



**Asia-Pacific
Economic Cooperation**

Advancing Free Trade
for Asia-Pacific **Prosperity**

Capacity Building to Promote Trade of Products that Replace those with Mercury to Reduce Marine Pollution

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APEC Ocean and Fisheries Working Group

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ABBREVIATIONS AND ACRONYMS

APEC	Asia-Pacific Economic Cooperation
APEC OFWG	APEC Oceans and Fisheries Working Group
CCS	Chilean Custom Service
EU	European Union
Hg	Mercury
HS	Harmonized System Custom Codes
MMA	Ministry of the Environment of Chile
MMT	Million Metric Tons
MPs	Microplastics
NGO	Non-governmental Organization
NOAA	The National Oceanic and Atmospheric Administration
SHOA	Chilean Navy Hydrographic and Oceanographic Service
UN	United Nations
UNEP	United Nations Environment Programme
WCO	World Customs Organization

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1. INTRODUCTION OF THE PROJECT

Mercury is a natural constituent of the Earth's crust and can be released into the environment from several natural sources. It can also be released from anthropogenic sources such as mercury-containing thermometers that, when broken, disperse this metal. Once the mercury enters the environment it persists for long periods of time and only changes shape circulating between the air, water, soil and biota. Eventually it can be removed from the system by depositing it in sediments in the ocean or lakes and by trapping it in stable mineral compounds such as cinnabar. Once deposited in the environment, naturally present microorganisms can change mercury to methyl mercury, a particularly hazardous form that concentrates up food chains in a process called biomagnification. Methyl mercury is the most toxic form of mercury and it presents the greatest health risk to humans and wildlife (UN Environment).

The APEC economies generate more than 60% of the involuntary emissions of mercury into the ocean (Streets et al., 2011), a portion of which has its origin in products of general consumption such as bulbs, batteries, cosmetics, thermometers, electrical switches, etc. In the ocean, mercury bioaccumulates in fish such as Tilefish, Shark, Swordfish, etc. generating a risk for human health and for the economy, since there are recommendations to reduce the consumption of fish with high mercury content. This project helped the delegates of APEC economies to identify the general consumption products mentioned above available in the market that do not contain mercury, which are manufactured, imported and exported by APEC member Economies, in order to promote and increase the trade of products without mercury.

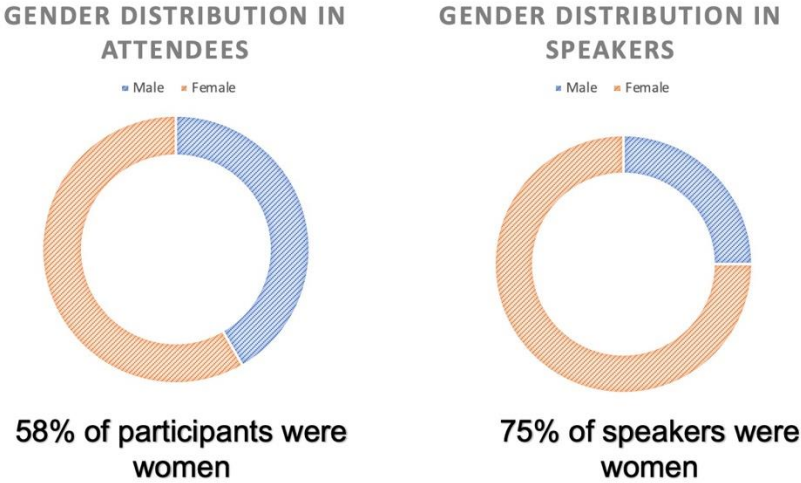
The project will also benefit all APEC member economies to fulfill with the provisions established in the articles 3, 4, 17 and 18 of Minamata Convention, because these articles regulate the trade of mercury (Art 3), the products with mercury added (Art 4), establish requirements on exchange of information (Art 17), and on information, sensitization and public education (Art 18). The Minamata Convention establishes

that from the year 2020 the production, import and export of most products with mercury added will not be allowed, as a result of this the identification of this type of products and their alternatives without mercury is the first stage for fulfill with these provisions.

2. ATTENDEES

This workshop was attended by 48 people and delegates from seven APEC economies (Chile, China, Indonesia, Papua New Guinea, Peru, Russia and Viet Nam). These people work in universities, government, industry and in civil society groups. 58% of the participants corresponded to the female gender.

Figure 1: Gender distribution



International speakers from the United States, Spain, Chile and Japan participated in the workshop, those who work in institutions such as UN Environment, the European Union and NGOs with global reach, 75% of the speakers corresponded to people of the female gender.

Table 1: Speakers details.

Speaker	Economy	Institution
Ms Paulina Riquelme	Chile	EELAW
Ms Rocío Millán	Spain (Non APEC member)	European Union - CIEMAT
Ms Julie Andersen	US	Plastic Oceans
Mr Eisaku Toda	Japan	UNEP

The following NGOs participated in this workshop and presented details of the work they do in APEC economies:

- The Nature Conservancy.
- Plastic Oceans
- Meri Foundation

Figure 2: Workshop attendees



3. SUMMARY PRESENTATION

2.1. Session 1

In session 1, scientific and technical information was given to delegates on mercury and the risks that this metal generates for the environment, human health and economic activities such as fishing and aquaculture. Details on illnesses caused by mercury contamination such as “Minamata Disease” and the symptoms that people who are affected by mercury normally presented. In addition, details on the mechanisms of bioaccumulation and biomagnification of mercury in fish were presented, then results of international studies on the levels of mercury present in fish and shellfish produced in the APEC region were shown. Delegates expressed concern about the effects that mercury contamination could have on the fish market and on the consumption patterns of the population.

Delegates from Peru asked about international regulations for mercury in fish and which fish species most bioaccumulate mercury and their potential health risks. Speaker Rocio Millan answered this question and provided details on these matters.

2.2. Session 2

Session 2 addressed issues related to international law and how international environmental conventions such as the Minamata Convention generate demands for APEC economies regarding the adoption of domestic management measures to reduce mercury releases into the environment and ocean. The practical difference between the signing and ratification of an international environmental convention was explained to delegates, and a detail of the APEC economies that have signed and ratified the international Minamata Convention was presented. In this session it was observed that the delegates did not have a basic knowledge of international law and the obligations that their economies have at the international level.

Delegates from Peru, Russia and PNG asked about other international environmental conventions that have an effect on fishing and aquaculture and how this type of conventions can influence the formulation of public policies. Speaker Paulina Riquelme answered this question and provided examples of the link between international environmental law and public policy.

2.3. Session 3

In session 3, speaker Eisaku Toda explained the technical scope of the Minamata Convention and detailed the requirements established in Articles 3 and 4 and Annex A of this convention, where the prohibition and gradual elimination of trade, production and import of products with added mercury is established. Delegates were then presented with detailed technical information on everyday products that have added mercury such as: batteries, bulbs, skin creams, sensors, medical items, electrical devices, etc. In addition, products that fulfill the same function and that do not have added mercury were presented, and finally a comparison was made of the prices of products with and without added mercury.

Delegates from Chile commented that the choice of products such as thermometers or bulbs with added mercury has to do with the lack of information on alternatives and on the risks that mercury can produce at home and in the environment. In addition, they mentioned as an example that in Chile a mercury thermometer normally costs US\$ 1/unit and a digital thermometer without added mercury can cost approximately US\$ 3/unit, so the decision to buy a product that does or does not contain mercury may be influenced by the price of the product and this takes special importance in developing economies such as most APEC economies

2.4. Session 4

In session 4, the NGOs The Nature Conservancy, Plastics Oceans and Meri Foundation, presented the activities they are carrying out in the APEC region and

the projects they have in progress related to understanding the impacts of mercury on marine mammals, fishing and also the link that exists between marine debris, microplastic, and mercury contamination. Special attention was given to the information presented by the Meri Foundation on the levels of mercury detected in fish, birds and marine mammals in Patagonia and Antarctica.

Delegates from Russia, Peru, Chile and PNG requested more technical information and papers published by Meri Foundation on these matters.

2.5. Session 5

Presentations from Peru, Russia, Viet Nam and Indonesia were made in Session 5 about the policies, plans and regulations that exist in their economies to manage mercury contamination. In this session, the absence of preventive domestic policies that control mercury releases into the ocean and the risks that this pollutant can generate in health, the economy and the environment were observed.

All delegates agreed that the following should be continued in their economies:

- Developing domestic communication campaigns that educate civil society on the risks of mercury
- Training Policy makers on international law and multilateral environmental / commercial agreements.
- Increasing the exchange of scientific information between APEC economies on the possible effects of mercury on fishing and human health

2.6. Field trip

On the third day of the workshop, a technical visit was made to the SHOA of the Chilean Navy, where different technologies for control and monitoring of physical and chemical variables of the ocean such as temperature, heavy metals such as mercury, iron, zinc, etc. were presented to delegates. Tsunami monitoring methodologies and technologies and the collaboration that exists between APEC

economies on these issues were also presented. The delegates showed a high interest in learning about the early warning systems associated with tsunamis and also in historical records on the evolution of the ocean surface temperature in Chile and in the APEC region.

Figure 3: Field trip



Also, during this field trip, officers from the Chilean Navy explained to the delegates the collaborative activities that exist between the navies of the APEC economies to share scientific information on the ocean, prevent marine pollution and monitor the proper functioning of maritime transport, fishing and tourism.

4. CASE STUDY

During the workshop a case study was presented on the work carried out by the Chilean Customs Service to control imports of products with added mercury and the technologies and methods used by this service to detect illegal trade in elemental mercury. The collaborative work that exists between customs services in APEC economies was also presented, and how the exchange of information and lessons learned can help combat mercury illegal trade.

Chilean Customs Service explained to delegates the Harmonized System custom codes (HS)¹ and the approaches for customs codes to identify and distinguish non-mercury-added products and mercury-added products listed in Annex A to the Minamata Convention, including approaches for their possible harmonization, taking into account the results of the survey on the Harmonized System initiative developed by the United Nations Environment Programme Global Mercury. In addition, CCS explained that research conducted by UN indicates that countries most commonly go beyond the six-digit HS codes at the regional and domestic levels for the purpose of imposing customs duties, primarily by creating eight-digit “tariff” codes. Similarly, customs codes of 10 digits or more may be created for statistical and other purposes, sometimes at the recommendation of WCO. It was at the eight- and 10-digit levels that the Products Partnership envisioned potential collaboration among the parties, with the objective of obtaining better trade data distinguishing between non-mercury-added products and mercury-added products listed in Annex A to the Minamata Convention (UNEP/MC/COP.3/5).

There was agreement among the delegates that the great challenge for APEC economies has to do with electronic commerce and how control measures are established by customs services to prevent unauthorized trade in products with mercury added through this type of trade.

5. RECOMMENDATIONS FOR FUTURE WORK

Based on the experiences obtained in this workshop and the information provided by the delegates from APEC economies who attended the workshop. The following recommendations were agreed:

¹ The Harmonized Commodity Description and Coding System, also known as the Harmonized System (HS), comprises internationally standardized nomenclature used to classify traded products.

- Creating an online platform to easily share public information such as scientific articles, reports, books, etc. on the effects of mercury on people's health, environment, fishing and aquaculture.
- Preparing a technical guide on products for daily consumption that contain added mercury, so that it can be used as an input so that different stakeholders learn to recognize products with mercury and thus make informed decisions when making a possible purchase of these products.
- Preparing an online course on the different international environmental conventions that exist and that generate environmental or commercial obligations for APEC economies.
- Building commitment among ministerial / local governments and NGOs to reduce marine pollution by mercury.