

## **SUMMARY REPORT OF THE SUPPLY AND STORAGE EXPERTS GROUP MEETING Supply and Storage Partnership Area of the Global Mercury Partnership (UNEP)**

The meeting was organized by the Government of Spain (Ministry of Agriculture, Food and Environment, MAGRAMA), with the collaboration of the Government of Uruguay (National Environmental Directorate). The meeting was held in Madrid (Spain), 25-26 October 2016, at the MAGRAMA.

### **1. Workshop objectives:**

- Collaboration of the Supply and Storage Area with other areas of the Global Mercury Partnership.
- Overview of the challenges faced by the Chlor-Alkali industry, including consideration of the risk of surplus mercury within this sector going again to the market.
- Highlight the mercury stabilization and solidification technologies as tools to ensure the environmentally sound management of mercury.
- Present the analytical tools to characterize mercury and mercury wastes, environmental studies for mercury monitoring.
- Review relevant mercury storage experiences.
- Discussion on the future activities of the Supply and Storage Area.

The meeting also had the aim to exchange initiatives and real experiences that have been undertaken both in public and private sectors and to contribute to disseminate information.

### **2. Participants:**

The list of participants is attached as an Annex to this summary report.

## **Day 1/ Agenda Items: Opening of the meeting**

### **Welcome speech by the Deputy General Director of Air Quality and Industrial Environment, Spanish Ministry of Agriculture, Food and Environment:**

1. The Spanish representative welcomed and thanked the participants for their attendance at the meeting. She highlighted the very close time period for entry into force of the Minamata Convention and the urgent challenge at this time to ensure that the large amounts of surplus mercury emerging now and in the coming few years are not placed again into the market and are managed in an environmentally sound and safe manner for human health and the environment. Spain is co-leader of the partnership area together with Uruguay and is fully committed to the goals of the area. She wished a fruitful meeting to all participants and declared the start of the meeting.

2. The governmental representatives of Spain and Uruguay, co-leaders of the Supply and Storage Partnership Area of the Global Mercury Partnership, also welcomed the participants; they alternatively chaired the meeting.

**“The Supply and Storage Area of the Global Mercury Partnership, relation to other Areas and to the near entry into force of the Minamata Convention.”**

Speakers: Representatives of Spain and Uruguay, co-leaders of the Supply and Storage Partnership Area.

3. The co-leaders reviewed the objectives of the area and the links with other Partnership Areas. They acknowledged the lack of activity due to the complexity of the goals of the area and to the variety of the sectors involved. Besides, and given the heterogeneity of the fields covered, other partnership areas have developed a number of initiatives directly related to the goals of the Supply and Storage Area, which has further increased the complexity of the task.
4. Among other relevant issues, the speakers stressed the priorities of the area at this time, particularly the need to be prepared to manage the significant amount of metallic mercury that is expected to be generated from the decommissioning of the Chlor Alkali sector and to ensure that it is managed as waste and not placed again into the market. In this regard, representatives from the waste management and the Chlor Alkali areas were invited to attend the meeting to share their concerns and contribute to the discussion on the environmentally sound management of mercury.

**“Global Mercury Partnership and the Minamata Convention on Mercury”**

Speaker: Representative of UNEP Secretariat.

5. The Representative of UNEP Secretariat briefly reviewed the background of the Minamata Convention and of the genesis of the Partnership Areas. She noted the potential contribution of the partnership area to the implementation of some of the relevant articles of the Convention:

Art. 3 and 21, the Secretariat hopes to celebrate COP 1 in September 2017 where the parties to the Convention would decide on Reporting Forms A-D provisionally adopted by INC 7 and on other pending issues on reporting. The identification of mercury stocks is another relevant issue linked to the goals of the area.

Art. 10, COP 1 shall adopt the guidelines on interim storage of mercury, other than waste mercury, taking into account the Technical Guidelines of the Basel Convention, without excluding the inclusion of additional requirements.

**“Update on global mercury mining production and trade trends”.**

Speaker: Representative of Mercury Policy Project.

6. The Representative of Mercury Policy outlined the main trends of mercury trade and underlined the shift of mercury trade from wealthier countries to less wealthy, particularly to East Asia. In general terms, trade trends are changing so fast that it is difficult to keep track of the changes, so frequency of reporting becomes more important. Despite the increase in national bans on the export of mercury (e.g. the EU, USA, and others under consideration in Switzerland, Canada, Japan, etc.) a decrease in the amount of mercury in ASGM activities has not been reported. A waste expert from the Spanish Ministry of the Environment explained that mercury is legally exported as waste and later might be diverted to other uses. The impact of illegal trading, such as in the DELA case, was also pointed out.
7. The presentation provided figures on the current situation regarding primary mercury mining showing also that mercury price is highly volatile. For example, the free market price of mercury tripled after export bans were implemented and has now fallen back and regained some stability.
8. The speaker announced that Mercury Policy Project is currently under contract with the Commission for Environmental Cooperation to conduct a North American mercury trade study that involves the United States, Canada and Mexico. The main goal of the study is to enhance understanding of the available statistics on North American mercury trade, identify significant gaps and discrepancies in mercury trade statistics, and provide recommendations to address discrepancies and improve reporting. The study is expected to be completed by the end of 2016 and will be made publicly available.
9. The experts shared their concerns on the significant gaps in reporting accurate information on mercury production and trade flows that prevent a clear understanding of the global supply situation, particular since much of the global mercury trade is for use in artisanal and small scale gold mining (ASGM) and the fact that virtually all mercury used in ASGM is released into the environment, making it the largest source of global emissions.
10. In the ensuing discussion, along with others the Representatives of Uruguay and Spain expressed some concerns on the reliability of the data on mercury trade provided by COMTRADE since COMTRADE is mainly designed for economical and tax control purposes. For instance, no custom code for dental amalgams exists. The speakers encouraged the use of data from national customs statistics to update current figures on mercury flows.
11. The Spanish representative noted that a small study on global supply and trade of mercury was conducted in Spain last year which showed that there are data reported by COMTRADE wrongly reflected mercury quantities that in fact are, for example, articles with other

metals. The use of inaccurate sources can lead to a situation where erroneous data are presented and appear as reliable, providing an inaccurate picture.

12. The Representative of Uruguay explained that the national authorities are currently reviewing national custom codes for mercury and mercury in products with the purpose of facilitating the identification of all the mercury entering or leaving the country.
13. UNEP Secretariat and Mercury Policy explained that COMTRADE is not the only source of information, and that custom data and direct interviews with custom officers are also being conducted in the updating process. Mercury Policy suggested that the Convention should address the need to collect such data, and that the partnership area could contribute to the task. He also added that the involvement of mercury traders in the process is relevant.
14. UNIDO pointed out that training of national custom officers would greatly contribute to an effective control of export/import activities.
15. The participants agreed that it is necessary to send a clear signal to the Convention on the importance of frequent reporting and addressing current gaps in data gathering.

#### **“Presentation on the Results of the Chlor-Alkali Experts Group in Vienna (June 2016)”**

Speaker: Representative of UNIDO.

16. The speaker explained that the organization assists in the timely ratification and implementation of the Minamata Convention. UNIDO is currently involved as leader in two Partnership Areas, i.e. Artisanal and Small-scale Gold Mining, and Reduction in Chlor-Alkali.
17. The objective of the meeting in Vienna was to analyse the sector in terms of location of the remaining Chlor-Alkali facilities, historical context regarding the development and the adaption of technologies across the sector.
18. He continued by explaining that the meeting selected the main areas of action and that the organizations that will lead the process for each of the areas are being identified.
19. The speaker also underlined the importance of assisting developing countries with technical and financial support to address the conversion of the existing facilities in a sound environmental manner. The Representative of the USEPA added that the representatives of the potential funding sources (e.g. international banks) need to understand the challenges faced by the industry during the conversion process, and that this understanding may necessarily take some time. The UNEP Secretariat representative said that UNEP would act as a catalyser for the process.

**“Review of the state of the Chlor-Alkali industry with Mercury technology. Spanish Chlor-Alkali plants experience, future challenges and course of action”**

Speaker: Representative of ERCROS.

20. The speaker described the business areas of the company and explained the decommissioning process of the Electrolytic Unit IV-A in the Chlor-Alkali facility located in Flix (Spain), an industrial facility commissioned in 1975 that implemented Mercury cathode and DeNora cells technologies with a design Capacity of 70,000 t/year.
21. The speaker noted the main challenges lying ahead, including the following: the shortage of suitable containers for the storage of mercury, the lack of clear and detailed technical guidelines, the need to build a warehouse or to convert an existing facility to serve as a storage warehouse, including the implementation of the necessary monitoring, maintenance and surveillance activities, the obligation to undertake soil remediation at the site, the uncertainties on the final options for the disposal of mercury and the lack of legal certitude on the transfer of the responsibility over the management of mercury to the waste manager, taking into account that the EU deadline for the phasing out of Chlor Alkali mercury cell plants is November 2017. The speaker also stressed the importance of keeping a detailed record of all the activities developed during the decommissioning process.

**“Review of the state of the Chlor-Alkali industry with Mercury technology. Spanish Chlor-Alkali plants experience, future challenges and course of action”**

Speaker: Representative of SOLVAY.

22. The Representatives of SOLVAY explained that the Torrelavega Electrolysis Plant is the last chlorine plant utilizing a mercury technology in Solvay Group and it is forecasted to continue to be operational until the EU deadline for mercury technology.
23. They shared the same concerns expressed by the previous presentation on the future dismantling operations and on the management of the resulting mercury. They also added that there is scarce information on mercury management after decommissioning of the plants and that a close collaboration with the authorities in order to solve unexpected problems is essential. The company has decided to store the mercury in the modified cell room, which, according to previous experiences, would help to minimize spillage risk.
24. Other concerns expressed were the uncertainties on the treatment capacity of commercially available mercury stabilization technologies and on the duration of the temporary storage of mercury, the lack of competence in the stabilization sector that results in rising prices, the need to ensure that mercury is irreversibly transformed and that it cannot return to the

market and the potential damage to the image of the companies in case of mismanagement of mercury by the final waste manager, even if all liabilities have been properly transferred.

25. The Representative of USEPA asked for more information on the lack of adequate containers. The speakers explained that given the current uncertainties on the amount of mercury that will be generated and on the final disposal of mercury, no clear figures on the number of containers can be provided, but that they have detected a significant shortage. It was noted by some of the participants that containers used for temporary storage would become in the future waste contaminated with mercury, which should be taken into account during the design of management in order to minimise the amount of waste generated during temporary storage.

**“Presentation on stabilization and solidification technologies (I). Current state of the mercury stabilization solidification technology developed by MINAS DE ALMADÉN Y ARRAYANES, S.A. (MAYASA) and the Spanish Mercury Technological Center (CTM)”**

Speaker: MINAS DE ALMADÉN Y ARRAYANES, S.A. (MAYASA) and the Mercury Technological Center (CTM)

26. The speaker explained that from 2001 to 2011, MAYASA collected, treated and stored the surplus metallic mercury from industrial facilities located in various European countries within a framework agreement signed among MAYASA and the European Association of Chlorine Producers (EURO CHLOR).
27. In all cases, these operations were carried out under the most exacting international standards (ADR, RID, IMDG, etc.). During that 10-year period of operations no accident or mercury leak were recorded.
28. The Representative of MAYASA described the Sulphur polymer Stabilization and Solidification technology developed by the company that transforms liquid mercury into an inert compact solid. During the process, 100% of Hg is transformed. The final product emits 100 times less mercury than cinnabar and is non-flammable. In addition, no water consumption, and neither effluents nor wastes are generated during the process. The leaching values of the final products fulfil the EU acceptance criteria for landfills for inert wastes (<0,01 mg/kg, Decision 2003/33/EC), therefore it could be sent to an inert landfill but the scenario proposed additional safety precautions and suggested that the material be deposited in hazardous waste landfills (above ground specially engineered landfill).
29. In addition, there is an available authorised landfill for hazardous waste located in the premises of the company; MAYASA has also identified several other suitable specially engineered landfills near the area.
30. MAYASA has obtained all the necessary permits and authorizations for the construction of a plant that could be built, tested and working in eleven months; the treatment capacity

foreseen is 600 ton/year (but this basic treatment capacity could be easily multiplied by 2 or even by 4, if necessary). Treatment costs have been estimated at 2,500 €/ton of metallic mercury.

31. The Representative of the Overseas Environmental Cooperation Center (Japan) announced that Nomura Kohsan, a Japanese company, foresees to present by 2020 a new mercury stabilization technology. The Representative of Mercury Policy informed the group that the US Company Bethlehem Apparatus has developed a mercury stabilization process that yields a mercury sulphide that passes the US TCLP (Toxicity Characteristic Leaching Procedure) leach tests for elemental mercury disposal. Currently, this mercury sulphide is allowed by the US EPA to be exported to Canada for land disposal.
32. The representative of Spain commented that it would be convenient to take into account the irreversibility of the different technologies; it is technically very easy to obtain metallic mercury from pure mercury sulphide (85% of mercury) and economically much more profitable than from natural cinnabar ore (<4% of mercury) which needs, among others, metallurgical process.

**Presentation on mercury stabilization and solidification technologies (II). Update of the current state of the mercury solidification technology with microcements developed by CEMINTECH**

Speaker: Representative of CEMINTECH

33. The presentation provided a description of the technology of stabilisation and solidification of contaminated mercury waste with sulphur microcements. These microcements have very fine particle size and contain sulphur to encapsulate mercury; they are mixed with water and superplastifiers, as polycarboxilates, and can penetrate in voids, cracks and internal porosity. The technology is suitable for the treatment of mercury waste with low mercury content (<2%), e.g. demolition wastes, and it is implemented in situ using a mobile unit to mix standard cement with a small amount of microcements. The technology has been tested in Spain (sediments from a dump) and in Uruguay for the treatment of two industrial wastes with different granulometry from a mercury Chlor-Alkali Plant. The tests conducted showed that the best results are achieved using a mix of both types of waste.
34. The leaching values of the final products obtained fulfil the EU acceptance criteria for landfills for inert wastes (<0,01 mg/kg, Decision 2003/33/EC). CEMINTECH seeks to involve local concrete producers to reduce transportation costs and risks. The cost of the process depends upon the costs and the amount of microcements to be used, which is always reduced, and on the amount of waste to be treated.

**“Projects and experiences on the application of mercury stabilization and solidification technologies. Project from Uruguay.”**

Speaker: MVOTMA/DINAMA-Uruguay.

35. The Representative of Uruguay presented the results of the tests on mercury stabilization/solidification technologies for the treatment of waste from a Chlor alkali facility in Uruguay. The project included the characterization of the waste from the area of the Chlor alkali plant: small amount of waste with high mercury content and large amount of waste with low mercury content.
36. Two stabilization/solidification processes were performed in two centres in Spain, i.e. stabilization and microencapsulation in a sulphur polymeric matrix in the Spanish Mercury Technological Center (CTM), and stabilization with sulphur microcements in the Cement International Technologies (CIT). CTM treated waste with high mercury content, while CIT treated waste with low mercury content.
37. The test showed that it is feasible to stabilize Chlor-alkali mercury waste using the sulphur polymeric + stabilization technology as well as the stabilization with microcements. The final product after stabilization and microencapsulation in a sulphur polymeric matrix increases by 1,7 in mass from the original waste, while mercury concentration in leachate decreases 96% in the final monolite for both types of waste, thus the product could be sent to a specially landfill according to the Uruguayan legislation. Leach tests were conducted both in Spain and in Uruguay.
38. Afterwards, the speaker described the activities linked to the GEF funded project for the development of Mercury Risk Management approaches in Latin America. The Project is co-funded by Uruguay, Argentina, Ecuador, Peru and Uruguay, and is coordinated by the Basel Convention Coordinating Center for LAC. She also announced that the Uruguayan government is drafting a plan for the decommissioning of the existing Chlor Alkali plant that is expected to be presented by the end of 2016.
39. The need to disseminate the information on stabilization and solidification technologies presented in the meeting was highlighted by the participants.

#### **Round table discussion.**

Following the presentations of the first day, a round table discussion was organized further elaborating on the prominent topics raised throughout the day, in particular on existing gaps on data related to mercury stocks, production and trade flows, the need to assist Parties to the Convention to fulfil the dispositions of the Convention, and the apparent lack of commercially available capacity for the treatment and storage of mercury.

40. The representative of Spain explained that the amount of mercury from Chlor Alkali industry in the EU was previously estimated to be 8,000 tons, while this year the amount has been



estimated to be 6,000 tons; it seems that a significant amount of mercury has gone back into the market with a high risk of being released to the environment, e.g. through its use in ASGM activities, which calls for urgent action.

41. The Representative of Mercury Policy suggested working in close collaboration with the Chlor Alkali sector in order to identify in a clear way the disposition of present and future mercury stocks, design plans for temporary storage, assess the need for more containers, etc. He added that the Supply and Storage Partnership Area could report on these issues to COP 1. The information might be used later for the development of national plans. He also suggested conducting a survey among the companies involved and to present it to COP 1 to try to find suitable solutions for the problems that might be identified. For instance, the shortage of containers is a real problem and the Convention should be aware of the problem and be prepared for action. The Partnership Area could be used to bring all the sides together. Further, the results of the survey could be used as the baseline information to apply for funding from the GEF or from other sources, should there be interest.
42. Some of the participants explained that establishing a clear communication channel between the needs of the industry and the activities of researchers is also a key issue. UNEP Secretariat suggested that the Area could provide the necessary guidance to COP 1 on these issues.
43. The Representative of Spain drew attention to the fact that metallic mercury, declared or not as waste, shows always the same physical-chemical properties and therefore poses the same risk to human health and to the environment and it is necessary to apply the same safety measures. She highlighted the Basel Technical Guidelines on the environmentally sound management of wastes consisting of, containing or contaminated with mercury or mercury compounds (adopted at COP-12 of the Basel Convention, May 2015) as the more extensive, reliable, globally accepted and transparently reviewed source of information on these subject. She added that nowadays there is not enough available commercial capacity for the treatment of mercury and that more time is needed to develop a feasible option at a commercial scale.
44. The Representative of USEPA asked about the possibility of establishing regional treatment facilities. The Representative of Uruguay replied that at least in South America that option is not feasible due to limits on waste shipments imposed by national regulations. She also explained that the technological options were clear, but that there is a severe lack of financial resources that prevented the private sector from applying them.
45. The Representative of UNIDO raised the issue regarding the lack of a solid regulatory framework and the necessary capacities particularly in developing countries to face the challenges posed by mercury management. He added that it is urgent to assist developing countries to fill gaps in their national regulations.

## **Day 2/ Agenda Items:**

### **“Presentation on analytical tools to characterize mercury and mercury wastes: Environmental studies for mercury monitoring”**

Speaker: Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT)

46. The presentation reviewed the activities on mercury monitoring in the area of Almadén (Spain) where the oldest and largest mercury mine in the world is located. The area presents high mercury concentrations and it has been subjected to mercury monitoring studies since the end of mercury production.
47. The speaker explained that for over twenty years CIEMAT, in collaboration with MAYASA and the Ministry, has been conducting different studies in the Almadén area on soil parameters (physical, chemical and biological) that influence the Hg behaviour in soil; rhizosphere; soil-plant system (natural vegetation and crops); water and sediments; and developing environmental restoration proposals including socio-economical alternatives (land uses) and environmental monitoring.
48. The presentation included a detailed description of the studies conducted on the potential effects of mercury on the local population and on the different pathways, e.g. agricultural activities and food products, use of plant for traditional medicines, game meat, etc.
49. Besides the technical aspects of the presentation, the speaker stressed the importance of ensuring an active involvement of the local population and an effective dissemination of the results of the activities among the scientific community.
50. UNEP Secretariat recalled that Articles 19 and 22 call for the harmonization of monitoring technologies and includes an explicit reference to the assessments of the impact of mercury and mercury compounds on, among others, human health, particularly in respect of vulnerable populations.
51. The Representative of Spain noted that there are several monitoring networks in Spain that include mercury data i.e. biota, continental and marine water, air and sediments. These activities are developed by different governmental units and have been recently reported to UNEP Secretariat.

### **“Presentation on the mercury storage experiences carried out in Uruguay”**

Speaker: MVOTMA/DINAMA-Uruguay.

52. The speaker described the results of the GEF funded project on the environmental Sound Life-Cycle Management of Mercury Containing Products and their Wastes. The project will draft guidelines for the sound management of mercury waste.
53. Among other activities, the project will issue recommendations for packaging, storage and good practices related to management of waste products from lamps, compact fluorescent lamps, dental amalgam and other medical devices containing mercury. Temporary storage before treatment and final disposal will also be addressed.
54. The speaker also noted that the country is reviewing custom codes to facilitate control of mercury flows. In the framework of the project specific custom codes for mercury articles and products would be defined. New customs codes are expected to be released in 2017
55. The Representative of Mercury Policy asked whether any international working group on custom codes had been established. The Representative of Uruguay replied that no such group currently exists, to review custom codes related to mercury in the framework of the Minamata INC. She also noted that Colombia is currently implementing a successful program targeting the collection of mercury containing waste that involves manufacturers and recyclers, while Uruguay is testing a lamp collection system. The Representative of Mercury Policy added that thermostat manufacturers in the USA (<https://www.thermostat-recycle.org/>) have set up a voluntary program to collect old devices, and offered to share information on the results in the event that there might be interest in establishing similar programs in other countries. Perhaps it would be useful to have a specific group that deals with custom codes for mercury within the framework of the convention.
56. The representative of Spain noted that Article 10 of the Minamata Convention “Environmentally sound interim storage of mercury, other than waste mercury” is referring to mercury and mercury compounds intended for allowed uses, which represents modest amounts of mercury that will decrease over the years.

**“Presentation on other experiences on Mercury Storage. Containers for metallic mercury.”**

Speaker: MINAS DE ALMADÉN Y ARRAYANES, S.A. (MAYASA) and the Mercury Technological Center (CTM).

57. The speaker described the experiences related to the development and use of containers for mercury carried out by the company. MAYASA offers containers with different capacity, i.e. the traditional bottles of 34,5 kg, 300 units of 1tn capacity containers for rent, and 6 containers with a storage capacity of 400tn each in a mercury warehouse for temporary storage. She also added that MAYASA has all the necessary transportation permits. Further, the company developed between 2006 and 2010 the MERSADE project that designed and built a prototype container with a capacity of 50tn. The container presents a double metal

tank and has continuous remote monitoring to ensure zero emissions, and it is guaranteed for at least the next 50 years.

58. Some of the participants were interested in the cost of the different containers. The speaker explained that the 50tn container is a prototype and therefore costs are not representative of the final costs if the prototype is to be developed at commercial scale. The 1tn containers were built a long time ago, and therefore costs for the construction of new containers should be updated.
59. Some of the participants inquired on the existence of other mercury hotspots in Spain. The representative of CIEMAT explained that there are some sites in Northern Spain and in Central Spain, the latter in the vicinity of the Portuguese border. In general mercury hotspots are close to coal thermal and Chlor Alkali plants. Some of the experts explained that Spanish industrial facilities using mercury technologies are legally obliged to conduct soil testing campaigns. The Representative of Spain added that the “Regional Plan on the reduction of inputs of Mercury” developed and approved in the framework of the Barcelona Convention includes the identification by the Parties of “existing sites which have been historically contaminated with mercury, including at least the old mines and decommissioned Chlor alkali plants”.

**“Discussion on the future activities of the Supply and Storage Partnership Area of the Global Mercury Partnership”.**

Speaker: Ministry of Agriculture, Food and Environmental Affairs -Spain and MVOTMA/DINAMA-Uruguay.

60. The Representative of Spain pointed out the main ideas for this agenda item:
- 1.- Review the past, current and future activities of the Supply and Storage Partnership Area of the Global Mercury Partnership.
  - 2.- Involve institutions and industrial sectors to allow them to share their knowledge and views on the mercury management issue, especially from Chlor Alkali sector.
  - 3.- Review the relationship of the Supply and Storage Area with other areas of the Global Mercury Partnership, taking into account the near entry into force of the Minamata Convention.
61. The Representative of Spain opened the discussion by mentioning other partnerships areas linked to the objectives of the Supply and Storage Partnership Area such as “Mercury waste management” and “Mercury reduction in Chlor-alkali”, but also “Reducing mercury in ASGM” and “Mercury reduction in products”.
62. The Representative of UNIDO expressed the importance of gathering all the relevant information on mercury management plans in the most developed countries, including funding options, technologies, gaps identified by the meeting, regulatory issues, etc. All the information gathered should be conveyed to developing countries where Chlor Alkali plants are in the process of converting into mercury free installations.

63. The Representative of Mercury Policy pointed out that similar tasks are being implemented by the Chlor Alkali Partnership Area and therefore it is important to identify common work areas with all the Partnership Areas.
64. The Representative of Spain emphasized that the information on mercury management options has been available for years. She reminded the group that a workshop on mercury management in the Latin-American and the Caribbean region was organized by the Supply and Storage area in 2012 in Brasilia; a significant part of the information presented in the current meeting was made available during the workshop in Brasilia. There have been few decisive developments since then but perhaps it is not enough.
65. Some of the participants signalled that the main change since 2012 is the near entry into force of the Minamata Convention that urges all the parties to the Convention and other stakeholders to take urgent action. The Representative of Mercury Policy suggested identifying countries that have established a regulatory framework to address the management of mercury coming from the Chlor Alkali sector. The information could be useful to set up a general regulatory framework for countries in need of assistance to develop their own legislation. Nevertheless, some of the participants of the meeting were sceptical that national governments would take an interest in an initiative that might be regarded by many as an external interference.
66. Several of the experts shared the opinion that it is essential to gather all the relevant information generated during the last years. The representative of USEPA suggested that the first step forward should be to establish communication channels with all the other Partnership Areas of the Minamata Convention to identify the common points of interest. The representative of Mercury Policy indicated that the Supply and Storage Partnership Area could identify sectors and/or countries that are directly linked to the priorities of the area. The Partnership Area could then ask them to explain their own plans and to assist the area to develop plans for each of the priorities identified. For example, Spain, Italy, Slovenia and Indonesia could be contacted to discuss problems and solutions related to past and current primary mercury mining. The non-ferrous metal sector was identified as a suitable candidate to be addressed in the first place to test the feasibility of the system. USEPA volunteered to contact the leader of the Chlor-alkali area.

**Conclusions of this discussion:**

67. At the end of these presentations, a review of the development and results of the workshop was carried out, which resulted in the following conclusions:
- It was recognized the need to contact other sectors that are also directly linked with the objectives of the Supply and Storage Partnership Area in order to get them involved in the activities of the partnership area (i.e. non ferrous).

- The meeting stressed the importance of increased cooperation with other partnership areas in order to identify each other's needs, as well as common goals and strategies with the aim to establish synergies.
- Identify developing countries and countries with economies in transition with mercury Chlor alkali plants that are not members of the World Chlorine Council.
- The participants also agreed on the need to go to the country level to have better knowledge of their priorities and needs to try to help them to increase their capacities for the environmentally sound management of mercury, including the identification of gaps in trade/production data, weaknesses of the legal system affecting mercury management, technical and financial needs and funding options to help countries in the conversion of Chlor-alkali plants.
- Stabilization technologies were recognized as a suitable option to contribute towards solving the risks posed by the management of metallic mercury, although some concerns on the treatment capacity of commercially available options still remain.

#### **Closure of the meeting**

68. The draft report of the meeting will be first distributed with the presentations made during the meeting to all participants; the final report will be made available to the members of the partnership area and to other interested stakeholders; the co-leads of the SS partnership area will present the results in the upcoming meeting on mercury wastes in Bangkok.
69. There were final words of acknowledgement and appreciation to all participants from the representative of the Spanish Ministry for Agriculture, Food and Environment. On behalf of Spain and Uruguay she thanked for all those who made presentations during the meeting and for the active and positive participation of all attendees. She declared the meeting over and expressed her best wishes to all participants to enjoy a very sunny afternoon and have a safe journey back home.

## ANNEX

**List of participants**  
**SUPPLY AND STORAGE EXPERTS GROUP MEETING - Minamata Convention**  
**25 - 26 October, 2016**

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