



**United Nations
Environment
Programme**

UNEP Global Mercury Partnership
Advisory Group
Tenth meeting
Geneva, 23 November 2019

**Report on activities undertaken within the Global Mercury
Partnership of the United Nations Environment Programme**

Note by the secretariat

The Overarching Framework of the UNEP Global Mercury Partnership outlines that one of the functions and responsibilities of the Partnership Advisory Group is to report on activities undertaken within the UNEP Global Mercury Partnership.

The annex to the present note sets out a report on such activities. The report has been drafted by the Secretariat of the UNEP Global Mercury Partnership, reflecting input received from Partnership areas on their activities during the period from August 2018 to October 2019.

The Partnership Advisory Group may wish to discuss and provide input on the report on activities, which could be the basis for future work of the Partnership.

Annex

Report on activities undertaken within the United Nations Environment Programme Global Mercury Partnership (August 2018–October 2019)

I. Introduction

Initiated in 2005 by a decision of the United Nations Environment Programme (UNEP) Governing Council¹, the Global Mercury Partnership (hereinafter referred to the “Partnership”) currently focuses its work on supporting timely and effective implementation of the Minamata Convention; on providing state of the art knowledge and science on mercury; and on delivering outreach and awareness raising towards global action on mercury.

The Partnership is structured around eight priorities for action or so-called “Partnership areas”: artisanal and small-scale gold mining, mercury cell chlor-alkali production, mercury air transport and fate research, mercury in products, mercury releases from coal combustion, mercury waste management, mercury supply and storage, and mercury releases from cement industry.

This report provides a list of the highlights of Partnership areas activities during the period from August 2018 to October 2019², as well as some of the future work planned. It is based on the input received from the leads and co-leads of each Partnership area.

II. Overview

Participation

The number of official partners of the Global Mercury Partnership is steadily growing:

- As of 1 November 2019, there were 195 official partners of the Partnership, including 34 governments, 9 intergovernmental organizations, 68 non-governmental organizations (NGOs), 43 industry as well as 41 academia and others.
- Some partners are global industry partners or federations of civil society organizations that collaborate with and represent a large number of national entities/associations. In addition, the Partnership works with a number of stakeholders that have not yet officially joined. The Partnership also closely collaborates with the Secretariat of the Minamata Convention.

Organisation

Individual Partnership areas are led by the following organisations:

- Artisanal and small-scale gold mining: The Natural Resources Defence Council (NRDC), the United Nations Environment Programme (UNEP) and the United Nations Industrial Development Organization (UNIDO)
- Mercury cell chlor-alkali production: The United States Environmental Protection Agency and the United Nations Industrial Development Organization (UNIDO)
- Mercury air transport and fate research: The National Research Council (CNR)³ - Institute of Atmospheric Pollution Research, Italy and the Biodiversity Research Institute (BRI)
- Mercury in products: The United States Environmental Protection Agency
- Mercury releases from coal combustion: The International Energy Agency Clean Coal Centre and the Macquarie University (Australia)

¹ UNEP Governing Council Decision 23/9

² With respect to the Partnership Area on mercury supply and storage, the reporting covers the period from July 2017 to October 2019

³ Consiglio Nazionale delle Ricerche

- Mercury waste management: The Ministry of the Environment of Japan and the Graduate School of Global Environmental Studies, Kyoto University (Japan)
- Mercury supply and storage: The Ministry for the Ecological Transition⁴ of Spain and the Ministry of Housing, Territorial Planning and Environment⁵ of Uruguay
- Mercury releases from cement industry: The Global Cement and Concrete Association (GCCA)

Partnership Advisory Group

The Overarching Framework of the UNEP Global Mercury Partnership establishes a Partnership Advisory Group to, amongst others, serve the Partnership and encourage the work of its Partnership areas. Composed of up to 25 members, its membership includes Partnership Area leads, partners nominated by the Partnership areas and other representatives. Observers may also attend meetings of the Partnership Advisory Group.

During the reporting period, the Partnership Advisory Group held its ninth meeting on 18 November 2018 in Geneva⁶. Its tenth meeting will take place on Saturday, 23 November 2019 in Geneva, back to back with the third meeting of the Conference of the Parties to the Minamata Convention.

Delivery

The activities of the Partnership were delivered in the form of the following:

- Guidance materials
- Information gathering and exchange
- Advocacy and awareness raising
- National and regional strategy planning
- Demonstration projects

Detailed activity reports from individual Partnership areas are provided in the next section.

III. Activity Report by Partnership Area

1) Artisanal and small-scale gold mining (ASGM)

- a) The objectives of the Partnership Area are the continued minimization and elimination, where feasible, of mercury uses and releases in artisanal and small-scale gold mining.

Lessons learnt and ways forward: Creating alternatives to mercury amalgamation continues to be a key challenge, one that is being tackled by many partners, as described in the key activities section below. Alternatives should be affordable, cleaner and more efficient at extracting gold, a combination that is well recognized by international agencies, governments, NGOs and academics. However, such a major change in processing requires continuous efforts in formalization, education and organization of miners. Bottom up approaches, involving the miners, are essential.

In addition to finding alternatives to mercury amalgamation, alternative business practices may also be considered. Increasing technical and regulatory assistance as well as government support in mining areas and increased consideration of miners' needs, motivations and skills may enable changes in reducing polluting practices, as well as supporting law enforcement against illegal mercury importers, smugglers and sellers.

- b) Key activities in the Partnership Area include:

The Partnership Area chose to report on key activities by partners. Below are the activities undertaken by partners during the reporting period. Joint work is displayed per project, in order to avoid repetition:

- GEF planetGOLD programme:

⁴ "Ministerio para la Transición Ecológica"

⁵ "Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente"

⁶ The report of the meeting as well as other meeting documents may be found at: <https://web.unep.org/globalmercurypartnership/partnership-advisory-group-meeting-9>

- UNEP, UNIDO and NRDC, launched the planetGOLD programme in London in February 2019. This global programme is funded by the Global Environment Facility (GEF) and led by UNEP. It is implemented by Conservation International, the United Nations Development Programme (UNDP), UNEP, and UNIDO, in collaboration with a range of executing partners. The planetGOLD Programme will help gold miners replace toxic mercury with cleaner techniques, as well as improve access to finance and facilitate formalization of the sector. The Programme works in eight countries (Burkina Faso, Colombia, Guyana, Indonesia, Kenya, Mongolia, Peru and the Philippines), and has a global knowledge management and communications component. The launch was attended by approximately 100 participants from the finance sector as well as jewellers and other downstream gold buyers, NGOs, government representatives and ASGM experts. Since the launch, UNEP, UNIDO and NRDC have been working on the main elements of the global project, including outreach to the investment sector, development of knowledge management tools and materials and a communications strategy. UNEP has also been developing the programme website and supporting other communication activities, while UNIDO has been actively developing plans for a major Global Forum on ASGM to be held in 2020.
- Artisanal Gold Council (AGC) contracted teams of local employees in Mongolia and the Philippines to initiate activities for the GEF planetGOLD⁷ project “Contribution Towards the Elimination of Mercury in the Artisanal and Small-Scale Gold Mining Sector: From Miners to Refiners”, and is executing the project in Burkina Faso: “Contribution Towards the Elimination of Mercury and Improvement of the Gold Supply Chain in the Artisanal and Small-Scale Gold Mining Sector”. Under the Global Knowledge project AGC continues to engage with the finance and investment community and furthermore generally conducts research and development of technical and training solutions around ASGM.
- Levin source supported a scoping Study on the artisanal gold sector in Niger to assist project preparation for the GEF planetGOLD project.

- GEF funded National Action Plans on artisanal and small-scale gold mining

UNEP has provided technical support to 25 countries developing National Action Plans on ASGM (NAP), including:

- Launching of the “Handbook: Developing National ASGM Formalization Strategies within National Action Plans”, in English, French and Spanish. The Handbook was developed in collaboration with UNITAR;
- Launching of the “Quick Start Guide for managing mercury trade in artisanal and small-scale gold mining”;
- In collaboration with the Africa Institute, hosted the Regional African NAP workshop “Defining the road ahead: Lessons learned in developing National Action Plans for reducing mercury use in ASGM” in Eswatini in May 2019. Representatives from 18 countries from the region attended the workshop;
- Using in house experts and utilizing peer review system, provided technical comments on the draft NAP documents of 8 participating countries; and,
- Provided “help desk” services and consultations on the development of NAP to participating countries.

UNIDO completed 2 out of 9 UNIDO-implemented National Action Plan projects and submitted the final NAP reports, received new approvals of Angola and Rwanda NAPs by the GEF Secretariat.

Artisanal Gold Council (AGC), in the GEF funded NAP projects implemented by UNEP or UNIDO, supported the governments of Burkina Faso, Mali, Senegal, Gabon, Peru, Laos and Ecuador in producing National Action Plans.

Projekt-Consult GmbH, in the frame of the market based Better Gold Initiative (BGI) Projekt-Consult, with funding from the Swiss State Secretariat for Economic Affairs

⁷ Global Opportunities for Long-term Development

(SECO) and the Swiss Better Gold Association (SBGA), supported to the Peruvian Government in the elaboration and socialization of the National Action Plan for ASGM.

- Artisanal Gold Council (AGC)
 - Sustainable Development of Artisanal and Small-Scale Gold Mining in Indonesia with funding from Global Affairs Canada;
 - Developing Training Materials to Promote the Reduction of Mercury use in ASGM in Peru, Indonesia, Philippines and Papua New Guinea with funding from the Asia-Pacific Economic Cooperation;
 - Increased Transparency and Control of Mercury in Peru with funding from the US Department of State;
 - Abating Mercury Emissions via Mobile Processing Units for Small-Scale Gold Processing in Suriname with funding from the US Department of State;
 - Strengthening of responsible practices in economic, social and environmental development in ASGM in Guinea with funding from the German Association for International Cooperation (GIZ)⁸ (completed); and,
 - Reducing the Supply of Mercury available for use in the Andean ASGM sector in Peru with funding from the US Department of State (completed).

- Alliance for Responsible Mining (ARM)

ARM supported the following mining entities in the improvement of their processing methods:

- In Colombia, the “Cooperative Multiactiva Agrominera of Iquira municipality” and “La Fortaleza Association – La Gualconda Mine”;
- In Peru, “Central de Cooperativas Minero Metalúrgicas de Puno” (CECOMIP);
- In Honduras, “the Minas y Cuevas S.A.”; and
- In Burkina Faso, Pilot Experiments in Zorgho and associated municipalities, Ganzourgou Province.

Lessons learnt include that continuous support with mining organisations brings sufficient confidence to miners to allow them jump to better technology and efficiency in the process, even with difficult financial decision. It leads to permanent changes, and a way toward a definitive drop of the mercury techniques. The intermediate steps which consist in reducing the mercury use by optimising the concentration phase aim at helping miners in better accepting the change in their methods, and at better caring for water usage and tailings management. The technical support of metallurgists also greatly helps convince miners, through tailor-made solutions based on detailed mineralogical analyses.

- ASSM Consult ApS

ASSM ApS has, in cooperation with the EU funded PanAfGeo programme and the French funded GEMMAP programme, carried out:

- Trainings on ASM, including technologies and processing related to ASGM: in November 2018 in Lilongwe, training of more than 50 trainees from Malawi, Kenya, Tanzania, Sudan, Mozambique, Rwanda and Angola; in June 2019 in Dakar training in French of more than 50 trainees from 9 French speaking countries in Western Africa.
- Development of handbooks resulting from the trainings: “The ASM handbook for Malawi – with a regional perspective” and “The regional ASM handbook for Western Africa” or “La Mine Artisanale in Afrique de l’ouest Francophone”; and,
- Finalized a study on “Inventory of the ASM sector in Malawi” in August 2019. This inventory concludes that mercury has not really been introduced in Malawi, but with influx from Mozambique and Zambia it remains a question of time.

⁸ Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

- European Environmental Bureau / Zero Mercury Working Group (EEB/ZMWG)
 - In 2018-2019, together with the UNDP Small Grants Programme (SGP), the EEB/ZMWG have organized three regional workshops (Asia – Bangkok, Africa – Lusaka, Latin American and Caribbean – Panama) under the project, “Building Local to Global Coalitions for Chemicals and Waste Management, Towards Zero Mercury Use, Supply, Trade and Emissions.” The objective of the workshops was to develop the capacity of NGOs to design and implement mercury reduction projects with SGP funds. Ninety participants have been directly trained, from 51 countries. ASGM was a central topic in all three workshops, considering its prominence in the three regions.
 - Building on a previous project on artisanal and small-scale gold mining (ASGM), in 2019, ZMWG partner AGENDA continued to assist the government of Tanzania in carrying out its ASGM NAP, as well as assisting the Federation of Miners Association of Tanzania (FEMATA) in organizing its annual general meeting (held at the end of August 2019), and ensuring that miner’s perspectives are included into the National Action Plans on ASGM.

- Futura Jewelry

Futura Jewelry's worked on the following actions:

- Assembling 100% mercury-free jewelry products as an alternative choice for consumers, made from gold from certified artisanal small-scale mines with clean, mercury-free mining practices;
- Awareness raising activities: Futura website as well as blog posts providing information that supports the UN mission, enlisting support of social media influencers spreading the word to their followers, podcasts (including "Hey Change" and "Green Dreamers"), and the creation of Instagram @futurajewelry to consistently communicate and educate;
- Participated and donated to Pure Earth initiative 20 Years of Pollution Solutions;
- High-level meetings with major department stores including industry leader - Bergdorf Goodman in New York to participate in stocking, promoting and communicating with their customer base the option of mercury free gold jewelry;
- Confirmed participation with the WEBSTER specialty store in New York as the only featured jewelry option to be promoted on their Sustainability Day during NY Fashion Week. With focus being on certified Ecological Fairmined gold and how it directly helps reduce worldwide mercury emissions;

Currently in discussions with major Hollywood actress to enlist support on the mission; and creating a comprehensive jewelry industry report outlining the facts around the problem; how mercury is used in the process; how widespread the problem is; the effects on communities, women, children, ecosystems; and the solutions. Once finalized, the report will be released to the media.

- International Commission on Occupational Health (ICOHs)

ICOHs and the Scientific Committee MinOSH (Mining Occupational Safety and Health) have this year participated in conferences to promote topics on OSH in Mining, especially prevention of silica dust and Tuberculosis (TB) and mercury pollution from artisanal and small scale gold mining (in March 2019 at the 3rd International Occupational and Environmental Diseases Congress, Turkey; and SASOM-MEDICHEM Joint Congress 2019 and OSHAfrica 2019 Conference in South Africa in July-September 2019).

MinOSH is, through the Danish Society of Occupational Medicine, supporting actions with the Danish NGO Dialogos on mercury-free ASGM and a project on mercury-free mining elaborated for Bolivia is about to be presented to donors.

- IMPACT Transforming Natural Resources Management (IMPACT)

IMPACT implemented a number of projects and activities to contribute to the elimination of the worst practices and support innovative market-based approaches.

- As part of the Just Gold project in north-eastern Democratic Republic of the Congo (DRC), funded by Global Affairs Canada: established a gravimetric mercury-free gold processing plant for the partner mining cooperative (plant envisaged to be fully operational during the current year); improved processing of mercury-free alluvial gold mining in mine sites where the Just Gold project is active; raised awareness on mercury reduction amongst women miners; promoted environment risk mitigation, mine rehabilitation and reforestation and supported the partner mining cooperative to develop an implementation strategy to tackle these challenges; supported the partner mining cooperative in implementing the Just Gold Traceability and Due Diligence System, to allow regular exports of conflict-free artisanal DRC gold onto the international market. Gold sold by the cooperative through the Just Gold project is accompanied by robust supply chain data collected by the cooperative.
- Began the implementation of the Just Gold project in Côte d’Ivoire with funding from the European Union. The project will implement the Just Gold Traceability and Due Diligence System, while providing technical assistance to miners, specifically focused on reduction of mercury use.
- Collaborated with UNITAR for the development of an ASGM Formalisation Index to measure and assess the level of formalisation during the implementation of National Action Plans and the Minamata Convention.
- Continued development and implementation of IMPACT’s Planning, Monitoring and Learning System (PML) for impact monitoring, to improve understanding of our interventions on including formalisation, mercury reduction, traceable supply chains, and due diligence initiatives.

- Levin Sources

During the reporting period, Levin Sources supported governments in setting national objectives/targets through the following projects:

- Feasibility study for the development of the National Society of Refining and Gold Processing (SATO);
- Technical assistance for the gold mining programme of the African Parks Network in the Democratic Republic of the Congo;
- Facilitating the revision of Certified Trading Chains in the Democratic Republic of the Congo;
- Development of an ASM ICGLR strategy for ASM-Gold due diligence in the Great Lakes Region;
- Sharing expertise and advise to address ASM in a round table on gold mining in Mali; and,
- Conducting a baseline study of mining and socio-economic development in Central African Republic.

In parallel, in order to eliminate the worse practices and promote alternatives, Levin Sources worked on exploring innovative market-based approaches, by working on the Commercially Viable and Conflict Free Gold (CVCFG) programme, which aims at establishing a sustainable, conflict-free, artisanal and small-scale mining (ASM) gold supply-chain originating in Eastern Democratic Republic of Congo.

Furthermore, Levin Sources has been working with downstream actors to support their responsible sourcing processes including on the ground risk assessments, the development of due diligence procedures, the identification of responsible sources, etc.

- Mine Research

A 6-year field program was designed for the UNDP Guyana: “Strengthening the enabling framework for biodiversity mainstreaming and mercury reduction in small-scale gold mining operations” (GEF ID number: 9565). The expected starting date is September 2019.

The project will reduce deforestation through the introduction of improved exploration methods (geophysics-guided micro drilling) and community-based forest restoration

practices (adapted from the Frugal Rehabilitation Methodology piloted in Mongolia for the Asia Foundation in 2016). Mercury releases will be reduced by about 10 tonnes over the lifetime of the project through the elimination of whole ore amalgamation and the introduction of low cost, higher efficiency gravity recovery options. The project aims to bring training to the mine sites, through a team of Guyanese experts based in the rainforest.

- Pact Mines to Market

Since 2018, Pact has produced two publications, with specific case studies in 8 countries (a draft report of which will be open for public review and inputs in September 2019).

- In Zimbabwe, Pact has been working with ASGM communities since 2014. In 2019, Pact Zimbabwe activities included the release of a film on mercury’s risks among women miners in Zimbabwe, government support for Minamata Initial Assessment (MIA) and National Action Plan (NAP) reports and under UNDP contract, project on longer term ASGM sector development objectives;
- In Indonesia, Pact supports since July 2019 the ISMIA Project (GEF GOLD Indonesia), on “Assessment and Capacity Development of business and financial products in the ASGM sector”;
- In Nigeria, Pact, supported by DFAT (Australia), trained miners in awareness and safer mining practices.
- In Colombia, continued work on “Somos Tesoro” Project funded by USDOL, focused on protection of miners, generating economic stability in families; and protecting and giving access to education to children; and,
- In Myanmar, assessed the ASGM sector in 2018-2019, and is undertaking a pilot project with ASGM communities in Homalin Township, Sagaing Region with a focus on mercury-free processing options/business models, in coordination with the Sagaing state level government and the respective ministry.

- Pan American Health Organization (PAHO)

PAHO/WHO: The Virtual Campus course “Mercury effects in human health and the environment and considerations under the Minamata convention” is currently under implementation for both Spanish and English editions. The Spanish edition has been attended by 60 participants from 15 countries, led by an academic team of regional experts from Nicaragua, Honduras, Costa Rica and Panama. The English edition has been attended by 50 participants from 14 countries, including Guyana and Suriname. The academic team was led by experts from Jamaica, Panama and Costa Rica. ASGM is an important topic of the course. Course participants commented on the large amount of useful resources available, covering different aspects of the Convention.

- Projekt-Consult GmbH

In the frame of the market based Better Gold Initiative (BGI) Projekt-Consult implemented the following activities with funding from the Swiss State Secretariat for Economic Affairs (SECO) and the Swiss Better Gold Association (SBGA) during the reporting period:

- In Bolivia, mercury baseline study for the small-scale mining sector in coordination with the Ministry of Mines and Metallurgy, and clean technology implementation in different Gold mining cooperatives to eliminate and substitute the worst practices, especially whole ore amalgamation; as well as study tours of Bolivian miners to Peru to learn about amalgamation substitution technologies;
- In Colombia, policy dialogue and events about the use of mercury in the ASGM sector, Clean technology implementation to substitute amalgamation in ASM operations; Building-up and consolidation of a responsible “Better Gold” supply chain from Colombian artisanal miners (“barequeros”) to Switzerland with mercury-free produced gold; and
- In Peru, organization of clean technology events to reduce/eliminate the use of mercury in selected ASGM regions in Peru, together with the Peruvian Government, Support of clean technologies in Peruvian ASGM operations, among

others “improved quimbaletes” to avoid whole ore amalgamation and shaking tables and cyanidation plants to substitute amalgamation.

Finally, in Togo, an assessment of the components of the artisanal and small-scale mining (ASM) management was conducted and support was provided for the implementation of the ASM management strategy (as part of the “Projet de Développement et de Gouvernance Minière” funded by the World Bank in Togo).

- Pure Earth (formerly Blacksmith Institute)

With funds from the US Department of State, the EU Delegation of Mongolia and China, the US Agency for International Development and others, Pure Earth recent work includes the following efforts:

- Assessing exposure risks to mercury at more than 500 sites globally including ASGM sites, gold shops and residences, and submitting recommendations on best practices for assessing mercury contaminated sites to the Minamata Convention;
- Mercury reduction and phase out projects transitioning artisanal and small-scale miners to more lucrative, safer, environmentally friendly practices in Bolivia, Mongolia, Peru, and Indonesia. In Mongolia, Pure Earth transitioned more than 1000 miners to mercury-free ASGM practices. Pure Earth will partner with Yayasan Tambuhak Sinta on ASGM work through the UNDP led GEF GOLD project in the near future. In Peru, Pure Earth trained more than 200 miners in mercury free methods, including miners certified to train miners moving forward;
- Remediation of land degraded by ASGM in Peru including restoration of 3.5 hectares of Amazon rainforest in Madre de Dios;
- Piloting effective approaches to recapture mercury and gold from ASGM tailings in Colombia, Peru and the Philippines;
- Partnering with the private sector, including the US based gold refinery of Hoover & Strong and many US based jewellers to promote awareness raising about dangers of mercury use in gold, and stimulate demand for mercury-free gold, through an auction of mercury-free gold jewellery and consumer facing programs promoting responsibly sourced gold; and,
- Pure Earth was awarded a 3-year grant from The Tiffany & Co. Foundation to continue training miners in mercury free mining in Madre de Dios and restoring rainforest degraded by ASGM.

- Sustainable Alluvial Mining Services (SAMS): Esa'ala ASGM Pilot Project (Papua New Guinea)

The Sustainable Alluvial Mining Services (SAMS) is engaged in a pilot project initiated by a local government authority to achieve sustainable rural development driven by revenue generated from responsible artisanal small-scale mining activities.

- The first phase of the four-phase project was implemented by a team of young mining professional volunteers. This included the organization of local miners into legal mining entities and the establishment of ASGM desks. So far, registrations include two Small Scale Mining Associations, an ASGM desk created at the District level and a female small-scale Mining Association;
- SAMS Technical experts based in Australia has also created a simple gold recovering equipment, which eliminates almost entirely the risk of spillage or loss, the risk of inhaling mercury vapour, and the risk of environmental contamination; and,
- Co-facilitating the Asia-Pacific Economic Cooperation-funded Workshop on Business Training for ASGM Miners together with the Artisanal Gold Council.

- Technisches Buero für Bergwesen Hruschka (TBB.HRU)

TBB.HRU finalized a research commissioned by UNIDO to develop technical solutions for the combined mercury-lead contamination in Nigeria, where ASGM was found to cause massive lead (Pb) poisoning in Zamfara and Niger State, particularly fatal for children. The credibility of any mercury related intervention in the Nigerian ASGM sector requires therefore necessarily to address lead contamination by ASGM as well. Considerable efforts on Pb remediation have been undertaken in the past, but prevention of re-contamination remains a challenge. The innovative key finding of this investigation is that Pb bioavailability can be significantly reduced by applying additives during mineral processing. This allows to “detoxify” the “toxic gold ores”; not completely but to a very considerable degree in the range of 80-95%.

- UNIDO:

As specialized agency of the United Nations, UNIDO has developed a substantial project portfolio to assist countries in fulfilling their obligations under the Minamata Convention. Beyond the NAP work, UNIDO commissioned of a study on mercury and gold trade flows and regulatory frameworks and coordination between relevant government bodies. UNIDO also extended a Memorandum of Understanding with the gold refiner Argor-Heraeus S.A for work on the artisanal and small-scale gold mining supply chain.

c) Planned future activities include:

- As some countries are now finalizing the development of their NAPs, the Partnership Area will focus on activities that support implementation of these plans, as well as support sharing of NAP experience among governments.
- Given the critical role of the private sector in reducing mercury use through creating clean supply chains, the Partnership Area will also work to attract more private sector partners and foster their collaboration and engagement.
- Additionally, as further research is undertaken to develop technical solutions and to monitor the success of the Convention, the Partnership Area will continue to act as a critical information sharing mechanism amongst Parties to the Convention.

2) **Mercury cell chlor-alkali production**

a) The objectives of the Partnership Area are to:

- Prevent the construction of new mercury-cell chlor-alkali production facilities;
- Reduce mercury emissions and use from existing mercury-cell facilities;
- Encourage conversion to non-mercury processes;
- Reduce or eliminate mercury releases from waste generated by chlor-alkali production facilities including waste from conversion to non-mercury processes; and
- Promote environmentally-sound options for storage of surplus mercury to limit downstream releases from surplus mercury generated by the conversion, phase-out, or closure of mercury-cell chlor-alkali facilities.

b) Key activities in the Partnership Area include:

- UNIDO on behalf of the Partnership Area visited the remaining chlor-alkali plant in Indonesia still using mercury and advised the plant ownership on the relevant Convention date for phaseout. The government was also briefed on this visit and its findings.
- UNIDO and ABICLOR on behalf of the area have been coordinating efforts to assist the remaining 4 chlor-alkali plants in Brazil to phase-out mercury from their operations. These efforts have included facilitating the search for financing for both replacement with membrane facilities and treatment, stabilization and disposal (storage) of the mercury wastes.
- CLOROSUR, the Latin American Chlorine, Alkali and Derivatives Industry Association is exploring a similar effort that would address the needs of other facilities in Latin America.

- The Partnership Area and the mercury waste management Partnership Area have pursued additional joint missions to identify the needs and challenges faced by chlor-alkali producers both for financing the conversion process and for addressing the management and disposal of mercury wastes.
- c) Planned future activities include:
- Continuing to collect more information from countries on ongoing and potential conversion projects;
 - Providing technology advice for potential conversions;
 - Facilitating the access to financing for promising potential conversion projects; and
 - Increasing the focus on addressing stocks management and disposal for converted facilities.

3) Mercury air transport and fate research

- a) The objective of the Partnership Area is to increase global understanding of international mercury emissions sources, fate and transport, by:
- Accelerating the development of sound scientific information in global mercury cycling and its patterns;
 - Enhancing compilation and sharing of such information among various stakeholders;
 - Providing technical assistance and training;
 - Enhancing the development of a globally-coordinated mercury observation system including air and water ecosystems; and
 - Enhancing the exchange of information and cooperation with relevant International Organizations, Groups and Programmes.

- b) Key activities in the Partnership Area include:

- To support the preparation of documents related to mercury monitoring under the ad-hoc technical expert group on effectiveness evaluation. The resulting documents are provided on the Minamata Convention website for review to prepare for formal discussions at the third meeting of the Conference of the Parties to the Convention.
- To support the preparation of the 2018 Global Mercury Assessment (GMA)⁹:

As requested by the UNEP Governing Council¹⁰, UNEP, in collaboration with the Arctic Monitoring and Assessment Programme (AMAP) has developed an update of the Global Mercury Assessment (GMA) 2013, which had been launched at the second meeting of the Conference of the Parties to the Minamata Convention. This report was prepared by teams of experts and peer-reviewed for scientific quality.

The work includes two reports:

- A Technical Background Report, (prepared in cooperation with AMAP), and
- A Summary report for policy makers.

CNR-IIA, in close cooperation with many international scientists, has lead chapter 4 “Levels of mercury in air” of the Technical Background Report (chapter 4 reports the list of all contributing experts and institutions). The chapter provides an overview of atmospheric mercury measurements and regional/worldwide spatial and temporal trends with a focus on measurements currently collected in regional monitoring networks around the world.

BRI has generated a new chapter on “Mercury Concentrations in Biota”. The chapter was based on BRI’s Global Mercury Synthesis (GBMS) database and describes the spatial gradients and temporal trends of mercury exposure and effects in fish and wildlife for around the world.

⁹ <https://www.unenvironment.org/resources/publication/global-mercury-assessment-2018>

¹⁰ Decision 27/12: Chemicals and waste management, 2013

- To facilitate the dialogue between the Partnership Area and on-going programmes such as the Group on Earth Observation (GEO) Flagship on “Global Observation System for Mercury - GOS4M”;
- To support countries and individuals to improve monitoring capabilities in their own countries;
- To promote continuous studies on mercury contamination in air and marine systems, several ad-hoc field campaigns have been organized and carried out in different parts of the world:
 - In this framework, ERA-PLANET “the European Network for Observing our Changing Planet” programme has been developed and is under implementation;
 - ERA-PLANET is an ERA-NET Co-fund action under the EU Horizon 2020 Framework Programme (Grant Agreement number 689443), which aims to strengthen the coordination of European research programmes in the field of Earth Observation (EO), within the Group on Earth Observations¹¹ and the European Earth observation Copernicus programme¹²;
 - Within this programme, the projects iGOSP “Integrated Global Observing Systems for Persistent Pollutants”¹³ and iCUPE (Integrative and Comprehensive Understanding on Polar Environments)¹⁴ are under implementation. iGOSP aims to develop a new paradigm for real-time monitoring of the quality of our environment with reference to the contamination of air, water and terrestrial ecosystems by persistent pollutants. The overarching objective of this project is the development of a fully integrated system of advanced sensors (based on nano-structured advanced materials) for major persistent pollutants coupled with state-of-the-art interoperable systems for data sharing and data management. iGOSP aims to better understand the dynamic processes of mercury and other persistent pollutants in the polar environments and to assess the fate of these contaminants between different environmental compartments.
- To foster the cooperation with other organizations involved in the Minamata Convention implementation including, but not limited to:
 - In cooperation with UNEP, WHO and other partners, a pilot project funded by the GEF “Development of a plan for global monitoring of human exposure to and environmental concentration of mercury” has been carried out to harmonize approaches and strengthen capacities for accurate monitoring and analyses of mercury concentration in human and the environment. Ad-hoc field campaigns have been carried out in different countries with passive air samplers and active systems to monitor mercury levels in air. This activity is aimed to assess the impact of mercury levels in air on human exposure of different population groups in WHO-selected contaminated sites. This project aims, specifically, to provide key elements towards harmonized approaches for developing a global mercury monitoring plan, and to strengthen the capacity for mercury analyses in humans and in the environment (for further information on the project, see UNEP website¹⁵).
 - Under contract with UNEP, BRI produced a report to “Develop a plan for global mercury monitoring using biota” following a workshop in Monaco in May 2019. This report is an add-on to the above mentioned GEF funded UNEP-WHO-CNR project.
 - In cooperation with UNEP, a pilot project was conducted by IPEN and BRI to measure mercury levels in humans (using hair) in multiple countries in Asia and elsewhere. The first round of such global analyses of mercury in humans and fish was completed and is now, respectively, published (humans) and submitted for publication (fish). In partnership with IPEN, BRI is conducting an awareness-

¹¹ GEO, www.earthobservations.org

¹² www.copernicus.eu

¹³ www.igosp.eu

¹⁴ www.atm.helsinki.fi/icupe

¹⁵ <https://www.unenvironment.org/events/workshop/workshop-elements-towards-global-monitoring-plan-mercury>

raising effort on mercury exposure in humans (based on hair samples) in 15-20 small island developing States with an emphasis in the Caribbean Region in close collaboration with the Basel Convention Regional Centre – Caribbean.

- In partnership with the Zero Mercury Working Group (ZMWG), BRI is conducting an awareness-raising effort on mercury in cosmetics for participating countries from around the world with an emphasis in the Caribbean Region, in close collaboration with the Basel Convention Regional Centre-Caribbean.
- In cooperation with the GEF Scientific and Technical Advisory Panel and the Society of Environmental Toxicology and Chemistry, a pilot project to develop a global biotic mercury database (called Global Biotic Mercury Synthesis) and gauge interest in a centralized, web-based platform among stakeholders to the Minamata Convention was completed. Phase 2 planning is in progress.
- Multiple communication pieces were generated by BRI to assist Minamata Convention delegates better understand mercury in the environment and in the products that we use. Those pieces were displayed at the first and second meetings of the Conference of the Parties to the Minamata Convention and will again be distributed, along with new information, at its third meeting (COP3).
- Under contract with UNEP, BRI is generating a synthesis of the mercury inventories contained in Minamata Initial Assessments for 43 countries to the Global Mercury Assessment process and will present them at various forums, including COP3, to increase understanding of patterns and trends of mercury in developing countries. BRI is conducting Minamata Initial Assessments for over 35 countries – 26 of which have been completed;

c) Planned future activities include:

- The Partnership Area intends to contribute to a global coordinated observing system for mercury to provide high-quality and comparable global data, in cooperation with countries and other stakeholders. The cooperation with on-going programmes such as the GEO GOS4M Flagship⁴ will be a key milestone and is instrumental to the future activities and achievement of goals set by the Partnership Area. The aim is to monitor mercury levels in air at rural/background and contaminated sites and marine systems, including biota samples by means of harmonized methods and contribute to the Minamata Convention implementation.
- The Partnership Area also aims to support the development of a biomonitoring toolkit that can quantitatively assist countries in how, when, where and what to bio-monitor within their countries, so capacity building and cost-effective approaches can be used in a standardized way around the world – facilitating an understanding of spatio-temporal patterns at regional and even global levels, once country results can be summarized.
- As partner with Antigua and Barbuda, BRI is collaborating on a new project supported under the Specific International Programme of the Minamata Convention: “Facilitating capacity-building with technical assistance and technology transfer for managing mercury in the Caribbean”.

4) **Mercury in products**

a) The objectives of the Partnership Area are to:

- Phase-out and eventually eliminate mercury in products and to eliminate releases during manufacturing and other industrial processes via environmentally sound production, transportation, storage, and disposal processes.

b) Key activities in the Partnership Area include:

- **Report on the Harmonized Commodity Description and Coding System (UNEP Minamata Secretariat and Products Partnership):** As directed by Decision MC-2/9 adopted at the second meeting of the Conference of the Parties to the Minamata Convention (COP2) in November 2018, the Minamata Convention Secretariat and the Partnership area, as well as key partners and stakeholders, collaborated to draft a report and to identify and suggest "approaches for customs codes to identify and distinguish non-mercury-added and mercury-added products listed in Annex A to the Convention, including approaches for their possible harmonization."

- The report consists of sections to describe the existing universe of codes and protocol for the Harmonized Commodity Description and Coding System; review the various coding strategies used by the World Customs Organization, as well as national governments and regional entities; and suggest potential approaches to be considered by the COP, which draw from the totality of research conducted.
- After integrating comments received from the consultation process, the final report will be presented for consideration at COP3 (documents UNEP/MC/COP.3/5 and UNEP/MC/COP.3/INF/12).
- The overarching goal of this initiative, if implemented, is to help facilitate the phase out of the mercury-added products listed in Part 1 of Annex A of the Convention by 2020.
- In addition, enhancing data generated by the Harmonized System could allow for the collection of information distinguishing between mercury-added and non-mercury added products, which would facilitate implementation of Article 4 of the Convention, ease and improve overall reporting, and foster better communication among trading partners.
- This report built upon the Harmonized System survey previously conducted by the Partnership Area to determine the level of interest and support for a coordinated process to consider mercury-product specific customs codes.
- **Mercury-Added Product Reduction Projects in Kenya, Ivory Coast, India, Bangladesh and the Philippines (EEB/ZMWG):** EEB/ZMWG continued supporting NGO partner organizations in Kenya, Ivory Coast, India, Bangladesh and the Philippines, to carry out mercury-added product reduction projects.
 - All five countries are now implementing the projects using tools developed through an earlier multi-year project; since their inception in 2017, these projects have advanced in collaboration with respective governments and the tools piloted in Nigeria and Mauritius are also being utilized, in current partner countries, dependent on the stage of activities they are engaged in.
 - Kenya: The Center for Environmental Justice and Development (CEJAD) in Kenya carried out a legal gap analysis focusing on product phase outs. The analysis was utilized by the government to address Article 4 provisions. CEJAD also worked collaboratively with hospitals and the Ministry of Health in carrying out inventories of mercury-added products and as a result, procurement agencies are now in dialogue with the Ministry to ensure the supply of alternatives.
 - Ivory Coast: The “Centre Africain pour la Santé Environnementale” (CASE) in Ivory Coast is close to completing its study on alternatives to mercury-added products at the national level. They are also the ZMWG African regional testing hub for skin lightening creams and with our XRF screened samples from African NGOs. Their collaboration with the government has also contributed to the creation of legal text that will (amongst others) address Article 4 provisions.
 - India: Toxics Link in India has conducted extensive research, in relation to its study on alternatives to mercury-added products. Indian traders working with relevant Chinese products have reached out to Toxics Link to obtain information on imminent market changes.
 - The Philippines: Ban Toxics in the Philippines has become the ZMWG Asian regional testing hub and screened skin lightening cream samples with their XRF from Asian NGOs. Ban Toxics continues to collect data for their study on examining a national market transition towards Convention compliant alternatives.
 - Bangladesh: The Environment and Social Development Organization’s (ESDO’s) study looking at mercury free alternatives in Bangladesh is now in its final stages. ESDO has also been very engaged in the ZMWG’s skin lightening cream campaign and helped lay the groundwork for Bangladesh signing a decree limiting the content of mercury to 1 ppm in cosmetics, mirroring the provisions of the Minamata Convention.

- **Skin Lightening Cream Campaign (ZMWG):** ZMWG collaboration with NGOs worldwide has continued, notably with the establishment of two regional testing hubs in the Philippines (to cover Asia) and Ivory Coast (to cover Africa).
 - For this latest round of sampling of skin lightening cream products, a new protocol was developed, to focus on the following two areas: (1) creams tested previously by governments that contain high mercury levels marketed in local shops and on the internet; and (2) gathering information on government enforcement activities and opportunities for collaboration under the Minamata Convention to address the transboundary nature of the skin lightening cream commerce, since most countries import these products.
 - **Mercury Reduction Workshops in Bangkok, Lusaka, and Panama (EEB/ZMWG):** The EEB/ZMWG, together with the UNDP Small Grants Programme (SGP), carried out the project “Building Local to Global Coalitions for Chemicals and Waste Management, Towards Zero Mercury Use, Supply, Trade and Emissions.”
 - Since May 2018, three regional workshops (Asia, Africa, Latin American and Caribbean) were carried out under the project.
 - The objective was to develop the capacity of NGOs around the world to apply for and implement UNDP SGP grants for mercury reduction projects in their respective countries in the coming years.
 - The workshops were held in Bangkok (37 participants, representing 23 countries), Lusaka (30 participants, representing 18 countries), and Panama (31 participants, representing 14 countries); workshop participants included UNDP/SGP officials, EEB/ZMWG facilitators, and NGOs.
 - ZMWG disseminated relevant information, as well as lessons learned from their partners’ experiences in, amongst other issues, reducing mercury use in ASGM and phasing out mercury added products.
 - In addition, NGOs shared ideas on project and tools for tackling the challenges involved in various other mercury reduction activities.
- c) Planned future activities include:
- Continue to support efforts related to the report on HS codes initiative (e.g., coordinating meetings and assisting in sharing materials);
 - Exploring organizational modifications to enhance operations of the Partnership;
 - Continue to identify alternatives to mercury-added products;
 - Compiling a list of projects and other publicly available resources on mercury-added products and alternatives;
 - Sharing the progress of the U.S. mercury inventory and reporting rule; and
 - Looking forward in GEF7, UNEP is working with WHO to develop projects addressing some of the priorities identified in MIA projects. These include mercury use in dentistry, mercury-containing medical measuring devices and mercury in cosmetics.

5) Mercury releases from coal combustion

- a) The objective of the Partnership Area is:
- The continued minimization and elimination of mercury releases from coal combustion where possible. It also aims to provide technically sound information on cost effective approaches for enhancing reductions of mercury emissions, particularly for developing countries and countries with economies in transition. No numerical targets are established for this Partnership area.
- b) Key activities in the Partnership Area include:
- The Partnership Area has provided a training course on mercury monitoring and control for the Colombian Geological Survey and, during a visit to the Paipa Power Plant, provided site-specific guidance on mercury reduction and waste management. The workshop is to be repeated in Colombia in early 2020.

- The Partnership area leads are currently working on two medium-scale projects to reduce emissions from the coal combustion sector in emerging economies:
 - A US State Department NOFO project to evaluate and reduce mercury emissions from the coal combustion sector in Indonesia. This will involve evaluation of mercury emissions from all coal-fired plants in the region, current and impending, to identify potential plants for remedial action. Site visits, capacity-building and training will follow, along with on-site training and plant evaluation. Members of the Partnership area will be invited to propose demonstration projects for three selected plants. At least one demonstration project will be selected, subject to approval by the Indonesian government and utilities, and funding will be sought to move the proposed project into reality. This project may be followed up by a similar but significantly larger project in India.
 - The preparation of a proposal for a GEF project entitled: “Assessing the future contribution of the coal sector to the Minamata and Stockholm Conventions”.

This project is preparatory research to assess the future role of the coal sector in mercury emissions. Potential mercury emission reduction will be estimated for coal-fired power plants and industrial boilers in the major emitting countries using a range of emission scenarios and assumptions. The project will demonstrate the effect of Minamata Convention implementation on potential mercury emissions from coal facilities and provide information on the repercussions of neglecting this large industrial source.
- The annual Partnership Area meeting took place at the MEC (Mercury and multi-pollutant emissions from coal) workshop in Hanoi, Vietnam, from 28 to 30 October 2019.

6) Mercury waste management

- a) The objective of the Partnership Area is to:
 - Minimize and, where feasible, eliminate unintentional mercury releases to air, water, and land from waste containing mercury and mercury compounds by following a life cycle management approach.
- b) Key activities under this Partnership Area include:
 - **Catalogue of Technologies and Services on Mercury Waste Management**

This tool was developed to disseminate in an effective manner information on mercury waste management technologies, products, and services of partners. The Catalogue in its 2019 version is now available on the Partnership website and will be updated continuously¹⁶.

Partnership Area meetings

The Partnership Area held a face-to-face meeting on 6 October 2019 in Bilbao, Spain, in the margins of the 2019 International Solid Waste Association (ISWA) World Congress. The objectives of the meeting were to: review activities undertaken after the previous meeting in 2018 and discuss the way to enhance the activities; seek effective ways to collaborate with other framework relevant to chemicals and waste and identify ways to utilize existing schemes and capacities and to arrange additional tools and schemes that contribute to promote activities of Partnership Area.

The meeting discussed in particular the promotion of information sharing among partners; the dissemination of technical information (including the catalogue); and the contribution to the discussion under the Minamata and Basel conventions.

The meeting agreed the following proposed actions:

- Seeking effective ways to utilize the mailing list and the partnership website;
- Considering ways to develop “needs driven database” by creating format to collect information on needs challenges related to mercury waste management;

¹⁶ <https://web.unep.org/globalmercurypartnership/catalogue-technologies-and-services-mercury-waste-management>

- Revising the Resource Persons List and integrating it into the Catalogue of Technologies and Services on Mercury Waste Management;
- Seeking possibility to hold future face-to-face meetings in the margins of other occasion relevant to chemicals & waste continuously;

These proposed actions will be shared with all partners and examined further.

The outcome of the meeting was presented in a dedicated session of the 2019 ISWA World Congress.

- **Knowledge sharing at relevant international meetings**

Experts from the Partnership Area attended relevant meetings to learn latest knowledge from the waste management sector and share technical information with relevant stakeholders and subsequently with other partners. In 2019, the Partnership Area dispatched experts to the 14th International Conference on Mercury as Global Pollutant (8 to 13 September 2019, Krakow, Poland) and to the 2019 ISWA World Congress (7 to 9 October 2019, Bilbao, Spain).

- **Collaboration with the Partnership Area on Mercury cell chlor-alkali production**

Mercury waste generated from the decommissioning of chlor-alkali plants is one of the major concerns in waste management as the re-use of such mercury is discouraged under the Minamata Convention. The Partnership Area hence conducted with the Mercury Cell Chlor-Alkali Production Partnership Area, in March 2018, in Uruguay, a joint mission to identify the needs and challenges faced by the chlor-alkali producer and the Uruguayan government, both in the financing of the conversion process, and in addressing the management and disposal of mercury wastes. A second joint study is now under planning.

7) Mercury supply and storage

a) The overall objective of the Partnership Area is to:

- Minimize and where feasible, eliminate mercury supply considering a hierarchy of sources, and retire mercury from the market to environmentally sound management.

In practice, it aims to:

- Eliminate the production and export of mercury from relevant mercury supply sources;
- Determine how much mercury will become available from primary mining, decommissioning of mercury chlor-alkali plants; and the quantity of by-product mercury generated from non-ferrous metal processing, gold mining as well as oil and gas production; and
- Collecting and disseminating information on options and technologies for storage or final disposal of excess mercury supply from the different sources.

b) Key activities in the Partnership Area include (as information on those were not available at the time of publication of the report to the second meeting of the Conference of the Parties, the below listed activities cover both the current and previous reporting periods, hence from July 2017 to July 2019):

- **“Workshop for training on mercury contaminated sites for Latin American countries”.** (Madrid, Spain, October 2017) promoted by Uruguay through the Coordinating Center of the Basel Convention and Regional Center of the Stockholm Convention for Latin America and the Caribbean (BCCC-SCRC) - Technological Laboratory of Uruguay (LATU) with the support of the Center for Energy, Environmental and Technological Research (CIEMAT, Spain). 15 selected representatives from the following countries participated in this workshop: Uruguay, Chile, Argentina, Bolivia, Peru, Nicaragua, Dominican Republic and Paraguay.

The workshop addressed the following topics:

- Soil degradation and contamination processes and recuperation techniques.
- Soil sampling for characterization and monitoring.
- Laboratories quality control (equipment, techniques and procedures).
- Technical visit to the CIEMAT laboratories and the mining area of Almadén.

- Ecotoxicology, risk assessment and environmental impact assessment.
 - CIEMAT experience in the mining area (Almadén) and in gold mining areas.
 - **“Training workshop on dismantling, waste management and contaminated sites associated with the Chlor-alkali Industry”** (Montevideo, Uruguay, February 2018). The National Environment Directorate (DINAMA) of the Ministry of Housing, Territorial Planning and Environment (MVOTMA) of Uruguay organized the Workshop which was attended by a large number of representatives from the national Ministry, local administrations, the Regional Centre BCCC-SCRC and the EFICE S.A. chlor-alkali plant, amongst others. Representatives of Spain shared their experience in relation to: EU Legislation applicable to the chlor-alkali sector (Ministry of the Environment, (MAPAMA), Remediation of a mercury contaminated site and Stabilization and Solidification technology (MAYASA), Mercury behaviour in soil and potential effects, environmental restoration, and environmental monitoring (CIEMAT) and plant dismantling (ERCROS).
- c) Planned future activities include:
- Update information on current primary mercury mining activities and their production.
 - Collaborate with industry for the environmentally sound management and storage of mercury in the sectors of chlor-alkali, non-ferrous and gas production.
 - Update information on options and availability of infrastructures and techniques for the management, storage and final disposal of surplus mercury.
 - Promote the replication of successful workshops.
 - Promote transparency and traceability throughout the whole life cycle of mercury, including supply source, trade and export, to address potential illegal sources of mercury supply.

8) Mercury releases from cement industry

- a) The objective of this Partnership Area is to:
- Minimize mercury releases to the environment from cement manufacture. The Partnership Area aims to supplement existing programmes in key, strategically selected ways to ensure that reductions are globally significant.
- b) No activities have yet been undertaken since the activities of the World Business Council for Sustainable Development (WBCSD) Cement Sustainability Initiative (CSI), previous lead of the Partnership Area ceased to exist and were integrated into the recently established Global Cement and Concrete Association (GCCA).
- c) Planned future activities include as a first step the review of the Partnership Area Business Plan.
- The Partnership Area also intends to support the development of database for emissions inventory. Because of the wide variation in mercury emissions worldwide, this work would: help disseminate information on monitoring techniques; support evaluation of emissions and the effectiveness of emission reduction approaches; establish an accurate plant information database; and encourage inclusion of cement manufacturing in country mercury inventories.
- The Partnership Area also intends to develop outreach materials and collaborate with complementary programmes to disseminate information about mercury emissions by the sector. Information will be shared to promote understanding of techniques for mercury management and control.
- Other aspects would be the support of the development of Partnership Area-related policies and regulatory frameworks and the facilitation of exchange of knowledge on new and emerging technologies.