



ANNUAL REPORT 2021

THE EUROPEAN PRECIOUS METALS FEDERATION



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STRUCTURE

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STRUCTURE



PRECIOUS METALS ARE...



* All figures/constituents are estimates and will differ according to type and manufacturer

THE EPMF'S MISSION

Since 2007 the EPMF has supported European companies operating in the areas of gold, silver and Platinum Group Metals (PGMs). The EPMF is keen to contribute to the ambitious EU policy agenda on a wide range of issues.



- risk-controlled environment through sourcing, production, use and recycling of the PM
- improved social and environmental footprint of PM
- increased awareness and understanding of environmental impact, importance and advantages of PM use and recycling
- respect the EU values by developing a more industry-friendly EU



CONTRIBUTION

- an open dialogue with policy makers
- credible leader with realistic pathway proposals
- knowledge on risk management throughout life-cycle
- waste as a resource and contribution to circular economy
- part of the solution thanks to technology
- communication on impact and contributions of precious metals on a high-quality modern lifestyle

POLICY ASKS

- a more integrated and harmonised EU legal framework
- growing expertise at EU and member state level
- a regulatory global level playing field with better enforcement of rules
- an increased role for the EU in the world
- · a smart and risk-controlled environment
- · a framework to increase waste collection and effective waste treatment
- more ambitious EU Conflict Minerals Regulation

PRIORITIES AND ACTIVITIES

CHEMICALS MANAGEMENT



I. THE HARMONISED CLASSIFICATION OF SILVER METAL

EU citizens own almost 60% of the silver on the EU market via investment, silverware or jewellery. Silver compounds and silver metal are critical components for green technologies such as solar panels, wind turbines, electrodes, fast chargers for electric cars etc. Europe recycles 37% of the silver used and produces 11% of its primary silver needs.

1. The issue

In July 2019, the European Chemicals Agency (ECHA) published in the registry of Harmonised classification and labelling (CLH) the intentions of a proposal from Sweden to classify silver metal as hazardous (i) skin sensitiser cat. 1; ii) mutagenic cat. 2; iii) reprotoxic cat. 1B; iv) aquatic toxicant (acute and chronic) cat 1. This proposal has potential consequences for all uses of silver, including jewellery, silverware, electronics, solar panels, aerospace and others. The discussions and conclusions around the classification will impact the REACH registration dossiers.

2. The EPMF's contribution

In 2019 the EPMF identified several data gaps that were subsequently addressed through an extensive scientific research program. In 2021, the EPMF finalised multiple studies on silver, ensuring new relevant information and robust data was made available. The result from these studies is now under review by the Risk Assessment Committee (ECHA). The EPMF performed an Extended One Generation Reproductive Toxicity Study (EOGRTS) using silver acetate as the test substance. The EOGRTS demonstrated adverse effects including (but not limited to) developmental neurotoxicity effects observed in the first filial generation (F1 generation), reduced offspring survival and growth, and a high mortality rate of the F1 generation. Considering the outcome of the EOGRTS and following CLP Regulation and ECHA quidance, silver acetate fulfils the criteria for classification as Reproductive Toxicant Category 1B. The EPMF initiated a comparative toxicokinetic (TK) study in which, for the first time, the bioavailability of silver powder via oral administration was compared with nanosilver and soluble silver compounds (silver acetate and silver nitrate). This study supported the read-across of scientific data; however, it shows that toxicological data generated on silver compounds and nanosilver cannot be directly used as representative for silver metal without a bioavailability correction. The EPMF will update the silver and silver compounds registration dossiers accordingly.

Before the studies, the EPMF conducted an impact assessment of the proposed classification on critical sectors, including jewellery, silverware, electronics, automotive, and aerospace. The assessment demonstrates a significant impact of the

proposed classification on industries such as electronics, photography, medicine, green energy, hygiene, water purification, jewellery, and silverware. A summary of these findings is <u>available upon request</u>.

Silver uses are not generally well known, especially societal benefits and contributions to the EU policy targets (e.g. Green Deal and Circular Economy). Hence, to ensure a better understanding of the unique properties of silver, the EPMF launched an awareness campaign on <u>Twitter</u> and <u>LinkedIn</u>. Short animations on silver highlighted how silver contributes to various EU policy goals such as climate change, environment, health and others. Concurrently the EPMF approached downstream users (DUs) companies to discuss their products and why silver is critical to their industry. The exchanges were captured on video and covered jewellery and tableware sectors, water purification, photography, nanosilver, wound care and dressings, cosmetics, and electricity transport (All the videos are available on the EPMF YouTube Channel. To complete the stakeholders' knowledge on silver properties and their history, the EPMF also ran a weekly Silver Quiz on Linkedin.

3. The EPMF's key messages

- Silver metal (massive and powder) currently has no environmental and human health classification.
- The EPMF is currently assessing the potential classification of silver compounds and nanosilver as Reproductive Toxicants Cat. 1B.
- Read-across from silver compounds and nanosilver data cannot be used to define the hazard profile of silver metal (massive and powder).



Silver is well known as a precious metal, but it has many unique properties that make it useful in industrial applications:

- highest electrical conductivity of all metals
- high reflectivity
- high ductility
- high malleability
- antibacterial properties

Silver has found applications in various technologies over time. Today, it is critical for the next generation of technological advancements, from electronics to renewable energy and electric vehicles.

4. The EPMF is in dialogue with:

- The European Commission: DG ENV and DG GROWTH
- The European Chemicals Agency (ECHA)
- Member States' REACH competent authorities
- NGOs & Academia
- Downstream industry sectors



II. ZERO-POLLUTION ACTION PLAN: Silver - as potential priority substance under the Water Framework Directive?

1. The Issue

In 2016 the Commission's Joint Research Centre (JRC) shortlisted silver as a candidate priority substance (PS) under the Water Framework Directive (WFD). The EU Member States and stakeholders started then discussions on harmonised silver Environmental Quality Standards (EQSs) for all matrices that could be of relevance and additional studies for more specific data on species were performed. For a while the silver EQS discussions were put on hold but relaunched in November 2020 under the lead of JRC/Sweden with a very ambitious deadline for EQS setting of mid-January 2021. The EQS have already been set at national level for silver in Germany, Austria, Belgium (Flanders), Czech Republic, Denmark, the Netherlands and Poland as silver is listed as river basin specific pollutant (RBSP), imposing limitations on pollutant releases at the source due to promulgation of emission limit values and as well as maximum values for surface water. Industry whose activities lead to a release of silver must take the necessary measures to comply with WFD requirements, such as land management approaches and/or extracting pollutants from water. This will often go through water and sewerage companies. The priority substances will be revised following the ongoing fitness check of the WFD and a potential legislative review of the WFD. If an EQS for silver is set EU-wide, the impact on the EPMF will be high as release of silver is likely to occur in the production of articles and manufacturing of the substance.

2. The EPMF's contribution

The EPMF is continuing to contribute to the discussions on the silver EQS in the silver sub-group led by JRC. Furthermore, the EPMF has published its own <u>assessment</u> of the silver freshwater toxicity data and the resulting EQS in the peer-reviewed literature. Whereas EPMF's comments and contributions on the ecotoxicity dataset have been partly taken into account by JRC, no proper discussions took place on the approach and assessment factors to be used for EQS derivation, resulting once again in an overly conservative draft freshwater EQS of 12-16 ng/L (depending on which ecotoxicity data are used). On this aspect, an input from the Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) has been requested and in their final opinion, they recommended an even more conservative draft fresh-

water EQS of 10 ng/L. At the same time EPMF's comments on the updated EU monitoring dataset for silver and its assessment, showing that silver does not pose an EU-wide risk and silver should thus not be prioritised, remain largely ignored by the European Commission. The EPMF considers this unacceptable and has raised its concern on the lack of transparency and scientific rigor in the prioritisation process at higher Commission level. In October 2021, the EPMF had a meeting with the Commission on the silver EQS process. The EPMF had an opportunity to share concerns on transparency issues that need improvement: i) all relevant information and monitoring data used to assess EU-wide risk in the prioritisation process should be provided to Member States and stakeholders; ii) prioritisation methodology should be implemented as set up by the JRC and agreed by all the stakeholders (rules cannot change during the process); iii) equal treatment of all substances; iv) timelines should be transparent. Moreover, the EPMF believes that an adequate scientific accuracy within the work needs to be ensured: i) all reliable available scientific evidence and principles should be considered; ii) stakeholders' comments should be adeguately addressed; and iii) available guidelines and recommendations should be implemented.

3. The EPMF's key messages

- The EPMF does not agree with the shortlisting of silver as possible priority substance as the available EU monitoring data do not suggest an EU-wide risk.
- Prioritisation methodology should be implemented as set up by the JRC and agreed by all the stakeholders (rules cannot change during the process).
- The EPMF believes the EQS proposed by JRC is overly conservative.
- The analytical techniques used to determine the silver concentrations for the monitoring dataset were not sufficiently sensitive, leading again to an overestimation of risk levels.
- The whole water monitoring dataset for silver was not sufficiently reliable to select silver as a candidate for EQS derivation.

4. The EPMF is in dialogue with:

- The European Commission: DG ENV and DG GROWTH
- The Joint Research Centre (JRC)
- Member States





You've probably heard the phrase "born with a silver spoon in their mouth", meaning to be born into privilege and wealth. But did you know that whilst the traditional gift of a solid silver spoon by godparents denotes a wealthy family, the silver itself was believed to prevent childhood illness?

III. REACH & CLP REVISIONS

Precious metals are indispensable to modern society and are fundamental in many sectors, including electronics, electrical equipment, automotive, aerospace, medicine, medical devices, jewellery and cosmetics. Therefore, the Chemicals Strategy for Sustainability (CSS), revision of REACH, and CLP will substantially impact the precious metals industry.

1. The Issue

The European Commission published a Chemicals Strategy for Sustainability on October 14, 2020. As announced in the European Green Deal, this is the first step towards a zero-pollution and toxic-free environment. The Strategy aims to boost innovation for safe and sustainable chemicals and improve the protection of human health and the environment against hazardous chemicals. It also seeks to establish a more straightforward 'One Substance - One Assessment (OSOA)' process for chemical risk and hazard assessment. The REACH and CLP revisions are actions under the Chemicals Strategy for Sustainability scope.

2. The EPMF's contribution

In 2021, the EPMF organised two events dedicated to CSS and the revisions of REACH and CLP. The EPMF invited DG Environment and DG Growth representatives to discuss the Commission's plans on REACH and CLP revisions with the EPMF members and downstream users. Other subjects included the role of precious metals in society and their contribution to the European Green Deal. Industry panellists highlighted the impact of the CSS on the precious metals industry and emphasised both opportunities and challenges for the sector. The European Commission reiterated the need for fact-based dialogue between EU policymakers and industry. The EPMF was recognised as an influential and essential stakeholder and was strongly encouraged to continue engagement. The event clearly showed the importance of a strong collaboration along the supply chain. The Green Deal objectives and the Chemicals Strategy for Sustainability will be at the heart of the EPMF's work during 2022.

Did you know that precious metals make our lives safer, more productive and healthier? Thanks to their unique properties, precious metals make it possible for us to have a cleaner environment, and their importance is growing as Europe leads the world towards a low-carbon economy:

- **Silver** can be used in a wide variety of products and sectors. It is essential in components of green technologies, e.g. solar panels, rapid charging stations and in-road applications. Currently, there is no 'like-for-like' alternative substance. Silver also continues to be used in X-rays and other medical applications. Silver's use in water purification continues today as it has for centuries.
- Gold is a critical element in the nearly 1.5 billion smartphones sold every year.
- **Platinum** is used in catalytic converters for cars, buses, trucks, and other industrial processes. It converts the emissions from the combustion chamber into less harmful gases as they pass through the system. In healthcare, platinum is used in pacemakers and defibrillators and platinum compounds are used in chemotherapy for cancer treatment.

Recycling precious metals contributes significantly to improving the supply of raw materials and increasing resource efficiency.

3. The EPMF key messages

2021 was rich in matters related to chemicals policy, REACH and CLP revisions. The EPMF issued position papers for both revisions, <u>here</u> and <u>here</u>.

The EPMF stands for:

- Supporting the need to ensure a thorough knowledge of all the substances placed on the market.
- Emphasising the need for a suitable approach specific to precious metals. The current Mixture Assessment Factor (MAF) proposal does not consider metals' unique aspects.
- Agreement that the evaluation of registration dossiers and substances is too complex and often too slow.

- The Authorisation procedure for REACH Risk Management Measures is too cumbersome and inflexible. This places EU-based companies at a competitive disadvantage, with minimal advantages from the risk control of Substances of Very High Concern (SVHC).
- Recommending a review of the Authorisation and Restriction procedures holistically in the context of a Risk Management approach. This could also be extended to other legislation, e.g. Occupational Safety and Health.
- Raising concerns over the current REACH revision proposal, the "Essential Use concept". The revision is currently unclear and could be extremely harmful to industry and future R&D if transposed from the Montreal Protocol to a much broader context without the necessary in-depth discussions.

4. The EPMF is in dialogue with:

- The European Commission: DG ENV and DG GROWTH
- The European Chemicals Agency (ECHA)



5. Timeline

IV. DOSSIER UPDATES

1. A continuous process for the Platinum Group Metals (PGMs)

The Platinum Group Metals (PGMs) include platinum (Pt), palladium (Pd), rhodium (Rh), ruthenium (Ru) and iridium (Ir). PGMs are used for autocatalysts, medical devices, healthcare, dental care, electronics, jewellery and <u>much more</u>.

The EPMF and its Members identified gaps in genetic toxicity data for several PGMs during the preparation of the registration dossiers under EU-REACH. In line with EU-REACH requirements, testing proposals for further in-vivo genetic toxicity testing were included. Testing proposals were developed for five platinum compounds: i) Group 1: 'hexachloroplatinates'; ii) Group 2: 'tetraammineplatinates'; iii) Group 3: 'hexahydroxyplatinates'; iv) Group 4: Platinum (IV) aqua hydroxo nitrato complexes; and v) Group 5: 'tetrachloroplatinates'. In 2021, the EPMF finalised the testing for groups 1-3 and 5, and the relevant REACH dossiers (including substances covered via read-across) were updated accordingly.

The testing proposal for group 4 has been approved by the European Chemicals Agency (ECHA) and will be initiated shortly. Summarily, the experimental data was negative and did not trigger a mutagenic classification. As a result, there was no update on the risk assessment performed under REACH based on the test results. An exception is the group of 'tetraammineplatinates', where the test result was inconclusive. A second in vivo genetic toxicity test is included as a testing proposal in the dossier and is currently under assessment by ECHA. The EPMF has also introduced testing proposals for further in-vivo genetic toxicity included in the dossier of tris (nitrato-O) nitrosyl ruthenium and rhodium trisulphate. These testing proposals are under assessment by ECHA, and a final decision for both is expected in 2022.

Data gaps were also identified for other endpoints, like repeated dose toxicity or reproductive toxicity. As no read-across options from existing data were identified, the generation of new data was considered the only remaining option. The palladium dichloride and disodium tetrachloropalladate testing have been finalised, and the test reports are expected in 2022. The testing of Platinum (IV) aqua hydroxo nitrato complexes is ongoing. Also, the inclusion of test data can be 'waived' for some endpoints. In the PGM metals' dossiers, this waiving argumentation is frequently used because PGM metals are inert materials and thus expected to be free from hazard. However, the arguments for waiving the endpoints are not valid without the proper experimental validation. Therefore, it was decided to update the PGM metals' dossier to remove the waivers that lacked solid validation. Read-across has been implemented from other dossiers that have the correct data available. This approach has been used for palladium and rhodium. For platinum and ruthenium, the use of read-across from existing data is weak. The generation of a limited dataset with these metals as test materials was agreed upon, and the work is scheduled for 2022.

Occasionally, indications of an adverse effect during test data generation is identified. These indications might lead to a direct classification, more stringent protection measures or further testing. Further testing aims to clarify the (non-)adversity of the effects in the initial testing. This was the case for 1,3-diethenyl-1,1,3,3-tetramethyl disiloxane and its platinum (0) complexes ('Karstedt Concentrate'). During the initial reproductive toxicity screening test, issues were identified that triggered a self-classification as Reproductive Toxicant Cat. 2 and the inclusion of a testing proposal for an extended one-generation reproductive toxicity study ('EOGRTS'). This study was approved by ECHA in 2021 and will be initiated in Q2 of 2022. The market for EPMF members is continuously changing. Since the REACH registration requirements mainly depend on the tonnage put onto the EU market, exceeding the threshold of a tonnage band simultaneously increases data requirements. Since 2021, a testing program has been operational to generate additional mammalian toxicity data for rhodium (3+) substances. This program was developed to ensure testing is reduced by the maximum use of, for example, read-across approaches. The testing is expected to last throughout 2022 and part of 2023.



The automotive sector dominates platinum and rhodium use as they are both vital components in emission control catalysts. These two precious metals are fundamental in removing carbon monoxide, hydrocarbons and nitrogen oxides from gasoline and diesel engine exhaust fumes. This removal results in dramatically improved global air quality. Catalytic converters help reduce outdoor air pollution in both cities and rural areas. The WHO estimates air pollution caused 3.7 million premature worldwide deaths in 2012.

2. Precious metals cyanides tests

Precious metals cyanides are widely used in industrial and professional applications, e.g., electrical equipment, optical products, computers, galvanic products, machinery and electroplating; thus playing an essential role in everyday life.

The EPMF has submitted two testing proposals (TP) for the precious metals cyanides for in-vivo genotoxicity/mutagenicity following positive in vitro data generation: potassium dicyanoaurate and potassium dicyanoargentate. The EPMF submitted a testing proposal for an in-vivo mammalian erythrocyte micronucleus test in the first case. ECHA agrees that this is an appropriate in-vivo follow up genotoxicity study to address the concern identified in vitro. The deadline to provide the in-vivo test results (OECD TG 474) is June 2022. Secondly, the EPMF included a testing proposal for an in-vivo somatic cell genotoxicity study for potassium dicyanoargentate because of the positive result in the mammalian cells' in-vitro gene mutation study. The EPMF will perform an in-vivo mammalian erythrocyte micronucleus test (OECD TG 489) combined with an in-vivo mammalian erythrocyte micronucleus test (OECD TG 474) to update the dossier by June 2023. The scientific part and analysis of the genotoxicity/mutagenicity testing outcomes will occupy 2022 and 2023.

78 Pt Platinum

Platinum is used to make essential components for a range of medical devices. Its biocompatibility, inertness within the body, durability, electrical conductivity, and radiopacity make platinum uniquely suitable for various medical applications. It is widely applicable in:

- surgical instruments: arthroscopic, ophthalmology, endo-laparoscopic, electro-surgical
- pacemakers
- electro-medical implants: defibrillators, hearing assist devices catheters
- stents and neuromodulation devices
- orthopaedics: spinal fixation, hip implants, knee implants

3. MISA

The Metals and Inorganics Sectoral Approach (MISA) was a cooperative programme set up by ECHA and Eurometaux (European non-ferrous metals association) to address technical and scientific issues faced by the metals and inorganics sector and to improve the registration dossiers in this sector. MISA is built on the principle of continuous improvement in identifying any outstanding REACH and CLP standard information endpoints. MISA is intended to provide information, supply chain communication and risk management needs, where relevant, for as many substances as possible. MISA is a voluntary programme endorsed by metals and inorganics consortia who signed a framework for cooperation, running from 2018 to the end of 2021. The EPMF actively participated in MISA, driving its REACH dossiers workplan update. Various topics were covered in-depth, including human and environmental hazards, unknown variable composition or biological substance (UVCBs), environmental exposure. The aim was to find common ground and technical solutions to consistently update the REACH dossier throughout the sector. Clear lessons were learnt and used as 'best practices/approaches' and updated methodologies. The EPMF has successfully updated its dossiers following MISA learning. However, the work is not yet finished with specific actions either ongoing or scheduled for future action following discussion and prioritisation with the EPMF membership.

Other topics still pending include minor constituents/impurities and supply chain communication. These could form part of a future program still to be defined with ECHA.

In summary, the EPMF updated its REACH dossiers following the exchanges and recommendations according to MISA. The MISA cooperation was a valuable experience for the EPMF, allowing the organisation to gain post-registration support for REACH dossiers and bringing clarity to aspects such as read-across and reporting it within a dossier. Moreover, it led to the creation of the UVCB platform to centralise, optimise and streamline the updating of the UVCB dossiers. The EPMF gained significant credibility with ECHA and regulators as a reliable partner during this process.

4. The EPMF is in dialogue with:

5. Timeline

• The European Chemicals Agency (ECHA)



PRIORITIES AND ACTIVITIES

SUSTAINABILITY



Sustainability is one of the EPMF's highest priority topics. The EU Green Deal policies, circular economy, responsible sourcing and due diligence are high on the EPMF agenda! In 2021, the EPMF was occupied with the revisions to the <u>Waste</u> <u>Shipment Regulation</u> and the End-of-Life-Vehicles Directive, EU Conflict Minerals Regulation, just to name a few. 2022 will present a number of challenges: the EPMF will continue the work started in 2021 and is already preparing for the upcoming revision of the <u>EU Conflict Minerals Regulation</u>, the proposal on Sustainable Corporate Governance and the revision of the Waste Framework Directive.

I. RESPONSIBLE SOURCING

1. The Issue

The Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected (CAHRAs) and High-Risk Areas is one of the instruments developed to help companies identify and better manage risks throughout the mineral supply chain. From miners, local exporters and mineral processors to the manufacturing and brandname companies that use these minerals in their products. The 5-step framework of the OECD guidance serves as the basis for the 'EU Conflict Minerals Regulation' that was adopted in May 2017 to control the trade in minerals from conflict areas and establish a system for supply chain due diligence obligations for EU importers of tin, tantalum, tungsten, and gold (3TG). The regulation explicitly prioritises the concept of responsible sourcing and targets the use of minerals traded to finance armed groups, forced labour and other human rights abuses. It requires EU companies to only import minerals and metals from responsible sources. The EU Regulation is fully applicable as of January 1, 2021.

2. The EPMF's contribution

The EPMF is in contact with DG Trade and DG Growth on matters relating to the EU Conflict Minerals Regulation. In particular, on the implementation of the Regulation, recognition of the supply chain due diligence schemes, CAHRAs list and upcoming revision in 2023.

3. The EPMF's key messages

The functioning and effectiveness of the EU Conflict Minerals Regulation is subject to revision by January 1, 2023, and every three years thereafter. The EPMF supports more ambitious regulation and recommends the following to the EU policymakers:

• lowering the threshold for gold to cover all gold imports that fall within the scope of the regulation, effectively following already existing industry initiatives. The current 100 kg threshold for gold and 4.000.000 kg for gold ores and concentrates required to trigger regulation risks weakening the standards. This could result in reputational consequences for the industry.

• the EU Conflict Minerals Regulation requires a more in-depth involvement of the entire supply chain rather than focusing only on (upstream) EU importers.

4. The EPMF is in dialogue with:

- The European Commission: DG Trade and DG GROWTH
- The OECD
- RAND Europe (consultancy working for the European Commission on identifying CAHRAs for EU importers of minerals)



In Europe, between 85 and 90% of gold is used for either jewellery or investment. What about the remainder? Approximately 10-15% of gold is used in a range of applications that use its unique properties. Its corrosion-resistance and static-free electrical conduction mean that a small amount is used in the nearly 1.5 billion smartphones sold every year. It is also used in other electronic devices where efficiency and high performance are required, such as mounting microprocessors and memory chips onto the motherboard in your computer. Electronic connectors requiring extended durability and reliable transmission are made of other metal alloys are then electroplated with gold to resist oxidation. Navigation in your car and with your mobile phone depends on the global positioning system (GPS) satellites with gold-coated components to protect them against corrosion from ultraviolet light and x-rays.

5. Timeline



II. SUSTAINABLE CORPORATE GOVERNANCE / DUE DILIGENCE

1. The Issue

In April 2020, the EU Commissioner for Justice, Didier Reynders, announced that the European Commission would propose mandatory human rights and environmental due diligence legislation on companies. The proposal on corporate sustainability due diligence was introduced on February 23, 2022. The Directive builds on the UN's Guiding Principles of business and human rights and the OECD Guidelines for Multinational Enterprises - Responsible Business Conduct Matters and aligns with internationally recognised human rights and labour standards. It aims to foster sustainable and responsible corporate behaviour throughout global value chains. Companies will have a pivotal role in building a sustainable economy and society. They will be required to identify, prevent, end, or mitigate adverse impacts of their activities on human rights (e.g. child labour, exploitation of workers) and the environment (e.g. pollution, biodiversity loss). The new EU rules will also cover the green transition and human rights protection in Europe and beyond.

2. The EPMF's contribution

In 2021, the EPMF submitted its contribution to the Commission's public consultation on sustainable corporate governance and published a position paper. The EPMF met with the Cabinet of DG Justice to understand the Commission's upcoming proposal. During the meeting, the EPMF emphasised the need to focus on the complementarity of EU initiatives and attention to the already existing voluntary due diligence schemes. Moreover, EPMF strongly advocates for a level global playing field and fair competition. EU policymakers should be aware that the EU industry

79 **Au** Gold

The first evidence of gold in curing illness dates back to 2500 BC in China. At that time, physicians widely used gold to cure fever, measles, and general infection. The wide-spread use of gold in medicine in the western world only started in approximately 1300 AD with the discovery of 'aqua regia', a mix of hydrochloric and nitric acids that could dissolve gold.

Nowadays, gold is used in both cancer diagnosis and treatment. Gold can be tracked through the human body to screen, investigate, and diagnose cancerous cells. The gold particles are injected into tissue as a radiation source during chemotherapy treatment.

cannot be the only actor involved - local government and public authorities can and should contribute to sustainability and responsibility.

3. The EPMF's key messages

The EPMF welcomes the European Commission's proposal for a Directive on corporate sustainability due diligence. We support the Commission's objective to respect both human and labour rights and corporate social responsibility throughout the value chains of European companies. Our key recommendations are:

- Due diligence should be applicable throughout the entire value chain.
- Complementarity of the EU initiatives.
- Reliance on voluntary due diligence schemes.
- · Cooperation with the third countries.
- Ensure a level global playing field.
- The banking system and banks are the big players in due diligence and should also be included.

More details are in the EPMF's position paper.

4. EPMF is in dialogue with:

- The European Commission: DG Justice
- The OECD



III. REVISION OF THE WASTE SHIPMENT REGULATION

1. The Issue

The new Circular Economy Action Plan (CEAP) was adopted in March 2020. It is one of the main building blocks of the European Green Deal, focusing on EU businesses and consumers to transition to a more robust and circular economy where resources are used more sustainably. CEAP targets product design, promotes circular economy processes and encourages sustainable consumption. This ensures that waste is prevented and the material resources are kept within the EU. The EU will assess and revise rules applicable to waste management within this framework.

2. The EPMF's contribution

Precious metals are materials of choice in the transition to a circular economy. Metals can be recycled infinitely, making them materials of choice to support the transition to a circular economy. Thanks to the world's most comprehensive and technologically advanced refining facilities, end-of-life products and production scrap containing precious metals can be successfully and economically refined. Recovery rates exceed 95% and, depending on the type of material, often surpass 99%.

Waste is a resource, and the EPMF aims to increase public understanding of how precious metals contribute to the circular economy. Precious metals can be recycled ad infinitum without losing their intrinsic properties and are critical to sustainable product design in the circular economy. The precious metals industry recognises the value of waste and encourages design for circularity. The industry will communicate clearly with consumers and society about technological applications, sustainability benefits and recyclability whilst being transparent about the environmental impact throughout the value chain.

CEAP is highly relevant to the precious metals sector; the revision of the rules on waste shipments will enhance the ability of chemicals and products to enable recycling to improve the uptake of secondary raw materials and substitute substances of concern. Where this is not possible, it will reduce their presence and enhance tracking. The main challenge for the precious metals industry is insufficient information about substances of concern in products and waste, their presence in recycled products and difficulties in applying EU waste classification methodologies.



The recycling of platinum contributes to a circular economy and sustainability. The recycling of platinum is an essential aspect of sustainability for the modern industry and energy sectors. Platinum is endlessly recyclable without a loss of quality.

3. The EPMF's key messages

Moving towards a more circular economy, and within that context, the EPMF recommendations for the revision of the <u>Waste Shipment Regulation</u> are:

- Reduction of the administrative burden by switching to a harmonised digital system.
- Fast track procedures for pre-consented facilities of waste shipments.
- A harmonised EU approach dealing with waste classification, procedures, and enforcement.
- All EU Member States should have a general tacit agreement to transit waste for recycling via EU ports without any discharge.
- Any upcoming regulation should secure a level playing field to avoid low-quality waste stream imports of precious metals that increase the burden on EU recyclers and refineries.

4. EPMF is in dialogue with:

- The European Commission: DG ENV
- Trinomics (consultancy firm working for European Commission on WSR revision)



COMMUNICATION

I. THE EPMF IN THE MEDIA

To complement the Silver Series videos and educate people about PGMs, the EPMF worked on a set of animations that illustrate platinum and rhodium's uses and unique properties. Alongside silver, PGMs are directly linked and contribute significantly to EU greening policies: from autocatalysts to glass fibres. You can view the videos on EPMF's <u>Twitter</u> and <u>LinkedIn</u> feeds – precious metals really are all around us!

Are you familiar with the concept of 'one substance, one assessment'? The Secretary-General of the EPMF, France Capon, wrote the <u>opinion piece</u> as a guest columnist for Chemical Watch entitled 'What is the key to making 'one substance, one assessment' work?'. The EPMF's experience can inform policymakers and help make the 'one substance, one assessment' concept successful. The use of the same hazard assessment across different legislation is long established in the precious metals industry. The EPMF invites you to listen to the <u>podcast</u> with Rud Pedersen on Chemicals Strategy for Sustainability to increase your knowledge further. This was one of the first podcasts to discuss the future of European chemicals policy in the context of the Green Deal debate on the new EU Chemicals Strategy for Sustainability. In this episode, Chris Davies, a Senior Advisor at Rud Pedersen Public Affairs and a longstanding former member of the European Parliament's environment committee, spoke with France Capon, Secretary-General of the EPMF.

II. SCIENCE AND THE EPMF

Science is key to much of the EPMF's work and having scientific experts on the team makes the EPMF work even more advantageous. In 2021, the EPMF published scientific articles on i) priority substances and European Water Framework Directive; ii) silver threshold for freshwater organisms; iii) oral exposure of silver acetate; and iv) toxicokinetic behaviour of silver substances.

If you are interested in the precious metals science, take a look at the following:

 <u>'Using Exposure Data to Identify Priority Substances Under the European Wa-</u> ter Framework Directive: The Quest to Reflect Uncertainties', co-author Jelle Mertens.

- <u>'Setting a protective threshold value for silver towards freshwater organism'</u> contribution by Katrien Arijs and Jelle Mertens.
- <u>'Systemic effects and impact on the gut microbiota upon subacute oral expo</u> <u>sure to silver acetate in rats'</u> cosponsored by the EPMF.
- <u>'New evidence on the comparative toxicokinetics of different forms of silver</u> (Ag) and its implications for read-across'.

Were you aware that it is possible to cooperate with a university on scientific study? The EPMF is doing just that by co-sponsoring a masters thesis at the University of Pau and the Adour Region (L'Université de Pau et des Pays de l'Adour (UPPA)). The thesis is entitled 'Accumulation and effects of platinum and palladium on unicellular algae - Influence of initial speciation that triggers speciation defined by composition test medium rather than test item and how complexation contributes to bioavailability'. The hypothesis focuses on the chemical equilibrium between the studied metals (platinum and palladium), and the dissolved ligands that are reached in a shorter time scale than the appearance of toxic effects. Thus, it is hypothesised that the effect of platinum and palladium on algae is insensitive to the nature of their initial compound used and instead depend on equilibrium conditions. The publication of this masters thesis is scheduled for Spring 2022 and will be publicly available. Keep an eye on the <u>EPMF news</u>!

THE EPMF TEAM

Are you familiar with all the persons assisting the EPMF Members and working on Chemicals Management, Sustainability and Communication?



The EPMF Staff

Secretary-General: Ms France Capon Senior Scientific Manager: Dr Jelle Mertens Scientific Officer: Ms Anissa Alami Policy Officer: Ms Zinaida Nazarenko Office Manager: Ms Audrey Rondepierre Back-Office Assistant: Ms Cathy Martin

The EPMF Consultants / Project Facilitators:

Ms Katrien Arijs

Mr Maxime Eliat

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PRECIOUS METALS, ALL AROUND YOU



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