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**UNEP Global Mercury Partnership
Advisory Group
Eleventh meeting**
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**Report on activities undertaken within the UNEP Global
Mercury Partnership**

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 Partnership.

The annex to the present note sets out a report on such activities. The report has been drafted by the Secretariat of the Partnership, reflecting input received from Partnership areas on their activities during the period from October 2019 to November 2020.

Annex

Report on activities undertaken within the UNEP Global Mercury Partnership (October 2019 – November 2020)

I. Introduction

Initiated in 2005 by a decision of the United Nations Environment Programme (UNEP) Governing Council¹, the Global Mercury Partnership (hereinafter referred to as the “Partnership”) focuses 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”, namely: artisanal and small-scale gold mining (ASGM), 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 the cement industry.

The present report provides an overview of overarching activities undertaken by the Partnership in follow up to the tenth meeting of its Advisory Group (PAG). On the basis of input received from the leads and co-leads of each Partnership area, it also presents highlights of Partnership areas activities during the period from October 2019 to November 2020, as well as some of the future work planned.

II. Overview

Participation

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

- As of 14 December 2020, there were 215 official partners of the Partnership, including 36 governments, 11 international organizations, 71 non-governmental organizations (NGOs), 55 industry/private sector as well as 42 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 as well as other UN agencies.

Organisation

Leads of individual Partnership areas are:

- **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:** Environmental Protection Agency of the United States and the United Nations Industrial Development Organization (UNIDO)
- **Mercury air transport and fate research:** The National Research Council (CNR)² - Institute of Atmospheric Pollution Research, Italy, the Biodiversity Research Institute (BRI) and the Dartmouth College
- **Mercury in products:** Environmental Protection Agency of the United States
- **Mercury releases from coal combustion:** The IEA Clean Coal Centre and the Macquarie University (Australia)

¹ UNEP Governing Council Decision 23/9

² 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 Transition³ of Spain and the Ministry of Housing, Territorial Planning and Environment⁴ of Uruguay
- **Mercury releases from cement industry:** The Global Cement and Concrete Association (GCCA)

Partnership Advisory Group

The Overarching Framework of the Partnership establishes a Partnership Advisory Group (PAG) 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 PAG.

During the reporting period, the PAG held its tenth meeting (PAG-10) on 23 November 2019 in Geneva⁵, back to back with the third meeting of the Conference of the Parties to the Minamata Convention. Its eleventh meeting took place on Tuesday, 15 December 2020 and Wednesday, 16 December 2020 in an online setting.

Mr. Rodges Ankrah, Environmental Protection Agency of the United States, and Ms. Teeraporn Wiriwutikorn, Ministry of Natural Resources and Environment of Thailand are serving as co-chairs of the PAG, further to their designation at PAG-10.

III. Highlight of overarching activities undertaken in follow up to the tenth meeting of the Partnership Advisory Group

A number of awareness-raising, information dissemination, technical expert consultations and experience-sharing activities have been conducted by the Partnership further to the tenth meeting of the Partnership Advisory Group, including:

The Overarching framework document of the Partnership was revised to reflect a number of evolutions, including subsequent to the adoption and entry into force of the Minamata Convention, as well as practices under the Partnership⁶. Amongst others, the focus of work of the Partnership has been updated to reflect that it aims at supporting timely and effective implementation of the Convention; providing state of the art knowledge and science on mercury; and delivering outreach and awareness-raising towards global action on mercury. The revised version of the Overarching Framework document is available in the 6 official UN languages on the UNEP website⁷ and made available in English to PAG-11 in document UNEP/Hg/PAG.11/6.

A Partnership Newsletter has been launched in 2020, in order to enhance communication and outreach. The Newsletter features highlights by Partnership areas and partners, relevant resources and publications, introduction of new partners, upcoming and past events, and will be circulated on a regular basis to all partners and interested stakeholders.

Cross-cutting issues: Responding to the request of the Partnership Advisory Group, work was initiated on the topics of mercury from oil and gas and from non-ferrous metals mining and smelting. Expert consultations were launched in April 2020 through online meetings⁸, with the overall objective to identify potential useful contributions from the Partnership, within the

³ “Ministerio para la Transición Ecológica”

⁴ “Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente”

⁵ The report of the meeting as well as other meeting documents may be found at: <https://web.unep.org/globalmercurypartnership/partnership-advisory-group-meeting-10>

⁶ At its tenth meeting, the Global Mercury Partnership Advisory Group endorsed proposals for updates to the Overarching Framework document on the basis of proposals put forward by the Secretariat and set out in document UNEP/Hg/PAG.10/4

⁷ <https://web.unep.org/globalmercurypartnership/partnership-advisory-group>

⁸ Information on the online meetings, including summaries of main discussion points, may be found at: <https://web.unep.org/globalmercurypartnership/expert-consultations-mercury-oil-and-gas> and <https://web.unep.org/globalmercurypartnership/expert-consultations-mercury-non-ferrous-metals-mining-and-smelting>

context of its mission and its existing areas of work. Participants were invited to attend in their expert capacity, to share views and ideas, and any useful background information. Interested Partnership area leads, together with the PAG co-chairs, subsequently agreed to guide a process for developing study reports on these two topics. Draft annotated outlines of the reports are presented in documents UNEP/ Hg/PAG.11/4 and UNEP/ Hg/PAG.11/5 for consideration and further discussion at PAG-11. Together with the information collected, the finalized annotated outlines will be used as a basis to develop the study reports during the first half of 2021.

Webinars to support sharing of information and experience: the Secretariat launched in April 2020 an online survey to identify interests and priority topics for future information-sharing online events to be convened. The following events were subsequently organized:

- The Partnership and its Partnership area on artisanal and small-scale gold mining organized in August 2020 a webinar for Spanish speaking countries on “ASGM and National Action Plans (NAPs) in the Latin American and Caribbean region”, which aimed at presenting the global status and progress made on NAP development, reviewing available tools and assistance from the Partnership and others, discussing challenges encountered during NAP development process or related projects as well as sharing experiences and possible solutions, including with respect to the future NAP implementation and sector transformation⁹.
- In the context of the 2020 deadline for phase out under the Minamata Convention, the Partnership and its Partnership area on mercury in products launched a series of online information sharing sessions. The first two, held in October and November 2020, were organized in cooperation with WHO and focused on mercury containing medical devices¹⁰ and on mercury in skin-lightening products¹¹. These events looked into the specificities of these products, shared information, guidance and knowledge and discussed some of the practices, experiences as well as challenges faced by countries and other stakeholders in meeting the 2020 deadline for phase out.
- The Partnership also contributed to several “Minamata Online” sessions¹², and co-hosted in November 2020 a session on “Multimedia modelling on global mercury movement”, co-organized by the Partnership area on mercury air transport and fate research together with the Secretariat of the Minamata Convention, the International Conference on Mercury as a Global Pollutant and the Geneva Environment Network¹³.

The third meeting of the Conference of the Parties (COP) to the Minamata Convention (Geneva, November 2019) called for cooperation with the Partnership on intersessional work on customs codes and on ASGM tailings in preparation for its fourth meeting (Indonesia, November 2021). The Partnership area on mercury in products is hence collaborating on the issue of customs codes with the Secretariat of the Minamata Convention to respond to the COP mandate, and the ASGM Partnership area is contributing to the ongoing efforts to update the ASGM NAP guidance document for possible adoption at COP4. Partners have provided technical input on ASGM tailings management, shared views on aspects that could be strengthened and suggested how to reference available tools to support implementation.

⁹ <https://web.unep.org/globalmercurypartnership/webinar-asgm-and-national-action-plans-lac-region-lessons-learned-tools-and-implementation>

¹⁰ <https://web.unep.org/globalmercurypartnership/webinar-mercury-added-medical-measuring-devices-tools-and-implementation>

¹¹ <https://web.unep.org/globalmercurypartnership/webinar-mercury-skin-lightening-products-towards-2020-deadline>

¹² <http://www.mercuryconvention.org/Resources/MinamataOnline/tabid/8527/language/en-US/Default.aspx>

¹³ <https://web.unep.org/globalmercurypartnership/minamata-online-multimedia-modelling-global-mercury-movement>

IV. 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 remains 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, access to finance, additional formalization, and other 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 hazardous and polluting practices.

- 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:
 - In early 2019 UNEP, UNIDO and NRDC launched the GEF GOLD programme, funded by the Global Environment Facility (GEF) and led by UNEP, in collaboration with a range of partners. The programme, now branded as planetGOLD, is helping gold miners replace toxic mercury with cleaner techniques, improving 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. 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, including the launch of the website, planetGOLD.org. Other Partners are participating as executing agencies for individual country projects. For example, the Artisanal Gold Council is executing the planetGOLD projects in Burkina Faso, Mongolia and the Philippines; Conservation International is executing planetGOLD Guyana, and UNDP is carrying out the projects in Colombia, Indonesia, Kenya, and Peru. Pact supported planetGOLD Indonesia assessment and capacity development of business and financial products in the ASGM sector. Pure Earth has helped with capacity building of government stakeholders in the ASGM sector and the empowerment of artisanal women miners in Indonesia; with building the financial capacity of miners; and with development of modules for ASGM formalization.
 - In June 2020, the GEF Council approved an expansion of the planetGOLD programme, adding eight additional countries: Bolivia, Ghana, Honduras, Madagascar, Nigeria, Republic of the Congo, Suriname, and Uganda. Led by Conservation International, the expanded programme will continue to focus on reducing the use of mercury, formalization, financial access, and responsible supply chains in the ASGM sector. It will also pilot jurisdictional approaches, which are place-based approaches to sustainability that focus on areas defined by (local) administrative boundaries, and that reconcile social, economic and environmental objectives through multi-stakeholder participation and government engagement. Some partners are involved in project preparation for this expansion. IMPACT worked on project preparation in Uganda.

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

UNEP has provided technical support to 30 countries developing National Action Plans on ASGM (NAP). Two of these have been completed. In addition to providing implementation support to individual country teams, UNEP also engaged in activities to benefit countries more broadly, including:

- Launching of the “Quick Start Guide for managing mercury trade in artisanal and small-scale gold mining”;
- Using in house experts and utilizing peer review system, providing technical comments on the draft NAP documents of 8 participating countries; and,
- Providing “help desk” services and consultations on the development of NAP to participating countries.

UNIDO completed an additional 4 out of 13 UNIDO-implemented National Action Plan projects (Burkina Faso, Ecuador, Ghana, and Nigeria), and received new approvals for NAP projects in Afghanistan, Bolivia, Cameroon, and Nicaragua by the GEF Secretariat.

- Artisanal Gold Council (AGC)

AGC has continued its work addressing ASGM in the core areas of policy, improved practices, finance, supply chain, and outreach. AGC continued to conduct research and development programmes on technical and training solutions for ASGM, including:

- In Indonesia, with funding from Global Affairs Canada, the AGC continued work on the project: “Sustainable Development of Artisanal and Small-Scale Gold Mining”.
- In Papua New Guinea, with funding from the US Department of State (USDoS) the AGC continued work on the project: “Reducing Mercury Use in Papua New Guinea’s Artisanal and Small-scale Gold Mining Sector”.
- In Peru, with funding from the USDoS the AGC continued work on the project: “Increased Transparency and Control of Mercury”.
- In Sierra Leone, with funding from the German Association for International Cooperation, the AGC began work on the project: “Demonstrating Responsible Artisanal and Small- scale Production and Trade of Gold in Sierra Leone”.
- In Suriname, with funding from the USDoS the AGC continued work on the project: “Abating Mercury Emissions via Mobile Processing Units for Small-Scale Gold Processing”.

AGC also participated in planetGOLD and NAP projects, funded by the GEF, which were detailed in the previous sections.

In response to COVID-19, the AGC has developed COVID-19 awareness posters and training materials that were distributed among all national teams in Asia and Africa and translated into five languages. Health training with AGC’s teams and partners in Papua New Guinea, Indonesia, the Philippines, and Sierra Leone was conducted. AGC continues to develop communications on the health and livelihood impact of COVID-19 on ASGM communities.

- Appelglobal

- Back in 2019, Appelglobal conducted a factfinding mission in Mauritania for the GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) on evaluating the potential for reducing the use of mercury by small-scale gold miners. Follow up training has been postponed until after the end of the pandemic.
- Together with Dialogos, Appelglobal has obtained financing for a two-year project in Bolivia. The project involves teaching and training small-scale gold miners to extract gold by mercury free means, and training medical professionals regarding the health hazards of using mercury. Full implementation has been postponed until after the end of the pandemic.

- In cooperation with a journalist Tom Heinemann, Appelglobal has produced an educational video on mercury-free gold extraction in four languages which have received over 1.8 million views. In 2020, Appelglobal is working on making versions in Swahili and Pemba.
- Appelglobal together with two other Danish companies (Elplatek and FLSchmidt) have obtained a grant from the Danish Government to clean rivers draining small-scale gold mining communities from mercury. Appelglobal and partners have evaluated test sites for the cleaning operation in Philippines and are presently evaluating test sites in South America.
- Conservation X Labs, and Cleangold LLC
 - With \$750000 in prizes for its 2020 edition, Conservation X Labs created the artisanal and small-scale mining (ASM) challenge, to incentivize innovation in solutions to: prevent, remediate or restore the impacts of ASM; reform supply chains of ASM; and better measure the environmental and social impacts of ASM. Among the challenge finalists competing for the prize this year, there is Cleangold LLC, an innovative toxin-free gold mining system, that is particularly well suited for use by small-scale miners.
- Diálogos
 - Diálogos is a Danish NGO specialized in projects encompassing miner-to-miner training in a mercury-free gold extraction method. At present, Diálogos has several ongoing projects involving mercury-free ASGM. The on-going projects and their aims include:
 - Uganda (with Appelglobal) *Free Your Mine, 2018-2021*. UNACOH, NAPE. The project aims to train around 1000 small-scale miners in the mercury-free extraction method; to increase knowledge of mercury toxicology for local health care workers, teachers and school children; and to empower civil society stakeholders to support the miners in their transition to mercury-free mining techniques.
 - Mozambique *Artisanal Mining: Ambitions and culture in Cabo Delgado 2016-2020*. Medicus Mundi, Céntrico de Vila. In March 2018 during a Diálogos' miner-to-miner training session with scientific monitoring, the mercury-free method yielded up to 78 % more gold than the locally used method. In 2020, one mining community had gone totally mercury free using only borax to extract the gold.
 - Bolivia *Mercury Free Gold Mining (2020-2022)*. Plagbol. This project aims to train 300 ASGM miners, as well as 60 miners to act as trainers, in the mercury-free method; increase knowledge of mercury toxicology for 20 health care workers and 50 teachers; and build capacity and empowerment of 50 civil society stakeholders, Miners' Unions with 900 cooperatives and the Ministry of Mining and Metallurgy to support the miners in their transition to the mercury-free method. Indirect beneficiaries will be 50,000 in the local population.
 - Tiira summit (planned 2021 but postponed due to COVID-19 pandemic). UNACOH, Busitema University, DASAM. A summit will be held with invited stakeholders from UNEP, Uganda Government, Dialogos etc. Presentation of miner-training in the mercury-free extraction method. There will also be a workshop at the University of Uganda on the prospects and challenges for promoting the mercury-free extraction method to ASGM miners.
- Carbone Guinée (member of the European Environmental Bureau / Zero Mercury Working Group (EEB/ZMWG))

Under a project conducted as part of the Small Grants Programme funded by the GEF, the NGO Carbone Guinée conducted activities related to reducing mercury use in ASGM, such as:

- Raising awareness among gold miners about the environmental and health risks associated with the use of mercury in gold mining for the adoption of good environmental and health practices.
- Training local craftsmen in the production of retorts and promoting them to enable gold miners to use alternative methods and techniques for profitable exploitation in their daily practice.
- Support for the acquisition of retorts.
- Worked to make the Sustainable Development Goal more understandable in connection with the Minamata Convention (Article 7) and the Guinean mining code.
- Making a documentary film on the testimony of gold miners and residents of the sites on operating conditions, the use of mercury and the risks to their health.
- Capitalizing on knowledge, lessons learned from the project's approach and experience.

- 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; Futura's jewelry can be found in retailers that support the need to promote jewelry made with mercury-free mined gold and educate their customers about responsible jewelry options that align with their values.
 - Awareness raising activities: Futura website as well as social media activity provide information that supports the work of the Partnership area. Futura enlists the support of social media influencers to grow the reach of its responsible gold message; participates in podcasts that help communicate the message on the elimination of mercury emissions in small scale gold mining and educate the public; and appeared on several jewelry webinars devoted to the need for better practices in the jewelry industry.
 - Futura participated in the charity event for Have a Heart that resulted in its event specific mercury-free gold jewelry being marketed to the 2 million followers of the on-line retailer Moda Operandi.
- 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 two gravimetric mercury-free gold processing plant for the partner mining cooperative; improved processing of mercury-free alluvial gold mining; raised awareness on mercury reduction amongst women miners; promoted environment risk mitigation, supported partners on mine rehabilitation and reforestation; and implemented Due diligence on the gold supply chains in the Just Gold mine sites.
- Published an Overview of Just Gold Environmental Stewardship in action in September 2020.
- Implementing the Just Gold project in Côte d'Ivoire with funding from the European Union. Regular exports from the cooperative to a European refiner. Installing mercury free gold processing equipment.
- 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.
- Gender Equality and Women's Empowerment in Artisanal Mining project, known as the Digging for Equality, funded by Global Affairs Canada. The project is implemented in DRC, Uganda and Zimbabwe over a three-year period.
- Elaborating on Just Gold Project lessons learned for publication.
- IMPACT is involved in the preparation of the GOLD+ project in Uganda.

- Pact Mines to Market

Over 2020, Pact's Mines to Markets programme has undertaken the following activities in support of ASGM's sustainable transformation:

- In Zimbabwe, Pact's 2020 ASGM activities included the establishment of a mercury-free mineral processing plant in at Umbrella Mine in Makaha, and training local miners on its operationalization. In collaboration with UNDP, Pact has also conducted several workshops and webinars on mercury-free gold production.
- In Mali and Ghana, Pact has commenced two new projects with the US Department of State on "Reducing Mercury Use and Strengthening Responsible Supply Chains in [Mali's/Ghana's] Artisanal and Small-scale Gold Mining (ASGM) Sector". Kick-off for these new Projects is scheduled for early 2021.
- In Colombia, Pact continued work on the "Somos Tesoro" Project funded by the US Department of Labor, focused on protection of ASGM miners, generating economic stability in families, including support for access to education for in mining communities.
- Late in 2019 Pact undertook an assessment of the ASGM sector in Mauritania and has been developing private and public sector partnerships to develop supply chain solutions with key partners in the country.
- Pact has established a Working Group on the responsible management of cyanide use in ASGM and is commencing the development of a Practical Guide on this important topic, with the Global Component of planetGOLD.
- At the global level, Pact has established and coordinated a Covid-19 working group through its Delve platform with the World Bank, which has included coordination of assessments on COVID-19 impacts on ASGM communities in Colombia, Kenya, Nigeria and Myanmar.
- Pact developed and partnered with the University of Delaware to publish a comprehensive Policy Assessment concerning ASM's contributions to the Sustainable Development Goals (SDGs).

- Pure Earth

Pure Earth is currently working in Peru, Colombia and Indonesia on projects addressing mercury pollution associated with artisanal gold mining.

In Peru, Pure Earth has been working since 2019 with artisanal miners in the region of Madre de Dios to reduce mercury-use and promote ecological mine closures. Pure Earth has worked with miners to restore and, in collaboration with the Center for Amazonian Scientific Innovation (CINICIA), held training for miners in restoration methods applicable to the Amazons. The team has also produced a report on the role of deforestation in accelerating mercury transport; a report about the local supply chain and an evaluation of gold certifications in the local context; and, together with other organizations and government authorities, the publication of a COVID-19 safety protocol for artisanal and small-scale miners in Madre de Dios. In Colombia, Pure Earth is working to develop a technical protocol for the management of tailings contaminated with mercury, which includes collection, treatment, transport, storage and final disposal. The team is also working to collect data that can be used to prioritize remediation interventions. Pure Earth contributed to the planetGOLD Indonesia project as described above.

- Stephen Metcalf (Independent consultant)

This year, Stephen Metcalf has been serving as the Chief Technical Advisor for the National Institute for Environment & Development in Suriname (NIMOS) whose GEF/UNDP EMSAGS Project (Improving Environmental Management in the Mining Sector of Suriname, with emphasis on Artisanal and Small-Scale Gold Mining) is supporting finalization of the country's NAP, while it focuses on strengthening policy, institutional capacity and promoting uptake of environmentally responsible technologies throughout the entire artisanal mine life cycle from exploration to restoration.

- Solidaridad Guyane and Minamata Disease Research Institute

The two partners collaborated on a mercury intoxication in the French Department of Guyane and provided the population with information on the type of fish they should focus their diet on.

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

The Sustainable Alluvial Mining Services 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 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 have 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;
- Co-facilitation of the Asia-Pacific Economic Cooperation-funded Workshop on Business Training for ASGM Miners together with the Artisanal Gold Council.

- University of British Columbia, Vancouver, Canada

- Part of the Consultant Group studying for the Government of Ghana the feasibility of implementing a Training Center for Artisanal Miners in Tarkwa. Produced a report which encompasses design of the center, list of equipment, suggestions of sources of income, strategy of teaching, personnel, business plan, cashflow, etc.
- Laboratory studies of unconventional methods to extract gold from gravity and flotation concentrates using bitter cassava, simplified cyanidation and organic extraction (no water). Results are very promising ranging from over 50% to 100% extraction. Students are searching for bitter cassavas with higher levels of glycosides in the Amazon.
- Elaboration of an extensive review article on Gravity Concentration Methods in Artisanal Gold Mining explaining the pros and cons of each procedure.
- Elaboration of detailed inventory of coexistence of Artisanal Gold Mining (AGM) and Conventional Gold Mining (CGM) companies.
- Elaboration of a list of problems faced by many projects when trying to eliminate the use of mercury in AGM, published at: Veiga, M.M. and Fadina, O. (2020). A review of the failed attempts to curb mercury use at artisanal gold mining and a proposed solution. *Extrac. Ind. Soc.* 7, 1135-1146.
- Consulting for UNDP Indonesia and the Government of Indonesia on methods to eliminate mercury in AGM.
- Classes to the Association of Small-scale miners of Peru on mercury-free methods to extract gold.
- Elaboration of a study on the legislations related to AGM in the 9 Amazonian countries. This is pointing out the hurdles to formalize AGM.

- University of Illinois at Chicago, Great Lakes Center for Occupational and Environmental Health

- Developed a curriculum for primary healthcare providers on mercury poisoning and other adverse health effects related to ASGM that is now posted by UNEP.
- Currently working on a biosensor system for mercury testing in biological fluids that will hopefully become a point-of-care test in 1 to 2 years.

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 continue to support sharing of NAP experience among governments, including through the planetGOLD programme and numerous bilateral activities.

- The Partnership area has had some success attracting more private sector partners last year and will continue to foster their greater collaboration and engagement.
- 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 are presented below.
- UNEP and Mexico's Secretariat of Environment and Natural Resources (SEMARNAT), the National Institute of Ecology and Climate Change (INECC), and CYDSA, S.A de C.V (private sector) are in the Project Preparation Grant (PPG) phase of a project to convert/decommission two remaining mercury cell chlor-alkali facilities in Mexico, including plans for the management of mercury waste and contaminated sites related to the two facilities. The Global Environment Facility approved the project in June 2020. The PPG phase has experienced some delays due to COVID-19.
 - ABICLOR and CLOROSUR, on behalf of the chlor-alkali Partnership 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 of funds for both replacement with membrane facilities and treatment, stabilization and disposal (storage) of the mercury wastes. COVID-19 has complicated project financing as the Brazilian Real (BRL) has been significantly devalued over the last year.
 - The Arctic Council's Arctic Contaminants Action Plan (ACAP) Expert Group on Mercury and POPs is scoping a potential project to reduce mercury emissions and releases from chlor-alkali facilities that impact the Arctic Region. A project concept is currently in development for funding consideration through the Arctic Council's Project Support Instrument (PSI).
 - The Partnership areas on mercury cell chlor-alkali production and on mercury waste management, led by the Ministry of the Environment of Japan (MOEJ), continue to pursue additional joint missions to identify the needs and challenges faced by chlor-alkali producers both for financing of 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 acquisition of financing for promising potential conversion projects;
 - Increasing focus on addressing stocks management and disposal for converted facilities; and
 - Increasing cross-partnership collaboration, especially with the storage and waste Partnership areas.

3) Mercury air transport and fate research

- a) The main 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 to address uncertainties and data gaps in global mercury cycling and its patterns (e.g., emission sources, air concentrations and deposition rates, source-receptor relationships, hemispheric-global air transport/transformation, mercury in biota and spatial and temporal variations driven by ecosystem sensitivity);
 - Enhancing compilation and sharing of such information among scientists as well as between them and policy makers.

The specific objectives are:

- To support the implementation of the Minamata Convention, and support the development of a globally coordinated monitoring system for measuring mercury levels in air, marine and terrestrial ecosystem, which may contribute to assess the effectiveness of measures taken;
- To assist relevant stakeholders involved, including Parties to implement the necessary actions to fulfil the requirements of the Convention and its objectives;
- To gather up-to-date information on mercury contamination worldwide and support capacity building activities to transfer knowledge on mercury monitoring and best practices to all relevant stakeholders involved;
- To facilitate the dialogue between the scientific community, policy makers and other relevant stakeholders.

- b) Key activities in the Partnership area include:

To support the preparation of the Mercury Monitoring Guidance Document for COP4. Activities included and led by BRI:

- Support the generation of Chapter 6 (on biota mercury) of the Mercury Monitoring Guidance Document in preparation for COP4 and assist with other Chapters as requested by the Secretariat of the Minamata Convention. The Global Biotic Mercury Synthesis (GBMS) is a data basis for this report.
- Support by Partnership area members as expert reviewers for Chapter 6.

To support countries and intergovernmental organizations to improve mercury assessment and monitoring capabilities. Activities included and led by BRI:

- Coordinate and assist countries with their Minamata Initial Assessments (MIAs) - 25 out of 35 have been completed
- Review completed MIAs that have been submitted to the Secretariat of the Minamata Convention and provide feedback to the Implementing Agencies and focal points of the Country.
- Develop country projects where the use of skin-lightening products is reduced and their sale and import in line with obligations of the Minamata Convention in coordination with the Partnership area on mercury in products. One project is being implemented with UNEP based on GEF funding;
- Assist with the initiation of regional networks in the context of projects supported by the Specific International Programme, such as the Caribbean Region Mercury Monitoring Network – overseen by Antigua and Barbuda;
- Provide add-on value support to countries that may want to initiate preliminary mercury monitoring efforts with Passive Air Samplers, biota and human biomonitoring;
- Generate communication pieces to enhance the understanding of policymakers of scientific findings, on topics such as mercury monitoring of air, biota, humans and certain products.

To facilitate the dialogue between the Partnership area and on-going programmes such as GEO Flagship on “Global Observation System for Mercury - GOS4M”. Activities included and led by CNR:

- Increase the availability and quality of Earth Observation data and information to contribute to the tracking of mercury released to the global environment and, where appropriate, anticipate changes to the environment;
- Harmonize metadata production, archiving and sharing data from existing mercury monitoring networks; and develop advanced services (e.g., access to air mercury monitoring data) in support of policy mandate through the Minamata Convention;
- Facilitate cooperation of governments and institutions tracking chemical pollutants;
- Foster the adoption of advanced sensors in monitoring mercury and its compounds;
- Prepare, archive and share metadata.

To promote continuous studies on mercury contamination in air and marine compartments with reference to several ad-hoc field campaigns organized and carried out in different parts of the world. Activities included and led by CNR:

- 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-funded 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 Observations (GEO, www.earthobservations.org) and the European Earth observation Copernicus programme (www.copernicus.eu).
- Within this programme, the projects iGOSP ‘Integrated Global Observing Systems for Persistent Pollutants’ (www.igosp.eu) and iCUPE (Integrative and Comprehensive Understanding on Polar Environments) (www.atm.helsinki.fi/icupe) have been developed and 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 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 in the polar environments and to assess the fate of these contaminants between different environmental compartments.

To develop a global web-based platform for existing and new mercury data. Activities included and led by BRI:

- The overarching goal of this project is to provide contributions toward advancing guidance on monitoring data and harmonized, comparable information on mercury concentrations in the environment, which may support the effectiveness evaluation discussions under the Minamata Convention;
- Project objectives are to: (1) Establish a Science-Policy Advisory Panel to guide the project, support quality control, and facilitate outreach, while working through the Partnership area with member participation; (2) Assess web-based Global Knowledge Platforms that best fulfil the needs of Parties and associated stakeholders of the Minamata Convention; (3) Generate a centralized database for existing mercury concentrations in biota (based on GBMS); (4) Identify a suite of queries collated from Parties and other stakeholders of the Minamata Convention; (5) Work with data providers, information technology experts, end-users, and other stakeholders to design and develop a functional online platform that meets identified interests; (6) Conduct testing of the platform capabilities, including data acquisition, data ingestion, data quality control, information synthesis, data query, and data visualization and implement any needed improvements based on the testing, leading to the development of a final version of the knowledge platform expected for the 15th International Conference on Mercury as a Global Pollutant (ICMGP) in July 2022;
- Consultations with the Minamata Secretariat are expected.

Passive air sampling for mercury on a global scale. Activities included and led by Environment and Climate Change Canada (ECCC):

- ECCC is leading a global passive air pilot study for the collection of atmospheric mercury concentrations. The intent of this study is to assess the feasibility and comparability of

Primary meetings of the Partnership area:

- 7-8 October 2020: GOMS⁴M held a webinar for participants interested in contributing to the development of a global database on mercury in air (further information, including the meeting agenda is available at www.gos4m.org/ko_agenda/)
 - 17 November 2020: Contributing to ‘Minamata Online’ Series, the Partnership area co-organized with the Secretariat of the Minamata Convention, together with the International Conference on Mercury as a Global Pollutant and the Geneva Environment Network, a webinar on “Multimedia modelling of global mercury movement” (further information, including presentations and recordings, may be found on the Partnership website¹⁴)
 - 10 December 2020: The Partnership area held its annual meeting with members and other interested participants (further information, including presentations are available on the Partnership website¹⁵). Amongst others, the meeting nominated Ms Celia Chen (Dartmouth College) as co-lead of the Partnership area.
- c) Planned future activities include:
- Partners of the Partnership area are working on projects that can contribute specifically to Articles 1, 19 and 22 of the Minamata Convention but are not limited to these Articles. Such activities include the development of data collection and synthesis, field assessments, and the development of mercury monitoring networks that can contribute toward a global understanding of mercury, as well as towards discussions on effectiveness evaluation under the Mercury Convention.
 - Efforts are particularly well established for air mercury data collection and monitoring through the GOS4M Flagship of the Group on Earth Observations and biota mercury monitoring based on the Global Biotic Mercury Synthesis (GBMS) database that will be published and also made available through a web-based interactive platform. GBMS is the only database that synthesizes over 1,400 peer-reviewed publications about mercury in biota that contributes to nearly 800,000 mercury data points for taxa identified in Article 19 (e.g., fish, sea turtles, birds and marine mammals).
 - The newly-established Caribbean Mercury Monitoring Network could be an example of regional network that members of the Partnership area could develop, especially in areas that have been identified with major data gaps, yet have identified or projected elevated environmental mercury loads that may infringe on ecological and human health.
 - There is a great need to increase engagement of the Partnership area with scientists at a global level to help meet its overarching goals, to assist with current projects, and to develop new activities. To respond to that need, the Partnership area designated as co-lead at its last meeting held on 10 December 2020 Ms. Celia Chen, professor at Dartmouth College (New Hampshire, USA), to further help with communications to the global scientific community and increase membership and active participation.

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:

¹⁴ <https://web.unep.org/globalmercurypartnership/minamata-online-multimedia-modelling-global-mercury-movement>

¹⁵ <https://web.unep.org/globalmercurypartnership/mercury-air-transport-and-fate-research-partnership-area-2020-meeting>

Report on the Harmonized Commodity Description and Coding System (Minamata Convention Secretariat and Products Partnership):

In response to Decision MC-2/9 adopted at the second meeting of the Conference of the Parties (COP) to the Minamata Convention, the Minamata Convention Secretariat and the Partnership area, as well as key partners and stakeholders collaborated in developing a report 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.", which was submitted to COP3¹⁶.

Thereafter, COP3 in its Decision MC-3/12 called for collaboration between the Minamata Convention Secretariat and the Global Mercury Partnership–Products Partnership, as well as relevant experts, to draft a guidance document that includes : (1) for the mercury-added products listed in annex A to the Convention, a list of possible customs nomenclature codes of more than six digits that could be used by parties; (2) for mercury-added products not listed in annex A to the Convention, a compilation of examples provided by national experts of customs nomenclature codes of more than six digits currently in use by parties; (3) examples of good practice where the use of customs nomenclature codes at the national level; and to provide an assessment of whether the subsequent development of six-digit harmonized codes would be a useful complement to codes of more than six digits.

The 2019 report consisted 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 drew from the totality of research conducted.

The report being developed under Decision MC-3/12 will seek to build on the observations in the 2019 report. The Decision requests that a draft report be made available on the Convention website and parties and others invited to provide comments by 30 January 2021. Thereafter, the Minamata Convention Secretariat and the Partnership area will revise the draft report, taking due account of the further input received from parties and others, and submit the final report to COP4 for its consideration.

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 and beyond. 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, ease and improve overall reporting, and foster better communication among trading partners.

Launch of Mercury in Products-Specific Webinars:

In an effort to provide outreach on challenges and lessons learned in global efforts to assess phase-out potential, including discussions of mercury-free alternatives, the Partnership and its Partnership area on Mercury in Products, in cooperation with the WHO and the Zero Mercury Working Group conducted webinars on mercury-added medical measuring devices and cosmetics in late 2020.

In October 2020, the “Mercury-added medical measuring devices: tools and implementation” webinar was conducted to share information, guidance and knowledge on sphygmomanometers and thermometers with a focus on import, export and production aspects; discuss challenges faced by countries and other stakeholders in the phasing-out of medical devices; encourage sharing of experience and best practices and provide relevant support to stakeholders for achieving a sustainable phase out of these devices. The event featured presentations by the Partnership area, the Minamata Convention Secretariat and WHO. Attendees also were invited to share country-level and other challenges and lessons learned.

In November 2020, the “Mercury in skin-lightening products: towards the 2020 deadline” webinar looked into the adverse effects of these products, shared information, and discussed some of the practices, experiences as well as challenges faced by countries and other stakeholders in meeting the 2020 deadline for phase out under the Minamata

¹⁶ Document UNEP/MC/COP.3/5

Convention. The event featured presentations by WHO, the Zero Mercury Working Group, the Natural Resources Defense Council, the University of the West Indies, Mona, Jamaica and members of academia. Country-level perspectives were provided through presentations by Sri Lanka, Uganda and the NGO Label Beauté Noire.

Mercury-Added Product Reduction Projects in Kenya, Ivory Coast, India, Bangladesh and the Philippines (European Environmental Bureau (EEB)/ZMWG):

EEB/ZMWG and its partner organizations in Kenya, Ivory Coast, India, Bangladesh, and the Philippines supported efforts by their governments to carry out mercury-added product reduction projects, including the following:

- Conducting studies of alternatives to mercury-added products;
- Outreach/workshop to customs officials on Article 4 provisions;
- Procurement of mercury-free alternative products in hospitals;
- Development of draft “road maps” to phase out mercury-added products;
- Identified importance of Article 4 awareness raising activities for traders, manufacturers and producers;
- Support for development of legal gap analysis for mercury-added products; and
- Supporting ratification.

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), to test online products determined by government analysis to have high mercury levels.

- The results of the last sampling round carried out in 2019 showed fruits when internet platforms Amazon, eBay, Lazada, Jumia (Africa), and Daraz (Asia) responded positively to a request to take down the high-mercury creams.
- A new round of sampling of skin-lightening cream products was started in November 2020.
- Work is ongoing building on results from 2019, including checking availability of creams on e-platforms and promoting an enforcement report. A questionnaire and a complementary supportive information document have further been developed to assist this work.

c) Planned future activities include:

- Continuing to support efforts related to the report on HS codes initiative (including through coordinating meetings and assisting in sharing materials);
- Continuing to identify alternatives to mercury-added products;
- Compiling a list of projects and other publicly available resources on mercury-added products and alternatives; and
- Sharing the progress of the U.S. mercury inventory.

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 the Partnership area.

b) Key activities in the Partnership area include:

The IEACCC (Co-lead of the Partnership area) won a US State Department NOFO project to evaluate and reduce mercury emissions from the coal combustion sector in Indonesia. This project is comprised of three phases:

- Phase 1: evaluation of mercury emissions from all coal-fired plants in Indonesia, current and impending, in order to rank the plants and identify three for closer investigation with respect to emission reduction strategies;

- Phase 2: calling on the Partnership area and other interested parties to focus on the configuration of the three selected plants in order to collate a “catalogue” of potential mercury reduction techniques and technologies, especially options which can be replicated across the rest of the coal fleet. Delivery of mercury monitoring and training workshops to Indonesian stakeholders and plant operators, with partners providing some of this training and insight;
- Phase 3: determination of potential funding and cost-leveraging options available to move mercury reduction policies and projects into practice in Indonesia.

Phase 1 of this project is now complete, and the results should be published before the end of 2020. This first phase has produced a detailed (unit by unit) mercury emission inventory for over 100 coal units in Indonesia. The information has allowed a projection of emissions over the lifetime of the existing fleet. According to these data, there are 10 units in this fleet which will, together, contribute over 45% of the emissions for the entire fleet over their remaining lifetime. Targeting these plants for emission control will be considerably more appropriate than a more expensive and less effective requirement for BAT/BEP across the entire fleet. It is being proposed that the data from this project be used to inform Indonesia’s Minamata National Implementation Plan. Three high-emitting plants have been selected for closer study in Phase 2. A webinar will be given on the Phase 1 results in January (it will be available live or on catch-up at <https://www.iea-coal.org/webinars/>). A call for partners to be involved in the proposal of mercury control techniques and technologies for these plants will be disseminated at an on-line event hosted by the IEACCC on-line in March 2021.

The Indonesia project will be followed up by a similar but significantly larger project in India, focusing on capacity building and training on mercury emission monitoring and control. Partnership area partners will be invited to contribute to the development of training programmes.

The Partnership area leads are also still bidding for another medium-scale project: 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 a 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 aim to demonstrate the effects 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, which was to be held in September 2020 in Jakarta along with the annual MEC (Mercury and multi-pollutant emissions from coal) workshop, was cancelled due to the ongoing COVID-19 pandemic. An on-line version of MEC, featuring the annual Partnership area meeting, is being planned for early 2021, with the hope that a face to face event will be possible in 2022.

The IEACCC produced a Webinar on “Implementation of the Minamata Convention – what it means for coal” which is available online¹⁷.

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:

Partnership area meetings 2020: The Partnership area held the first segment of its 2020 meeting online on 27 November 2020. The objectives of the meeting were to review ongoing activities by the Mercury Waste Management Partnership area (WMA) and

¹⁷ <https://www.youtube.com/watch?v=UtaHgryrCf0>

consider future ones; identify technologies and services on mercury waste management that partners can provide and challenges on mercury waste management that countries have faced in order to promote matchmaking; and develop the WMA activity plan.

Participants hence discussed in particular the identification of needs on mercury management technologies and services, needs and seeds matchmaking, possible collaboration with other Partnership areas and contribution to the consultations on mercury from oil and gas and from non-ferrous metals and smelting that are ongoing under the Partnership. Participants also discussed a number of possible future activities, and proposals will be discussed further at the second segment of the meeting, which will be held by the end of March 2021. The meeting documents and report will be made available online¹⁸.

Questionnaire survey to identify the needs for technologies and services on mercury waste management

A questionnaire survey will be conducted in order to have a better understanding of specific needs on mercury waste management. The format of the survey was elaborated in consultation with partners at the first WMA meeting 2020 and further comments were invited. The survey will be conducted between January and February 2021, and the results shared at the second segment of the WMA meeting for further consideration of potential future activities.

Catalogue of Technologies and Services on Mercury Waste Management

The Catalogue was developed to disseminate information on mercury waste management technologies, products and services of partners. The latest version of the Catalogue is under development and will be made available on the Partnership website.

Collaboration with the Partnership area on mercury cell chlor-alkali production

Mercury wastes generated from the decommissioning of chlor-alkali plants is one of the major concerns in the area of mercury waste management, as re-use of such mercury is not encouraged under the Minamata Convention. In response to that the Partnership area conducted a joint mission in Uruguay in March 2018 with the mercury cell chlor-alkali production partnership area to identify the needs and challenges faced by chlor-alkali producers and the Uruguayan government - both in the financing of the conversion process, and in addressing the management and disposal of mercury wastes. In March 2019, the same joint mission visited the multilateral funding communities in Washington D.C. to assess potential combinations of financial schemes to assist the chlor-alkali producing companies for mercury phase-out and mercury waste management. The outputs of the joint mission were summarized in the final report of the joint survey.

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:

Study report on “Mercury from Oil and Gas”. The International Society of Doctors for the Environment (ISDE), with the collaboration of Spain and Uruguay as area leads, is preparing a draft report, together with an annotated outline, which identify possible

¹⁸ <https://web.unep.org/globalmercurypartnership/mercury-waste-management-partnership-area-2020-meeting>

sources and releases of mercury derived from these activities and the fate of this mercury, including considerations on the amount of mercury from this sector that could enter the informal market.

“Reduction of the use of mercury in communities dedicated to artisanal and small-scale mining in Colombia.” Project funded by the Ministry of Science and Innovation of Spain. 2019-2021. Head of Research: Sergi Díez (CSIC, Spain). The final objective of this project is to promote sustainable processes to improve the environmental situation and living conditions of artisanal mining communities. As an indicator of success, a control of mercury concentrations in the population was carried out before and after the training of miners in safety measures and alternative techniques. Activities carried out in Colombia during 4 weeks of stay (in November-December 2019) included:

- Seminar in University of Córdoba, Montería
- Seminar in Technological University of Chocó, Quibdó
- Five sampling campaigns in artisanal and small gold mining sites at the Chocó region explaining and providing information to the miners about best practices to reduce and eliminate the use of mercury in ASGM, safety working practices and the use of PPE (Personal Protection Equipment).

“Contamination by mercury and other toxic substances and impact on human health in the populations of the Atrato River basin as a consequence of mining activities.”

Project funded by the Ministry of Science, Technology and Innovation. Colombia-Colciencias 2019-2021. Heads of Research: J. Marrugo-Negrete (Colombia) & Sergi Díez.(CSIC, Spain).

The aim of this project was to evaluate the degree of contamination by mercury and other toxic substances, and its impact on human health in the riverine populations of the Atrato River Basin, as a consequence of mining activities. Several sampling campaigns were carried out, collecting sediment, water, fish, hair and blood human samples in the Atrato river area.

“Sustainable Remediation Techniques”. Rocío Millán (CIEMAT, Spain) participated as an invited online speaker in the 53 Safety, Health and Environment Congress, organized by the Colombian Security Council, which took place in September 14-18. 2020, in Bogotá (Colombia).

“Mercury, a problem for the society and the environment: The case of Almadén” Rocío Millán (CIEMAT, Spain) participated as an invited online speaker in the Third Technical Seminar ReLASC (Prevention and Management of Contaminated Sites Latin American Network, acronym in Spanish), held in Lima (Peru), in July 25, 2020.

The Partnership area also participated in meetings organized by other areas such as the Mercury Waste Management Area.

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.
- Collaborate with the Partnership area of Mercury Waste Management to identify which percentage of the mercury waste generated in oil and gas and in non-ferrous metals smelting is correctly disposed and how much (if any) of this waste enters the informal mercury market.
- Collaborate with the affected parties to find realistic formulas to ensure the mercury requisitioned by local authorities is safely disposed of and remains properly stored.
- Enhance the collaboration between members of the Partnership area and welcome new members by holding an online meeting at the beginning of 2021, with the collaboration of the Secretariat.
- 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) The Global Cement and Concrete Association (GCCA) has now fully integrated former World Business Council for Sustainable Development (WBCSD) Cement Sustainability Initiative (CSI) initiatives and projects and is ready to kick-off Partnership area work. Contacts have been initiated to find a co-lead for the Partnership area.
 - c) Planned future activities include the followings.
 - The Partnership area 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 to support the development of Partnership area-related policies and regulatory frameworks and the facilitation of exchange of knowledge on new and emerging technologies.
-