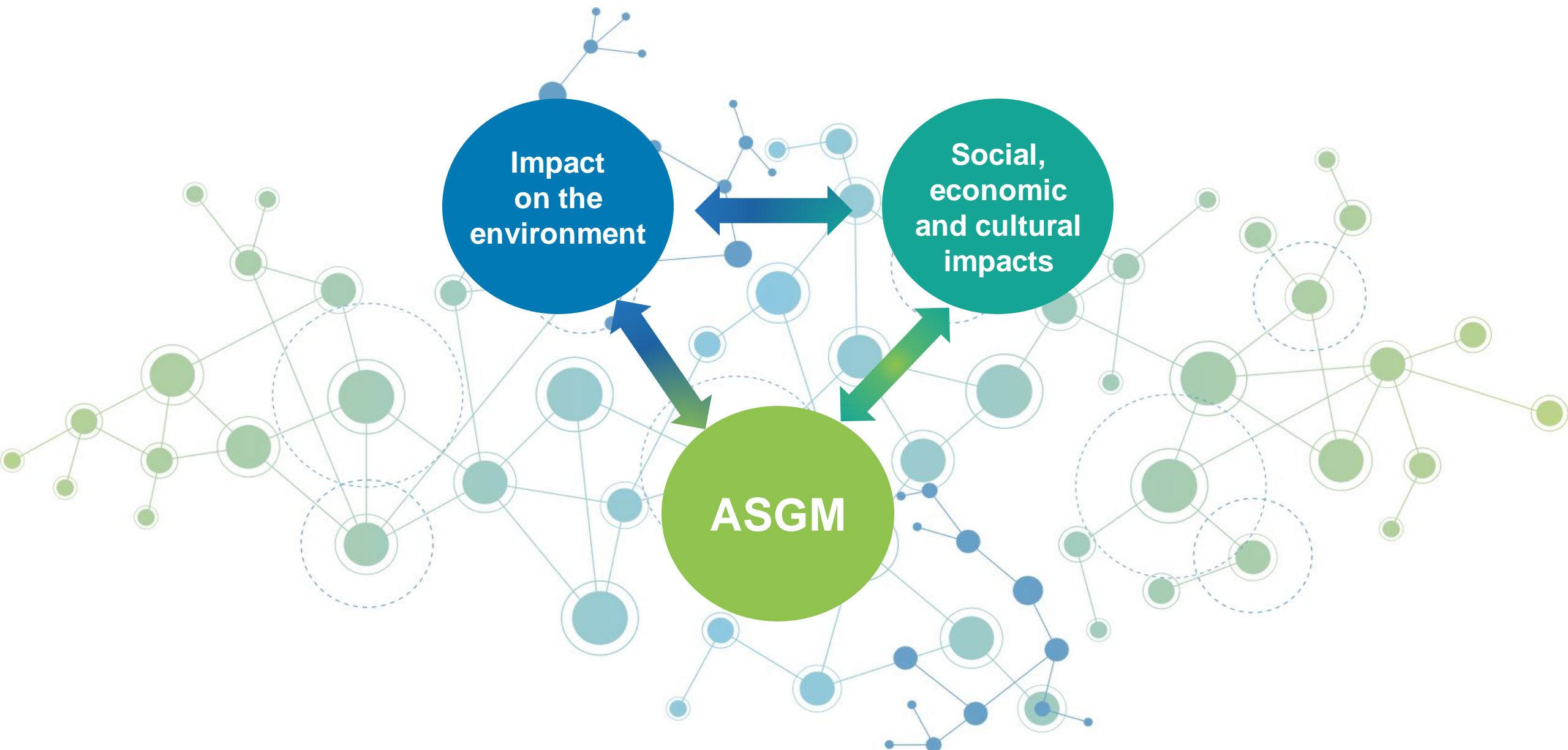
Opportunities at national level to generate co-benefits

The Minamata Convention on Mercury and the Kunming-Montreal Global Biodiversity Framework – mapping opportunities for generating co-benefits through coherent implementation

Five core provisions of the Minamata Convention as main entry points for enhancing co-benefits:

- Assessment of impacts of mercury on the environment
- Assessment of social, economic and cultural impacts, particularly in respect of vulnerable populations
- Artisanal and small-scale mercury mining
- Monitoring the presence and movement of mercury in the environment
- Remediation of mercury contaminated sites

Opportunities at national level to generate co-benefits



Generate co-benefits

Target 1 – Spatial planning²

- 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 revised and updated national biodiversity strategies and action plans (NBSAPs) in accordance with CBD [decision 15/6](#) and aligned with the GBF Goals and Targets.
- Integrate biodiversity positive action into the development and implementation of national action plans (NAPs) on ASGM in accordance with Art. 7 and Annex C.

Target 2 – Restoration

- Implement mercury control measures, including but not limited to those under Art. 12, and demonstrate the benefits of restoration of mercury-contaminated sites for biodiversity and ecosystem functions and services, as well as how achievements under GBF Target 2 can contribute to the objective of the Minamata Convention.
- Identify suitable and cost-effective methods for scaling up restoration of contaminated sites (e.g., t 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., creati mercury-free nesting areas for threatened turtles).
- Ensure that priority mercury-contaminated ecosystems, such those that act as sources of MeHg an of high biodiversity importance (e.g., wetlands), are identified and restored.
- Train and create incentives for ASGM miners to rehabilitate abandoned mining sites.

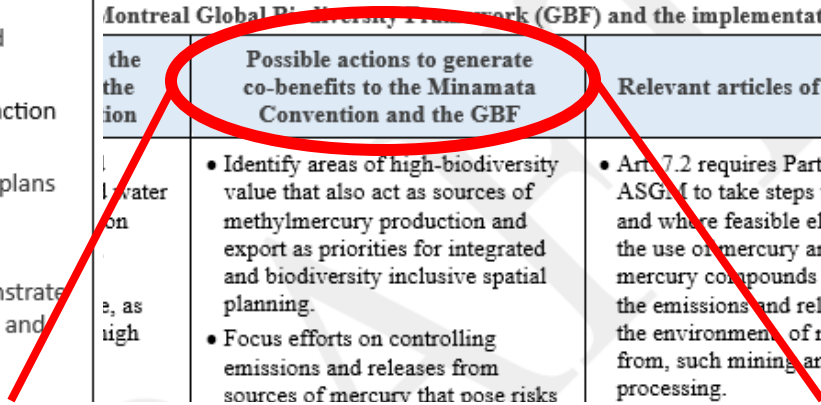
Target 3 – Protected areas

- Assess the extent of ASGM activities in which mercury is used and combine phasing out the use of mercury 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 rights 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.

Target 4 – Species extinction

Montreal Global Biodiversity Framework (GBF) and the implementation of the Minamata Convention.¹

the the ion	Possible actions to generate co-benefits to the Minamata Convention and the GBF	Relevant articles of the MC	Indicative possible joint indicators
Water on	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Art. 7.2 requires Parties with ASGM 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. 	<ul style="list-style-type: none"> • Areas that favour conversion to methylmercury are identified. • Zoning regulations and land use planning take into account potential effects of mercury emissions on biodiversity. • Implemented measures to control emissions and releases of mercury in areas of high biodiversity importance. • Established partnerships with Indigenous peoples and local communities. • Number of revised NBSAPs that integrate mercury control measures.
Local rely	<ul style="list-style-type: none"> • Integrate mercury control measures into revised and updated national biodiversity strategies and action 	<ul style="list-style-type: none"> • reduce emissions and releases of mercury and mercury compounds, respectively. 	
cts a and	<ul style="list-style-type: none"> • Implement mercury control measures, including but not limited to those under Art. 12, and demonstrate the benefits of restoration of mercury-contaminated sites for biodiversity and ecosystem functions and services, as well as how achievements under GBF Target 2 can contribute to the objective of the Minamata Convention. • Identify suitable and cost-effective 	<ul style="list-style-type: none"> • Art. 12.1 requires Parties to endeavour to develop appropriate strategies for identifying and assessing sites contaminated by mercury. • Art. 12.2 adds that any actions to reduce the risks posed by such sites shall be performed in an environmentally sound manner. 	<ul style="list-style-type: none"> • Activities and measures to restore mercury contaminated sites., including examples of co-benefits to mercury and biodiversity positive action from the implementation of Art 12.2 of the Minamata Convention and of GBF Target 2. • Studies demonstrating the feasibility of new
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s can ation of while			



Possible actions to generate co-benefits to the Minamata Convention and the GBF

Indigenous Peoples, biodiversity and ASGM



Indigenous peoples, local communities: mercury in ASGM



Credit: CINCIA

Mercury used in ASGM directly impacts the health, livelihoods and culture of Indigenous peoples who are engaged in the mining, who live near ASGM sites and even those who live far from ASGM sites.

The needs and priorities of indigenous peoples and local communities in relation to mercury used in ASGM are dependent on many factors.

Like other extractive activities, ASGM activities should start with FPIC (free, prior and informed consent) of the potentially affected indigenous peoples, and local communities and progress to establishing partnerships.

Parties are encouraged to engage indigenous peoples, local communities and other relevant stakeholders in the development of NAPs as well as in the review of progress in the implementation of article 7.



Brazilian Amazon

- ***61,8% in Brazil***
- ***61,5% of Brazil***
 - ***Almost twice the size of India***
 - ***30 mi people***

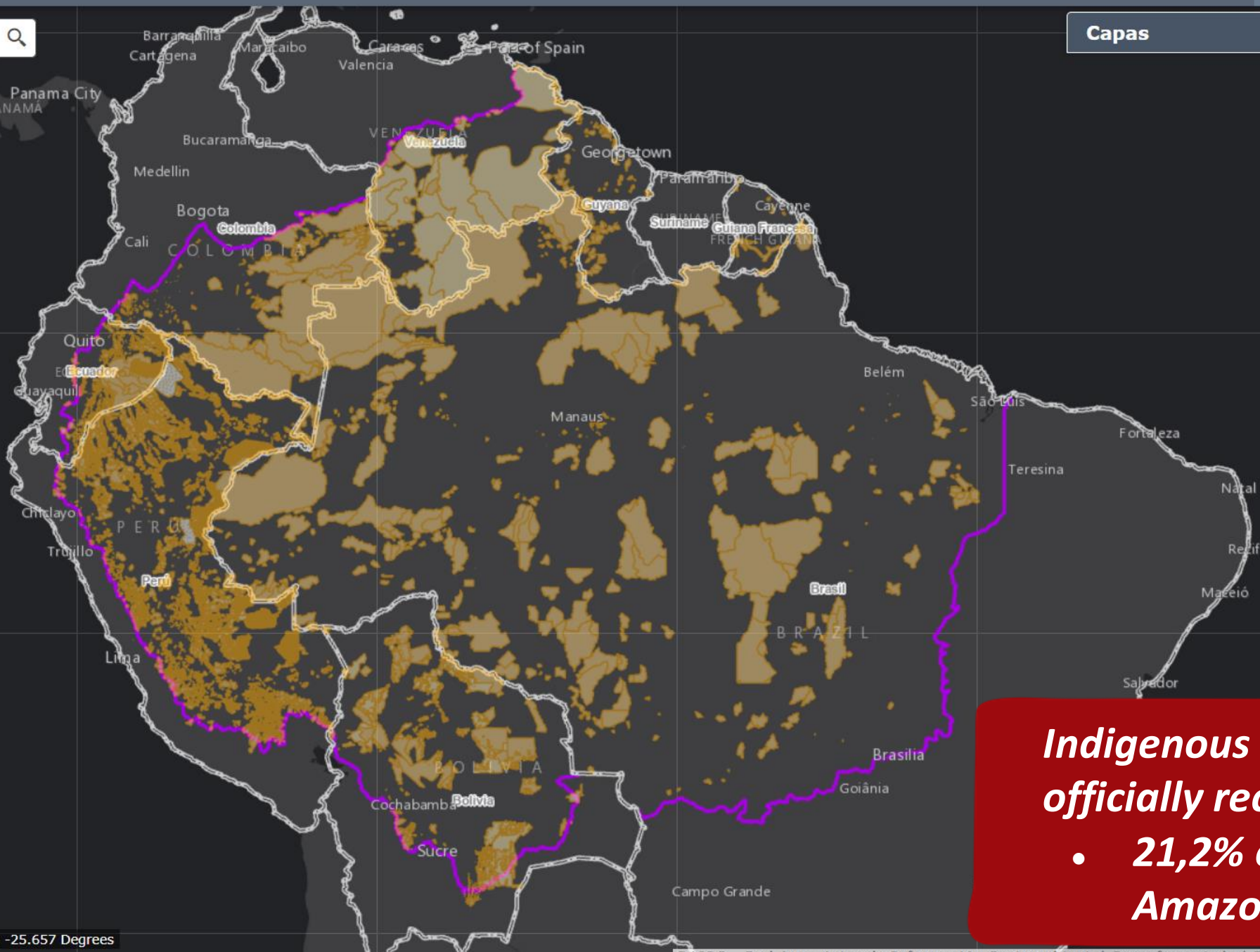


300mi

-14.617 -25.657 Degrees

Find address or place

Capas

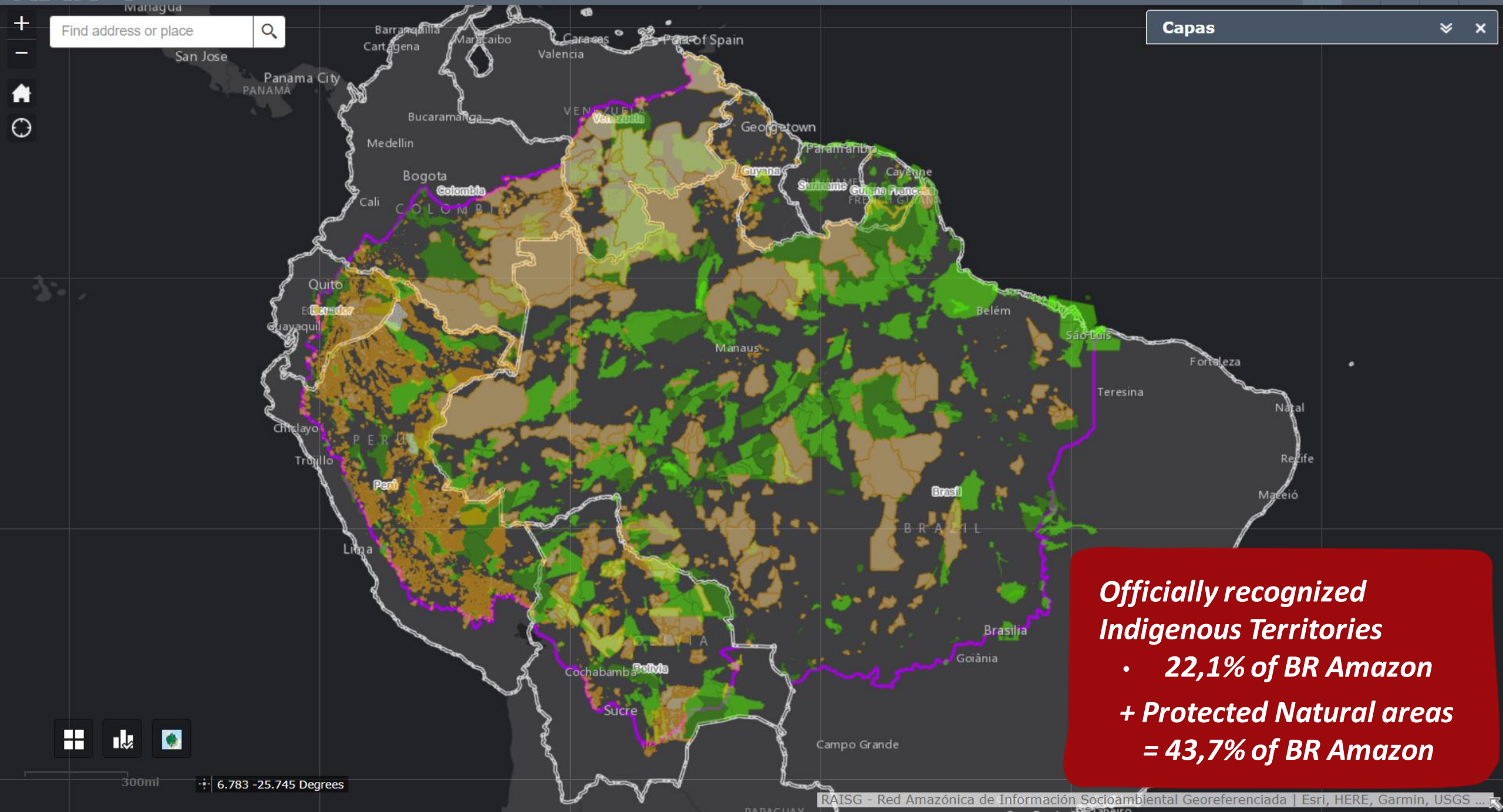


**Indigenous Territories
officially recognized**

- **21,2% of the BR
Amazon**



300mi 12.156 -25.657 Degrees

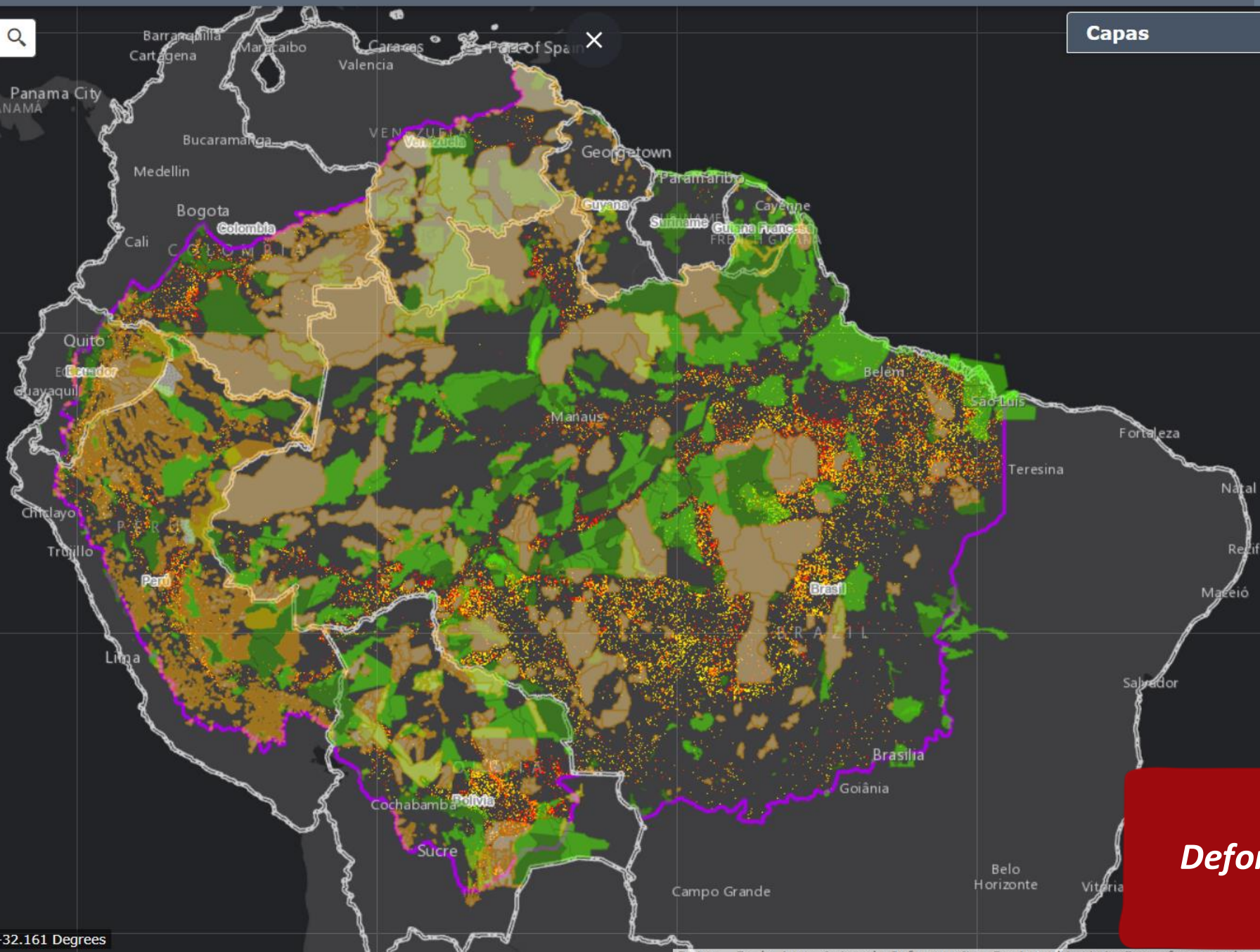


***Officially recognized
Indigenous Territories***

- 22,1% of BR Amazon
+ Protected Natural areas
= 43,7% of BR Amazon***

Find address or place

Capas



Deforestation



300mi 9.783 -32.161 Degrees

***Tumucumaque
Mountains National
Park***

***- One employee
in in the last year***

Parque Nacional
Montanhas do Tumucumaque

AMAPÁ

***Waiãpi Indigenous
Territory***

- 119

communities

- 1600+ people

TI Parque do Tumucumaque

Rebio de
Maicuru

TI Rio Paru D'Este

TI Waiãpi

Flota
do
Amapá

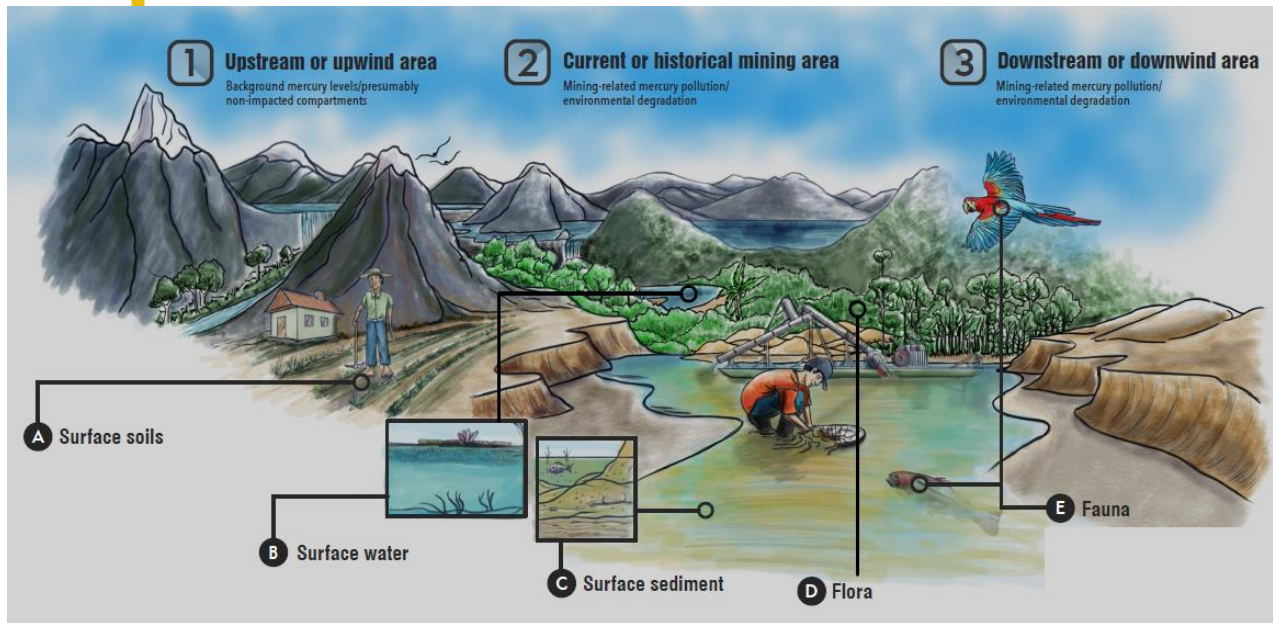
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Indigenous Peoples Platform

The Indigenous Peoples Platform of the Minamata Convention on Mercury aims to bring together Indigenous voices to promote the full and effective participation of Indigenous Peoples in the work of the Minamata Convention to put an end to mercury pollution.




THE SOCIO-ECONOMIC IMPACTS OF MERCURY POLLUTION ON FISHERIES AND LIVELIHOODS

Exploring how a natural capital approach may support the implementation of the Minamata Convention on Mercury



Scientific and technical series

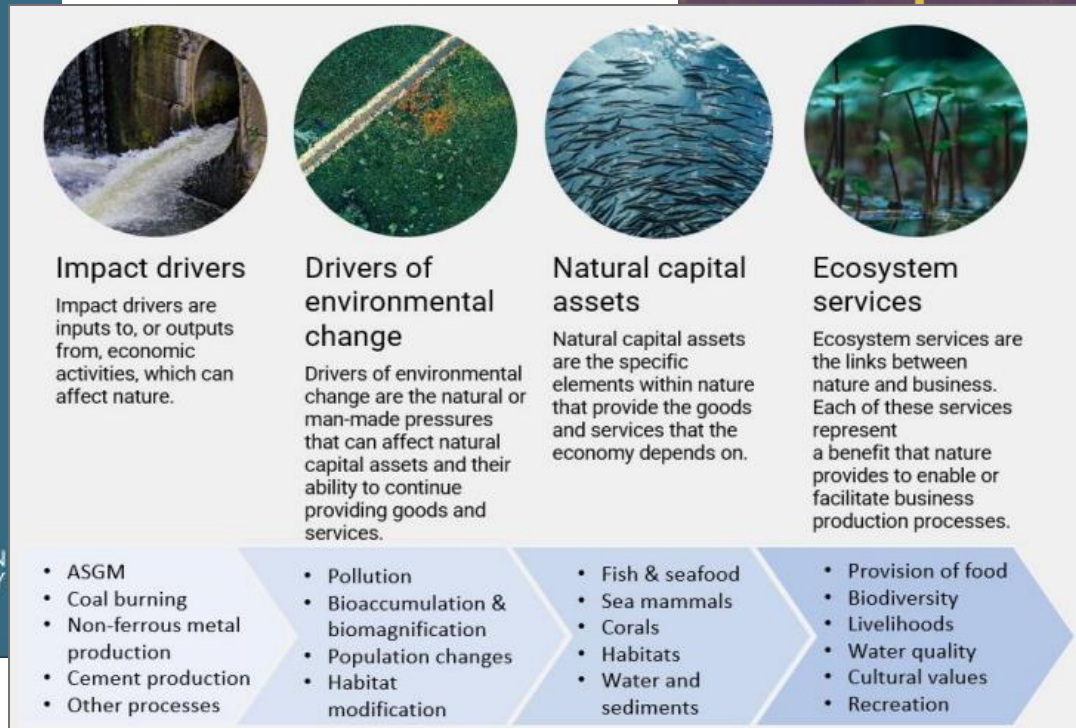




#2

MERCURY DISRUPTS ECOSYSTEM FUNCTIONS

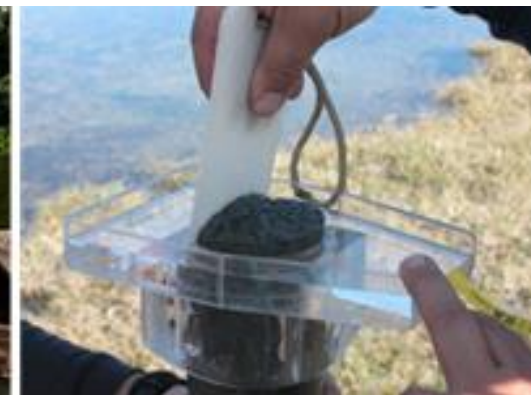
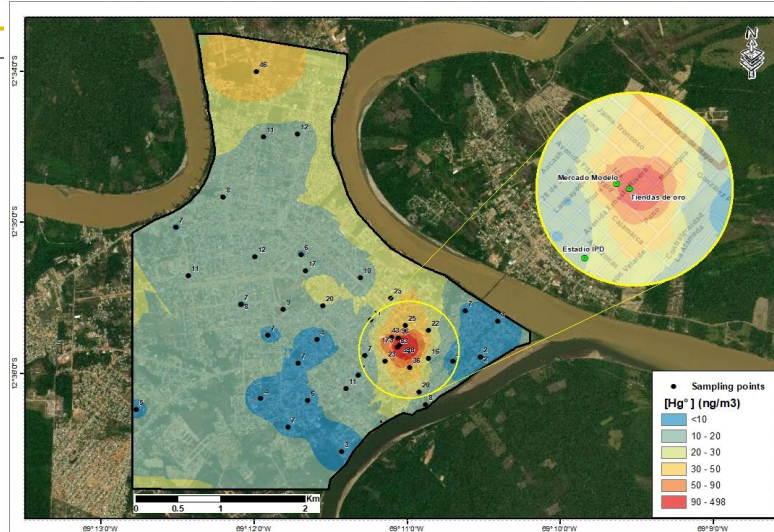
Mercury pollution disrupts crucial ecosystem functions, including food provision, air filtration, and water purification. This not only affects biodiversity but also jeopardizes the **economic livelihoods** and well-being of millions, particularly indigenous peoples and coastal communities who consume large amounts of fish.



In-Situ monitoring of mercury and mercury compounds in and around Artisanal and Small-Scale Gold Mining sites

Technical Background Document

Authors: Mónica Moreno-Brush, Claudia M. Vega, Luis E. Fernandez
Centro de Innovación Científica Amazónica (CIN CIA), Madre de Dios, Peru



Mapping mercury – ecosystem services pathways

Common International Classification of Ecosystem Services (CICES)



Section
Provisioning (Biotic)
Provisioning (Biotic)
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Provisioning (Biotic)
Provisioning (Biotic)
Provisioning (Biotic)
Provisioning (Biotic)
Provisioning (Abiotic)
Provisioning (Abiotic)
Regulation & Maintenance (Biotic)

Provisioning (Biotic)	Biomass	Wild animals (terrestrial and aquatic) for nutrition, materials or energy	Wild animals (terrestrial and aquatic) used for nutritional purposes	<i>Animals by amount, type</i>	Exposure to MeHg through dietary consumption of fish, seafood and other wild animals
Provisioning (Abiotic)	Water	Surface water used for nutrition, materials or energy	Surface water for drinking	<i>By amount, type, source</i>	Exposure to inorganic mercury through drinking water, particularly near point sources
Regulation & Maintenance (Biotic)	Regulation of physical, chemical, biological conditions	Pest and disease control	Pest control (including invasive species)	<i>By reduction in incidence, risk, area protected by type of living system</i>	Mercury has been shown to be a factor modulating the competition between exotic invasive bivalves and their native competitors. Accumulation of mercury in certain IAS also prevents the use of such species for human consumption further complicating attempts to control invasive species through efforts to commercialize them for human consumption.



Mercury and Ecosystem Services

Exploratory assessment of ecosystem-service valuation tools and applicability to mercury-related policies

mapped pathways to 33 ecosystem services

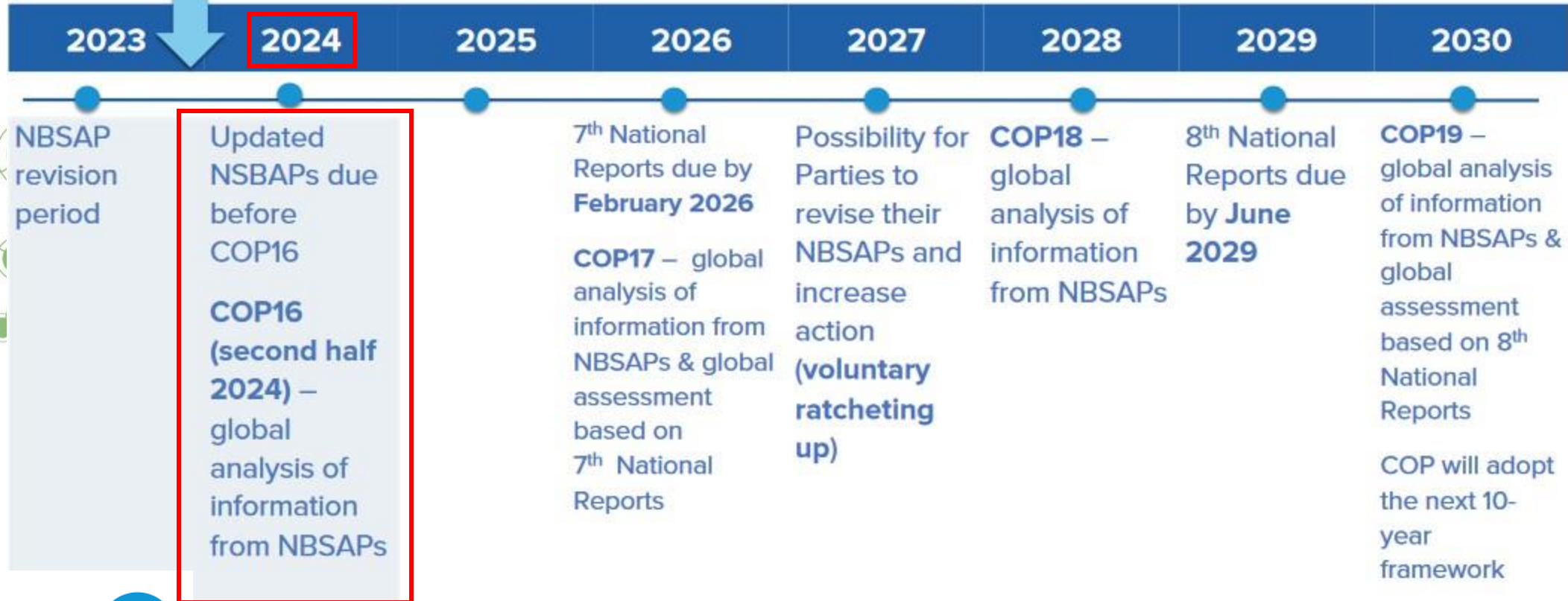
Planning and financing mercury & biodiversity action



GBF IMPLEMENTATION PROCESS



TIMELINE TO 2030



Monitoring and Evaluation

We will monitor progress towards delivering the EIP23 through the Annual Progress Report and the Outcome Indicator Framework. The framework contains 66 indicators, arranged into 10 broad themes. The relevant indicators for managing exposure to chemicals and pesticides are:

- H3** Emissions of mercury and persistent organic pollutants to the environment.
- H4** Exposure and adverse effects of chemicals on wildlife in the environment.
- J5** Prevent harmful chemicals from being recycled.

We provide long-term chemicals monitoring in England to assess and manage risk from substances known to be harmful and inform policy development. Defra will continue to develop monitoring methods to allow water bodies to be scanned for a broad range of chemicals beyond those already monitored. This information, along with established targeted screening, will be fed into the **prioritisation and early warning system programme** to inform decision making and regulation.

We have

- Substances being considered as negligible
- Seek to reduce our consumption
- Reduce the use of chemicals
- At UN Sustainable Development Goals by 2030

Government

Environmental
Improvement
2023

Division of the
Environment Plan



Focal Areas

Leveraging environmental expertise for lasting change



Biodiversity



Chemicals & Waste



Land Degradation



Capacity Development



Climate Change Adaptation

Global Biodiversity Framework Fund

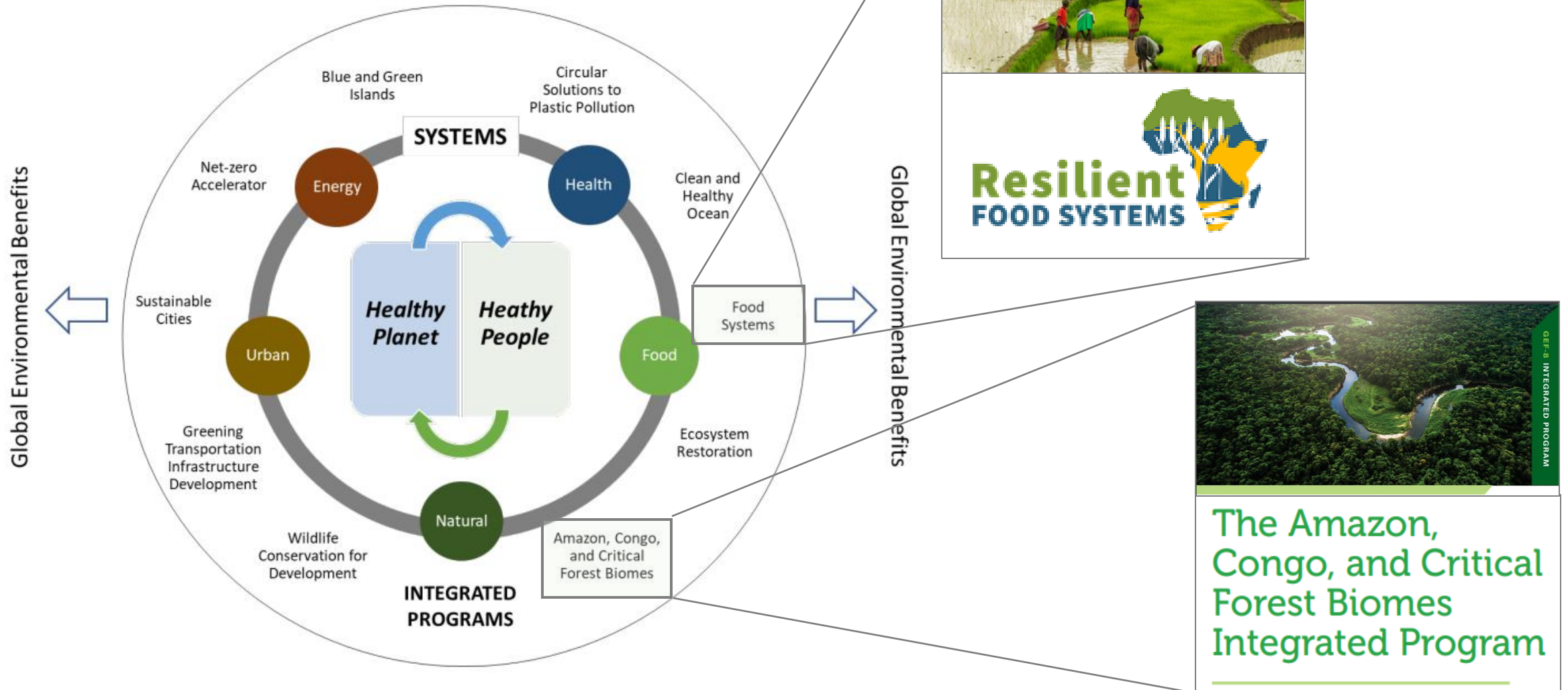
GEF Council provides \$1.4 billion boost for environmental action

PRESS RELEASE / June 26, 2023

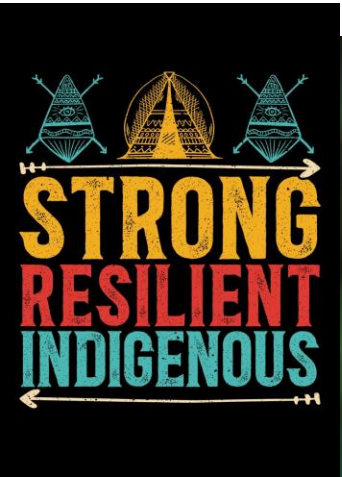
The funding package includes support for **136 countries** and has a significant focus on action to address **species and habitat loss, in line with the Kunming-Montreal Global Biodiversity Framework**. It spans 94 percent of all countries eligible for GEF support, which include **developing countries, countries with economies in transition, Least Developed Countries**, and Small Island Developing States.



GEF-8 Integrated Programs



Resource mobilization – GEF



What to expect at COP-5



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

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 measures 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;

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

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 COP at its sixth meeting.