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MINAMATA INITIAL ASSESSMENT



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MINAMATA INITIAL ASSESSMENT

2018

This inventory was performed in accordance with UNEP's "Toolkit for identification and quantification of mercury releases", Inventory Level 1, except for dental amalgam, which was quantified using the Toolkit's Inventory Level 2.

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GLOSSARY

AADD	Association of Albanian Dental Distributors
ASGM	Artisanal and Small-Scale Gold Mining
BAT	Best Available Technology
BEP	Best Environmental Practices
BP	Biocidal Product
BREF	BAT Reference Documents
BRI	Biodiversity Research Institute
BRSC	Basel Rotterdam Stockholm Convention
BRS- GAP	Basel Rotterdam Stockholm Convention Gender Action Plan
BC	Basel Convention
CCTC	Chemicals Collection and Treatment Centre
CFL	Compact Fluorescent Light
CLP	Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures
CLRTAP	Convention on Long-Range Transboundary Air Pollution
COP	Conference of the Parties
CSSE	Cross Sectorial Strategy on Environment
DCM	Decision of Council of Ministers
ECAT	Environmental Centre for Administration and Technology
EU	European Union
EIA	U.S. Energy Information Administration
FAO	Food and Agriculture Organization of the United Nations
FNS	Faculty of Natural Sciences
GDC	General Directorate of Customs
GDM	General Directorate of Metrology
GDP	Gross Domestic Product
GLP	Good Laboratory Practice
HCOF	Health Care Obligatory Fund
Hg	Mercury
HS	Harmonized System Codes
IFSV	Institute for Food Safety and Veterinary

INSTAT	Institute of Statistics
IOMC	Inter-Organisation Programme for the Sound Management of Chemicals
IPEN	International POPs Elimination Network
IPH	Institute of Public Health
KTOE	Kiloton of Oil Equivalent
LPG	Liquefied Petroleum Gas
MARD	Ministry of Agriculture and Rural Development
MIA	Minamata Initial Assessment
MoIE	Ministry of Infrastructure and Energy
MoTE	Ministry of Tourism and Environment
MoHSW	Ministry of Health and Social Welfare
MoEFA	Ministry of Europe and Foreign Affairs
MSI	Market Surveillance Inspectorate
NAMMD	National Agency for Medicinal Products and Medical Devices
NEA	National Environmental Agency
PPM	Parts per Million
PRTR	Pollutant Release and Transfer Register
PU	Polyurethane
RC	Rotterdam Convention
REACh	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
SIEF	State Inspectorate of Environment and Forestry
TJ	Terajoules
UHC	University Hospital Centre
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP GC	Governing Council of the United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UT	University of Tirana
VCM	Vinyl Chloride Monomer
WEEE	DCM on waste of electric and electronic equipment
WHO	World Health Organization

FOREWORD BY GOVERNMENT OFFICIAL

Albania is a signatory country to the Minamata Convention on mercury from 09.10.2014 and through the Global Environmental Facility (GEF) funds, the Minamata Initial Assessment Project implemented with UNDP and the Ministry of Tourism and Environment, aims to facilitate the ratification process on the convention, which comes with concrete obligations that support the national stakeholders in phasing out and phasing down of mercury added products and at the same time provides for guidelines on better management of mercury emissions and releases in the country from various sectors.

As per the Stabilization and Association Agreement between the European Union and Albania, the national legislation has been approximated at a great extent the EU chemicals legislation.

The main challenge with the legislation in place remains its implementation, where the Government of Albania has made progress towards preparing the grounds for the establishment of a National Chemicals Office. The law on chemical management is in line with most of the requirements of the Minamata Convention, therefore its ratification will only strengthen the current legislative framework for Albania.

A Level 1 national mercury inventory and a legislative and policy gap assessment was conducted, providing for gaps and recommendations for further implementation. In line with the findings, the Ministry of Tourism and Environment will continue working on the ratification of the Minamata Convention and strengthen the implementation of the legislation on chemical management.

The main priorities for the coming years are strengthening the policy, legal and institutional framework of mercury management, reducing the use of Mercury containing products and environmentally sound management of mercury waste, adoption of BAT/BET and strengthening engagement of the health sector with the sound management of mercury.

Awareness raising campaigns and education on the effects of Mercury in human health are key to better informed citizens that lead to better policy making and one of the Government's of Albania aim, to provide a better environment for its citizens.

Ornela Çuçi
Deputy Minister of Tourism and Environment
Minamata Convention Focal Point for Albania

EXECUTIVE SUMMARY

The report summarizes the results of main outputs of the project "Minamata Initial Assessment for Albania". It provides the review of inventory results, policy/regulatory and institutional frameworks assessment, as well as the national implementation plan and priorities for action.

Policy, regulatory and institutional assessment

The Minamata Convention was adopted by the Conference of Plenipotentiaries on October 10, 2013 in Japan, after discussions at five sessions of the Intergovernmental Committee. Albania became a signatory to the Minamata Convention on 9 October 2014.

Albania has adopted legislation establishing the framework for compliance with international commitments on chemicals, in particular the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and Stockholm Convention.

The Law on Chemicals Management No. 27/2016 sets the legal framework for the implementation of international conventions in this domain. Aiming at fully aligning the national legal framework with EU legislation, Albania has also adopted subsidiary legislation with regard to: the registration, evaluation, authorization and restrictions of chemicals, export and import of hazardous chemicals; classification, labelling and packaging of substances and mixtures; biocides; POPs and PCBs; mercury content in batteries and accumulators as well as in the electrical components and fluorescent lamps. The cosmetic sector needs to be better regulated in terms of imports and targeting products that may contain harmful substances including mercury;

Article 23 of the law on chemicals management stipulated that rules for banning the export of metallic mercury, compounds and certain mercury mixtures, safe storage of metallic mercury and specific criteria for the storage of metallic mercury considered as waste will be approved by the Council of Ministers. The legal basis for chemicals that addresses the Mercury Convention's requirements must be completed.

Law No. 10 463, dated 22/09/2011 "On integrated waste management" establishes the modalities to manage hazardous waste. Also Article 25 of this Law stipulates that hazardous waste is collected, transported and stored temporarily only when is packaged and labelled in accordance with this law.

Considering the adoption of the new regulations on chemicals management, the newly designed organizational system is still not fully established, e.g. the Chemicals Office. The law on chemicals management requires the establishment of a Cross-cutting Committee on Chemical Safety. The committee has not yet been established.

Minamata Convention Requirements:

Article 3: Provide provisions for the written consent in export and import of mercury
Article 4: Prohibit the manufacture, import and export of mercury added products as specified in Part I of the Annex A after the phase-out date specified for products to be phased out by 2020.
Article 8: Each Party with relevant point sources shall take measures to control and reduce emissions of mercury into the air from point sources
Article 9: Control and, where feasible, reduce releases of mercury and mercury compounds to land and water from relevant point sources
Article 10: Each Party shall take measures to ensure that the interim storage of such mercury and mercury compounds is undertaken in an environmentally sound manner
Article 11: Each Party shall take appropriate measures so that mercury waste is managed in an environmentally sound manner, restrict mercury derived from the treatment only re-used for a use allowed to a Party under this Convention or for environmentally sound disposal pursuant to paragraph 3(a); (For Parties of Basel Convention) not transported across international boundaries except for the purpose of environmentally sound disposal in conformity with this Article and with Convention.

Generally, there is a lack of knowledge and awareness about the health and environmental problems of mercury in products. At the moment the country lacks the information and prevention programs to protect the population at risks with reference to mercury and mercury management;

Currently, there is no qualification or specific training programs on mercury management for the sector in MoTE that deals with chemicals, customs, inspectors, staff of the NEA, and other authorities in the country. Lack of laboratory capacity for determination of mercury in products as well as food items is lacking. Capacities for evaluating antifouling paints as biocide products are very limited.

The establishment of the legal and institutional framework should be followed by capacity-building in relation to the implementation and enforcement of the new legislation and Minamata Convention requirements;

Following the findings from capacity assessment and the Hg inventory report that are related to Art 3/ Art 4/ Art 8/ Art 10/ Art 11/Art 14/Art 17 of the Convention; the Ministry of Tourism and Environment through the envisaged Chemicals Office should implement the necessary capacity-building and organizational development activities on chemicals management.

Results from the National Mercury Inventory

The inventory developed in the framework of "Minamata Initial Assessment" project takes into account all the mercury fed into different sectors of industry, in accordance with UNEP's "Toolkit for identification and quantification of mercury releases" Inventory Level 1, except for dental amalgam, which was quantified in combination with the Toolkit's Inventory Level 2, by following this steps: (i) Rapid identification of main emission source categories of mercury in air and release sources of mercury to land and water present in Albania; (ii) Data collection and analysis through assessment of the amounts of emission sources of mercury and release sources of mercury to land and water; (iii) Generation of the quantitative mercury inventory; (iv) Interpretation of inventory results.

The results of the inventory for the reference year 2016 in the Republic of Albania, shows that the total releases of the mercury from all source groups, are 4340 Kg Hg/y; of which 76 % are from mercury intentionally used in products such as thermometers, blood pressure gauges, fluorescent light bulbs etc.

The individual mercury releases sub-categories contributing with the highest mercury inputs were: Thermometers (2,588 kg Hg/y); Electrical switches and relays with mercury (403 kg Hg/y); Other laboratory and medical equipment with mercury (115kg Hg/y); polyurethane produced with mercury catalyst (84 kg Hg/y). Reducing mercury in products is the most effective means to decrease the

emissions into various media, particularly from the mercury containing waste streams. The total mercury flow to general waste accounted for 1020 kg Hg/y. The informal dumping of urban waste is the first contributor of mercury release to land, the second contributor of mercury release to water and the third contributor to air.

Following the results of mercury inventory, it is important to develop a national strategy and relevant action plan to identify and protect populations at risk regarding mercury and its compounds, particularly vulnerable populations;

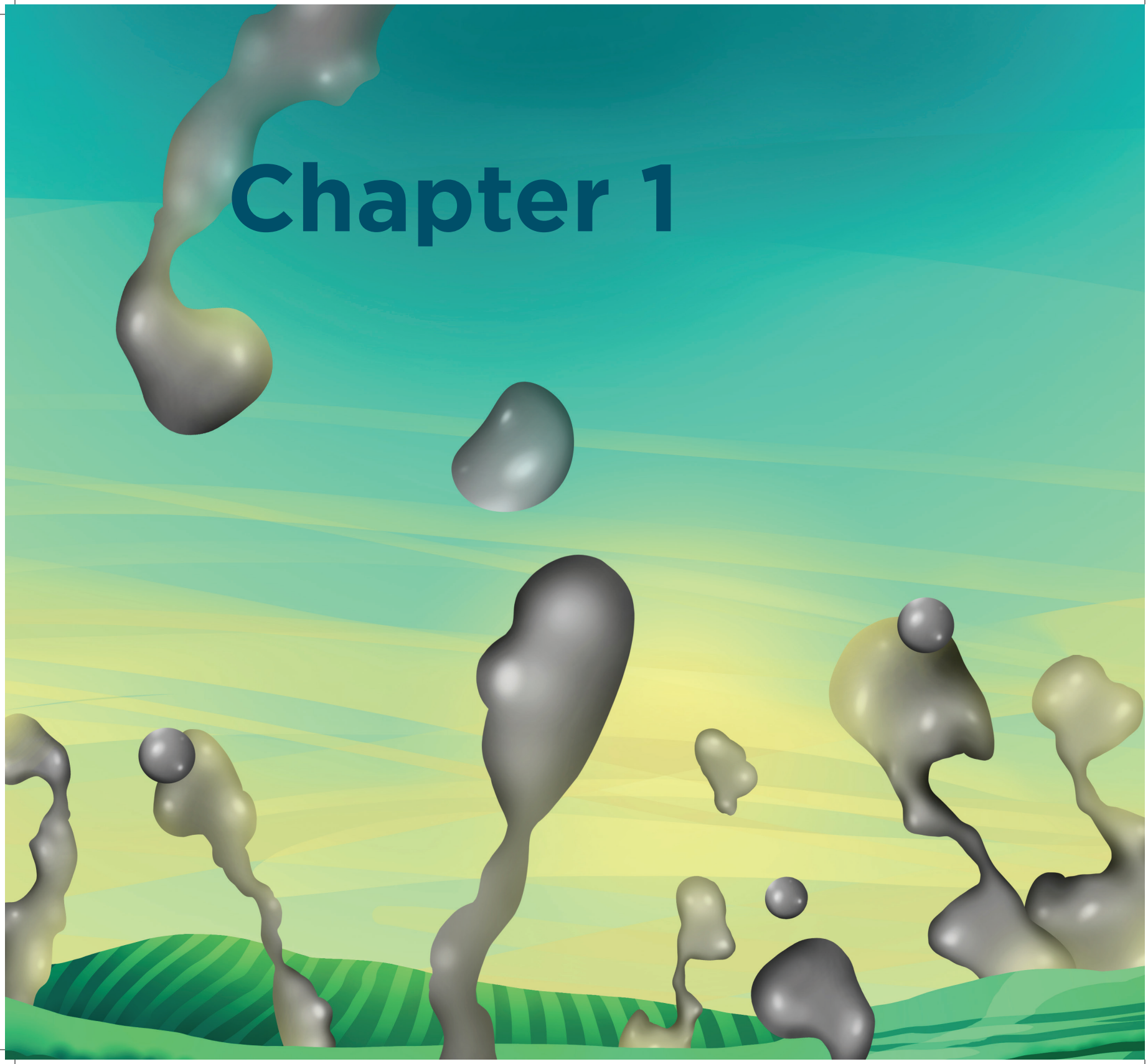
Priority areas for implementation of the Convention

The priority areas for successful implementation of the Minamata Convention on Mercury are derived from the major gaps in information identified during the institutional and legislative gap analyses and national mercury inventory. Albania will benefit from new and updated information about the mercury sources, magnitude of mercury, and how it cycles through the air, water, land and waste systems within the country, as well as building capacity in managing the risks of mercury. There exist potential synergies between the Minamata Convention and implementation plans of other chemicals conventions and it will be beneficial for future implementation efforts to take advantage of the overlapping needs of these conventions in order to enhance coordination of chemicals management efforts within the country.

The Implementation Plan and Priority of Action have been developed based on the findings from the mercury inventory report, assessment of the legislation and of the capacities of main institutions for the implementation of Minamata Convention in Albania.

The Implementation Plan considers five priority areas for action:

Priority 1: Strengthening the policy, legal and institutional framework of mercury management;
Priority 2: Reducing the use of Mercury containing products and environmentally sound management of mercury waste;
Priority 3: Building institutional capacity and raising awareness on mercury management;
Priority 4: Strengthening engagement of the health sector with the sound management of mercury
Priority 5: Improving the inventory, monitoring and reporting of mercury releases from diffuse and point sources


Chapter 1

NATIONAL BACKGROUND INFORMATION

1.1. Geography and population

Albania is a small country located at the western part of the Balkan Peninsula, at the eastern coasts of Adriatic and Ionian Seas.

The surface area of Albania is 28,748 km^2, of which 27,398 km^2 land and 1,350 km^2 water. The length of the state border is 1,094 km, of which 657 km are land borders, 316 km sea borders, 48 km river borders, and 72 km lake borders.

About 75% of Albania ‘s terrain is hilly and mountainous, more than 300 m above the sea level. The highest top is the Korabi Mountain (2,751 m). The other part consists of coastal plains or low hills.

The geographic position of Albania determines the inclusion of the territory in the subtropical Mediterranean climate area, with soft and wet winter, hot and dry summer and precipitations concentrated mainly during the cold half of the year. Generally, the climatic elements differ significantly between different areas of the country, particularly the temperatures and precipitations.

The diversity of ecosystems and habitats (coastal and marine ecosystems, wetlands, river deltas, sand dunes, lakes, rivers, Mediterranean shrubs, broadleaf, coniferous and mixed forests, subalpine and alpine pastures, meadows and high mountain ecosystems) offer a high variety of flora and fauna species. In Albania, there are about 7233 plant taxa (including ferns, fungus, lichens, and algae) and 5438 fauna species (including birds, mammals, reptiles, fishes, insects, decapods, etc.). About 32% of all European flora is found in Albania.

As of 2016, the population of Albania was 2,886,026 inhabitants, of which 1,461,326 are men and 1,424,700 are women. The sex ratio of the population of Albania is 102.6 males for every 100 females.

1.2. Political, legal and economic profile

Albania (Shqipëria in Albanian) is officially known as the Republic of Albania. The Albanian Government is a Parliamentary Democracy with 140 members in its legislature. According to the Constitution of Albania the President of the Republic is the head of state.

The legislative power is exercised by Parliament and the Government. The Prime Minister is head of the Government and is appointed by the President on the proposal of the party or coalition of parties that has the majority of seats in the Assembly.

Since June 2015, the country is pursuing a fundamental reform of its governmental system, with territorial reform accompanied by administrative and financial decentralization.

The key strategic document in this relevant field is the National Crosscutting Strategy on Decentralization and Local Governance for the period 2015–2020. The Law on the Territorial and Administrative Division of Local Government Units No. 115/2014 determined the administrative-territorial division of the country into 12 regions and 61 municipalities.

The new division is meant to overcome high fragmentation of local government units to enable the provision of more efficient investments in public services, including public transport, water supply and urban waste management.

The Law on Local Government No. 139/2015 defined the functions of local government units and transferred some of the functions from the national government to local governments. The following functions, of the municipalities in environment are:

- Drinking water supply;
- Wastewater treatment;
- Collection and disposal of rainwater and flood protection in residential areas;
- Local public transport;
- Parks, gardens and public green spaces;
- Collection, disposal and treatment of municipal solid waste (MSW);
- Construction and management of social housing;

- Implementation at local level of measures to protect air, soil and water;
- Implementation at local level of measures for protection from noise pollution;
- Management of the public forest and pasture fund;
- Protection of nature and biodiversity;
- Educational activities at local level on environmental protection.

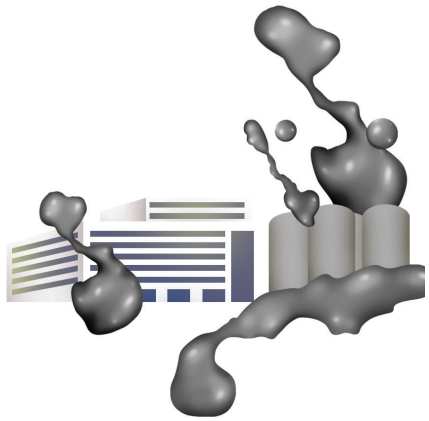
The reform did not change the division of the country into 12 Regions. There are 12 Prefectures, each headed by a Prefect (representative of the Council of Ministers at regional level). Prefects have no environment-related responsibilities as such, but they verify the legality of acts issued by local government units and monitor the implementation of functions delegated by the central government.

Albania is in the process of EU integration and at the same time its economic reforms objectives are to have a parallel development in all economic sectors.

Agriculture and rural development is considered as the main priority of the Albanian government in the last years for crops and vegetables production, fruit and olive tree cultivating sector and livestock production. Agricultural and rural development policies have contributed significantly to the economic, environmental and social development of agriculture and rural communities. On the other hand, it plays a specific role on the environmental pollution because of the use of chemical fertilizers, pesticides etc., which is further intensified by the impact of extensive agriculture. A special attention is also being paid to agriculture food security, taking into account the contribution of the sector's almost 50% of total labour force employment, and the potential for exports. For the coming years it is aimed for an expanding of the geographical map for exports in other European countries and beyond.

Albanian industry sectors have undergone many changes and diversification over the years. Albania's industry began with cement plants, food processing and flour milling and cigar, becoming dominant industries in its economy. Albania has since expanded into oil, chemical, mining, basic metal, textile, clothing and hydropower.

The impact of mineral exploration has caused progressive damage in the environment, including the destruction of the forest, pasture and natural habitats for flora and fauna. The mineral damps and industry of mineral enrichment have caused permanently environmental pollution with heavy metals.



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Therefore, the monitoring and reporting of the pollution of the environment from the mineral exploration or mineral enrichment is an important process that needs to be performed and improved.

Energy sector is one the most important and more developed in Albania. Energy production in Albania is mainly based on hydropower, domestic and imported fuels, and fuel wood used for electricity production, heat production and for transport. Energy demand is expected to increase in 2020, and there is a clear need for Albania to strengthen its energy security. While efforts to develop new thermal, wind and solar capacity are on-going, hydropower remains the nation's largest energy resource.

Transport is another sector of the economy that has had a very significant progress these last years. The last version of the Albanian Public Finance Review in February 2014, summarized the situation with respect to the Albanian Transport sector as follows:

- In the recent years, most of Albania's capital spending has gone to the transport sector, and within transport, primarily to roads.
- Albania has invested heavily in motorways in the last years.
- Businesses consider the quality of Albania's transport infrastructure, particularly roads, to have improved in these last years.

1.3. Profiles of economic sectors

The Gross Domestic Product per capita in Albania was last recorded at 4,541.39 US dollars in 2015. The economy of Albania advanced at 3 per cent year-on-year in the first three months of 2016, following a 2.15 per cent expansion in the previous period. Main contributors to the growth were trade, accommodation and transportation (+5.75 per cent); construction (+7.58 per cent); information and communication (+14.6 per cent); real estate (+3.7 per cent) and public administration, education and health (+0.9 per cent).[1]

The distribution of active enterprises by economic sector is: trade 47.1%, industry 9.3%, hotels, bars and restaurants 14.8%, transport and communication 9.6%, other services 13.3%, construction 4.6%, agriculture and fishing 1.2%.

1. INSTAT, 2016

Figure 1 Albania GDP change after 1990[2]

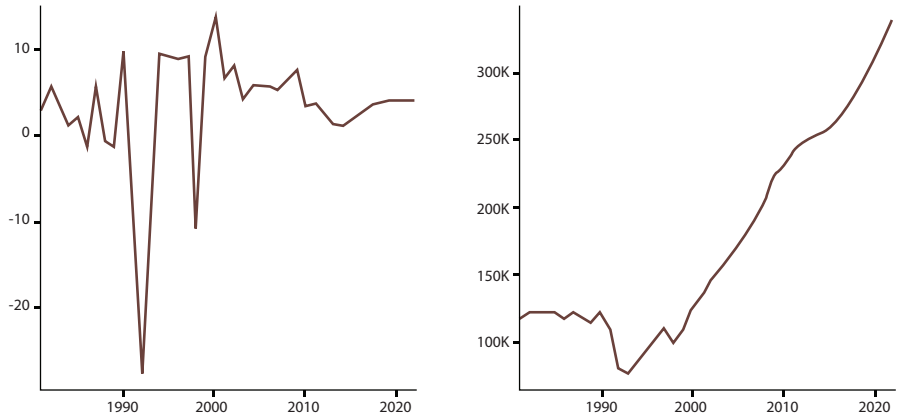


Table 1. Data of Albanian macroeconomic indicators

	2011	2012	2013	2014	2015
Population (million)	2.8	2.8	2.8	2.8	2.8
GDP per capita (USD)	4,691	4,359	4,512	4,782	4,151
Economic Growth (GDP, annual variation in %)	2.5	1.4	1.1	2.0	2.6
Unemployment Rate	13.4	14.1	17.1	18.0	17.7
Inflation Rate (CPI, annual variation in %)	3.4	2.0	1.9	1.6	1.9
Exports (EUR billion)	1.4	1.5	1.7	1.8	1.7
Imports (EUR billion)	3.8	3.8	3.7	3.9	3.9

Agriculture remains one of the largest and most important sectors in Albania. Agriculture is a main source of employment and income, especially in the country's rural areas. Agriculture contributes to 18.9% of the country's GDP. Field crops production is mainly influenced by cultures that are more representative of this sector such as vegetables, cereals and potatoes. Vegetable production in 2015 was 1,030,000 tones, increased by 8.4 % compared with the previous year and increased by 11.5 % compared with 2 years ago.

2. https://www.quandl.com/collections/albania

Potatoes production in 2015 was 245,000 tones, increased by 2.1 % compared with the previous year. The highest level of potatoes production was achieved in the prefectures of Korca with 65,439 tones, followed by Fier with 33,273 tones and Elbasan with 32,457 tones[3].

Fishing sector is underdeveloped in Albania. Compared with an average of 15.1 kg per capita per year of fish products consumption for Mediterranean countries, this consumption in Albania is relatively low, with about 3.3 kg per capita per year. Fishing in marine wetlands, which cover about 10,000 ha is frequent and 42-97 kg products per hectare are obtained. The fish processing industry is expanding. Albania's agricultural sector continues to face a number of challenges, however, including small farm size and land fragmentation, poor infrastructure, market limitations, limited access to credit and grants, and inadequate rural institutions.

The main industrial activities in Albania are the oil and gas extraction industry, processing industry, light industry, food and beverage industry, cement production, metallurgy and mining. Development in industry and mineral sector in some regions of the country has led to the generation of waste, sterile and chemicals, which are disposed in places which do not fulfil the environmental criteria.

The industry sector has contributed steadily with about 11% of GDP. The permanent dependence of Albania on minerals extraction is due to the existence of many deposits that can be used for commercial purposes. Deposits of chromium, copper and nickel have been opened long ago, but the mining equipment and the methods are already outdated, and many works have been abandoned; nevertheless, Albania has an important position in Europe for chromium extraction.

Other industrial activities which operate in Albania are the oil and gas extraction industry, processing industry, light industry, food and beverage industry, cement production and metallurgy.

Albania is rich in various energy sources, oil and gas, coal and other fossil fuels, as well as hydro power, forests natural biomass and other renewable energy sources. Hydro-power comprises over 97% of the produced electric energy. Currently, only 30% of water resources are used. The energy sector contributes with about 10% of GDP. The portion of the production from the private sector in the general national electric energy production is about 20%.

Transport has a direct impact on environmental quality in general and on that of urban areas in particular. The transport sector is one of main emission sources of greenhouse gases and contributes considerably to air pollution.

3. INSTAT, 2016

1.4. Environmental overview

Albania has inherited multiple environmental problems from the past, including: soil erosion, deforestation, biodiversity loss, urban waste, air pollution in urban and industrial areas, soil pollution caused by hazardous waste from the old industry, etc.

The State of Environment Report (SoER) is prepared every year by the National Environmental Agency (NEA). The SoER shows the state of the main environmental indicators for air, water, biodiversity, soil, climate change, forests etc., and is based mainly on the Driving Forces-Pressures-State-Impacts-Responses (DPSIR) framework. The Information on the state of the environment is the basic document which examines the overall state of the environment in Albania and gives recommendations for environmental policy planning on an annual basis.

Air quality varies greatly according to location: in rural and mountainous areas the air is clean, while in cities and in the vicinity of industrial areas air quality is far poorer. City air contains dust particles and gases from everyday urban and industrial activities. The most common air pollutants in Albanian cities, listed in order of their quantity and significance, are road dust, fine particles of unburned fuels emitted from vehicles, CO, VOCs, lead, NOx, SO_2 and O_3.

The monitoring of urban air quality is focused on indicators for: PM10, PM2.5, O_3, NOx, SO_2, CO and Benzene. Based on the data assessment over the last years in Tirana, a decrease has been observed at the concentration level of PM10 and PM2.5. This is due to improvements made in infrastructure and to several legislative measures undertaken regarding the standardization of used cars and vehicles. At the national level the concentration of CO and Benzene are at levels within the EU standards.

The Albanian Cross Sectorial Environment Strategy presents a strategy for reducing the emission of atmospheric pollutants in several ways, which include:

- monitoring of air quality in line with EU requirements;
- control and reduction of discharges of gases to the atmosphere by motorized vehicles;
- control and reduction of discharges of polluting substances from industrial plants;
- control and reduction of dust caused by construction; and,
- planning for air quality management.



The most common **air pollutants in Albanian cities, listed in order of their quantity and significance,** are road dust, fine particles of unburned fuels emitted from vehicles, CO, VOCs, lead, NOx, SO2 and O3.

Albania has numerous natural lakes (Shkodra, Ohrid, Prespa, etc.), which are an important water reserve. Part of the country's water, in particular that of the rivers Shkumbin, Fan, Gjanice, Lane is polluted by industrial discharges. As part of this water is used in agriculture, water treatment plants are indispensable.

Groundwater monitoring is made on the main watershed basins for chemical parameters, NO_3, NO_2, NH_4, HCO, Cl, SO_2, Na, Ca, Mg, K, Fe, dissolved oxygen, conductivity and hazardous substances. The levels of monitored chemical parameters are within the allowed limits. Groundwaters in Albania are classified as freshwater and have neutral and weak alkalinity, and strong average hardness. Content is within the maximum allowed values.

There has been an improvement in the quality of coastal bathing waters during recent years. This is due to investments made in the waste water treatment infrastructure. Until a few years ago the main source of pollution for coastal bathing waters has been the discharges of untreated waste water. However, investments made in some of the main cities have changed significantly the quality of bathing water. According to the assessment made more than 90% of the coastal bathing water stations in 2016 were classified within the A category and 6 % within B category (A being excellent quality and B good quality)[4].

Albania has a high level of biological diversity at the landscape, ecosystem and species levels, especially in relation to its small land area. Forty habitats are identified as rare and endangered with the number of endangered species approaching to 320. Albania has vegetation coverage of a high diversity of species, which grouped according to their values, can be split into: vegetation for timber; for fuel wood; for pastures; for industry, for medicines; for decoration, etc. Fauna is diverse, too. A number of endemic species are present, as well. Among the carnivores are the wolf, the fox, the jackal, the brown bear, the wild cat, etc. Herbivores like the deer, the wild goat, the wild pig, the wild rabbit, etc., are of particular importance. A number of about 350 types of birds exist in Albania. Numerous species of fish of economic value exist in the marine and inland waters, as well. Fauna has been damaged by irrational hunting, deforestation, reclamation of wetlands and marshlands, use of chemicals in agriculture, soil, water and air pollution, etc.

During the last two decades the total forest area decreased by 1.4%. This is due to changing land use categories in forest areas. It is directly related to the transformation and modification of forest lands. These are the basic problems caused by illegal logging, demographic movements, increase in the demand for wood and energy, overuse of forests resources, etc.

4. http://akm.gov.al/

Managed urban solid wastes have shown a growing trend over the years, explained, inter alia, with the social behaviour of people as a reflection of changes in their lifestyle. The annual amount of waste generated per capita in the whole country has an increasing trend, respectively: 396 kg/capita in 2015, 355 kg/capita in 2014 and 321 kg/capita in 2013.

The amount of industrial wastes mixed with urban wastes has had a non-linear growth from 2013 to 2015. In 2015 the amount of managed non-urban wastes was 94 kg/capita, in 2014 was 90 kg/capita and in 2013 this indicator was 44 kg/capita.

Organic waste are the main part in the composition of urban waste. In the managed waste the amount of organic waste has increased compared to the total amount. In 2015, organic waste constituted about 51.4 % of the total amount of waste from 50.2 % that were in 2014 and 41.0 % in 2013.

Managed waste are treated mainly by depositing them in landfills and other disposal places approved by the relevant local government bodies. Regular deposit of waste has increased, respectively, in 2015 were deposited 68.8 %, in 2014 were deposited 63.4 % and in 2013 were deposited 50.6% of the total amount of managed wastes in the country. Waste recycling has maintained approximately the same level of indicators with a slight tendency to increase. In 2015 were recycled 25.3 % of the total waste, in 2014 this indicator was 21.6 % and in 2013 was 24.0 %.

The law on environmental protection of 2012 has the objective to raise the level of environmental protection by establishing a consolidated network of environmental institutions at national and regional level accompanied by environmental policy implementation.

In general Albania has demonstrated progress regarding the management of environmental issues but still too many efforts are needed especially for the implementation of the environmental legislation, in particular for water treatment and waste management.

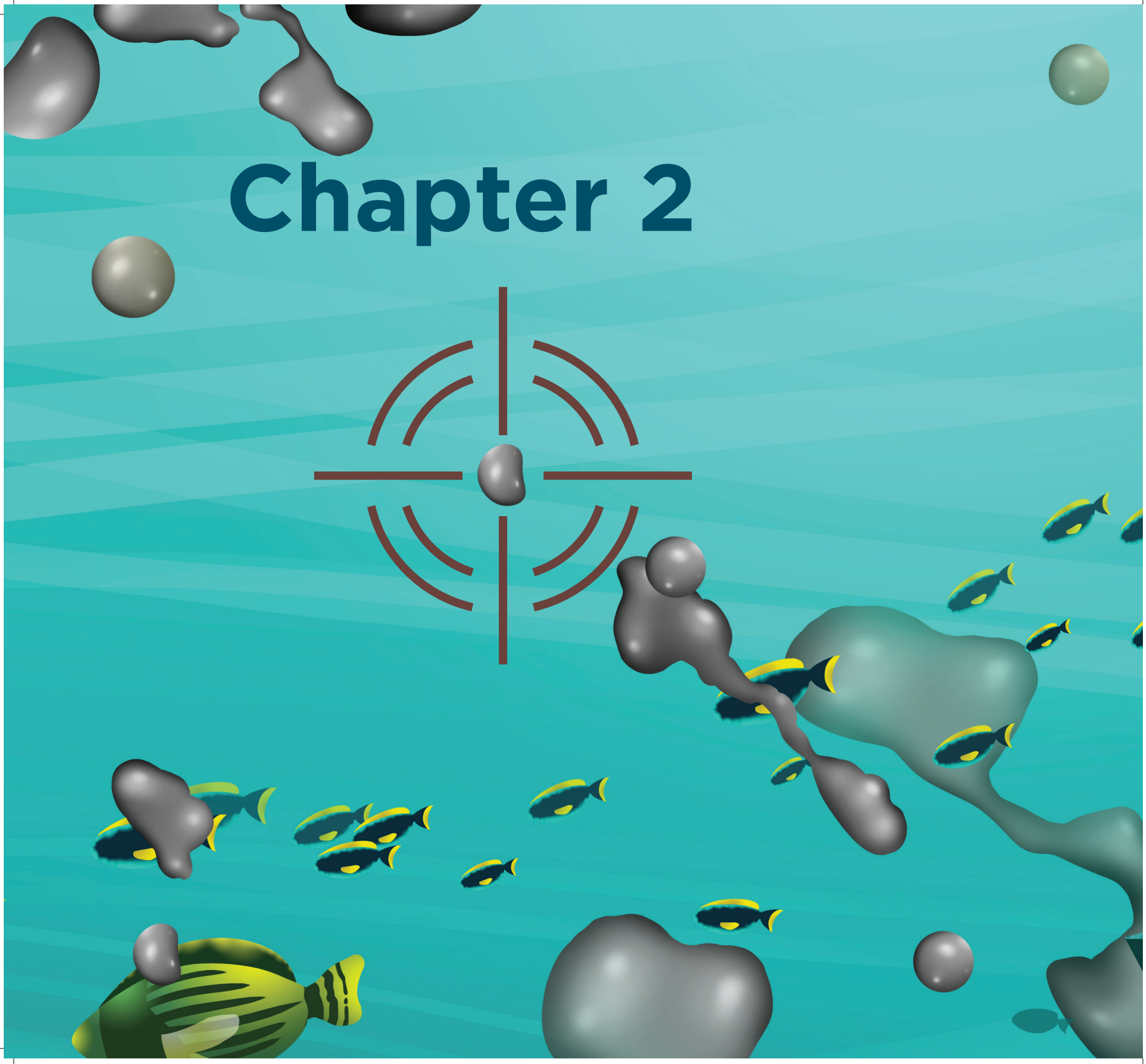
The country is susceptible to effects of climate change, in particular flooding and drought, as well as possible electricity shortages due to a high dependence on hydro-power which requires seasonal energy imports.[5]



Managed waste are treated mainly by **depositing them in landfills and other disposal places** approved by the relevant local government bodies.

5. Review and Update of the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs) in Albania

Chapter 2

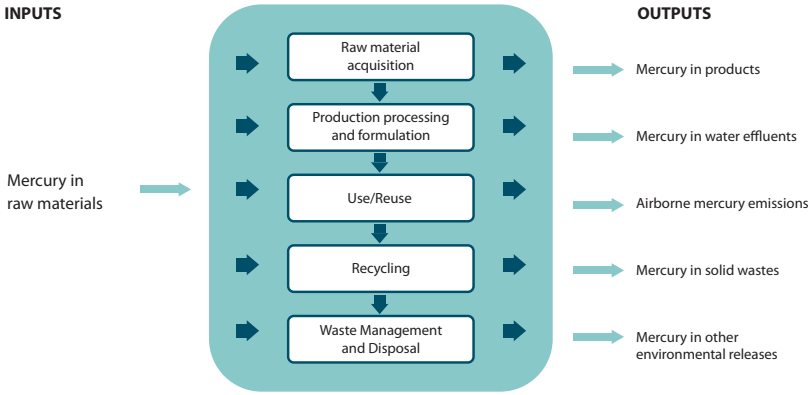


MERCURY INVENTORY AND IDENTIFICATION OF EMISSIONS AND RESOURCES

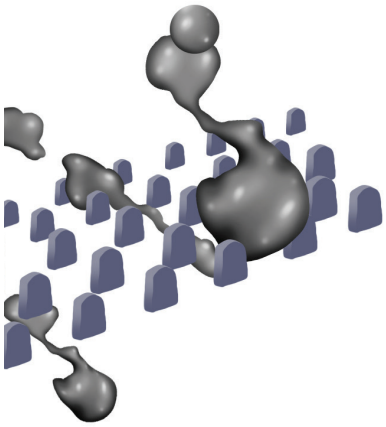
2.1. Introduction

This inventory was developed in 2017. Data for 2016 have been used in the inventory, when available. When data from this year have not been available, data from 2015 have been used. This mercury release inventory for Albania has been developed by using the "Toolkit for Identification and Quantification of Mercury Releases - Level 1" (version 2015), except for dental amalgam, which was quantified using our own detailed approach in combination with the Toolkit's Inventory Level 2. The Toolkit is available at the UNEP Chemicals' website[6]. It is based on mass balances for each mercury release source type, which incorporates and accounts for inputs, life cycle inventory and outputs (Figure 2).

Figure 2. Life cycle inventory used in the toolkit



6. http://web.unep.org/chemicalsandwaste/what-we-do/technology-and-metals/mercury/toolkit-identification-and-quantification-mercury-releases#_blank



The mercury releases sub-categories **contributing with the highest mercury releases to the land** were: informal dumping of general waste, mercury-containing thermometers, electrical switches and relays with mercury and cemeteries.

All the mercury fed into the system (e.g. an industrial sector) with materials and fuels will come out again, either as releases to the environment or in some kind of product stream. In other words: "Sum of inputs = sum of outputs". Inputs are quantified from the amount of mercury containing material fed into the system (called "activity rate") and general data on the mercury concentration in the fed material (called "input factor"). The mercury releases from the system (outputs) are calculated by distributing this mercury amount on the relevant release pathways based on available data on how the releases (or "outputs") are generally distributed in this sector. The calculation of this distribution is done using "output distribution factors".

Inventory Level 1 works with pre-determined factors, the so-called default input factors and default output distribution factors. These factors were derived from data on mercury inputs and releases from the relevant mercury source types from available literature and other relevant data sources. In Inventory Level 1, the Toolkit spreadsheet uses medium input and release factors for the calculation of the mercury inputs and releases and presents the results as "standard estimates" with no uncertainty interval. These calculated "standard estimates" are simplified results of inputs and releases and, may, as such, be above or below the actual inputs and releases in the country.

The general formula to calculate mercury releases is:

Estimated mercury release to pathway Y = activity rate * input factor * output distribution factor for pathway Y

The Toolkit for Identification and Quantification of Mercury Releases Level 2 was used in calculations only for the source category, "Application, use and disposal of dental amalgam fillings", for which the estimation was done on a more detailed level.

The preparation of the mercury inventory and identification of emissions and releases was done through the following steps:
Step 1: Rapid identification of main emission source categories of mercury in air and release sources of mercury to land and water present in Albania.
Step 2: Data collection and analysis through assessment of the amounts of emission sources of mercury and release sources of mercury to land and water.
Step 3: Generation of the quantitative mercury inventory.
Step 4: Interpretation of inventory results. A standardized presentation format is provided to ensure that all known sources are considered (even if they cannot be quantified), data gaps are apparent, and inventories are comparable and transparent.

2.2. Results and discussion

An aggregated presentation of the results for main groups of mercury release sources is presented in Table 2 and Figures 3-9 below.

Table 2. Summary of mercury inventory results

Source category	Estimated Hg releases, standard estimates, Kg Hg/y							
	Estimated Hg,input, Kg Hg/y	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal	Total releases *3*4*5
Coal combustion and other coal use	26.9	26.9	0.0	0.0	0.0	0.0	0.0	27
Other fossil fuel and biomass combustion	32.4	32.4	0.0	0.0	0.0	0.0	0.0	32
Oil and gas production	13.3	1.5	2.6	0.0	2.8	0.0	3.3	10
Primary metal production (excl. gold production by amalgamation)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Gold extraction with mercury amalgamation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Other materials production	242.6	182.0	0.0	0.0	60.7	0.0	0.0	243
Chlor-alkali production with mercury-cells	-	-	-	-	-	-	-	0
Other production of chemicals and polymers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Production of products with mercury content*1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Application, use and disposal of dental amalgam fillings	42.0	0.8	19.3	3.4	2.5	8.4	8.4	43
Use and disposal of other products	3,288.7	672.7	836.9	730.2	0.0	1,000.0	48.9	3,289
Production of recycled metals	11.3	3.7	0.0	3.8	0.0	3.7	0.0	11
Waste incineration and open waste burning*2	1,070.6	1,070.5	0.0	0.0	0.0	0.0	0.1	1,071
Waste deposition*2	1,650.8	16.5	0.2	0.0	-	-	-	17
Informal dumping of general waste *2*3	3,624.8	362.5	362.5	2,899.9	-	-	-	725
Waste water system/treatment *4	103.3	0.0	93.0	0.0	0.0	10.3	0.0	10
Crematoria and cemeteries	53.5	0.0	0.0	53.5	0.0	0.0	0.0	53
TOTALS (rounded) *1*2*3*4*5	4,340	2,370	1,220	790	70	1,020	60	5,530

1. **To avoid double counting of mercury** in products produced domestically and sold on the domestic market (including oil and gas), only the part of mercury inputs released from production are included in the input TOTAL.
2. **To avoid double counting of mercury** inputs from waste and products in the input TOTAL, only 10% of the mercury input to waste incineration, waste deposition and informal dumping is included in the total for mercury inputs. These 10% represent approximately the mercury input to waste from materials which were not quantified individually in Inventory Level 1 of this Toolkit. See Appendix 1 to the Inventory Level 1 Guideline for more explanation.
3. **The estimated quantities** include mercury in products which has also been accounted for under each product category. To avoid double counting, the release to land from informal dumping of general waste has been subtracted automatically in the TOTALS.
4. **The estimated input and release to water** include mercury amounts which have also been accounted for under each source category. To avoid double counting, input to, and release to water from, waste water system/treatment have been subtracted automatically in the TOTALS.
5. **Total inputs** do not necessarily equal total outputs due to corrections for double counting (see notes*1-*3) and because some mercury follows products/metal mercury which are not sold in the same country or in the same year.

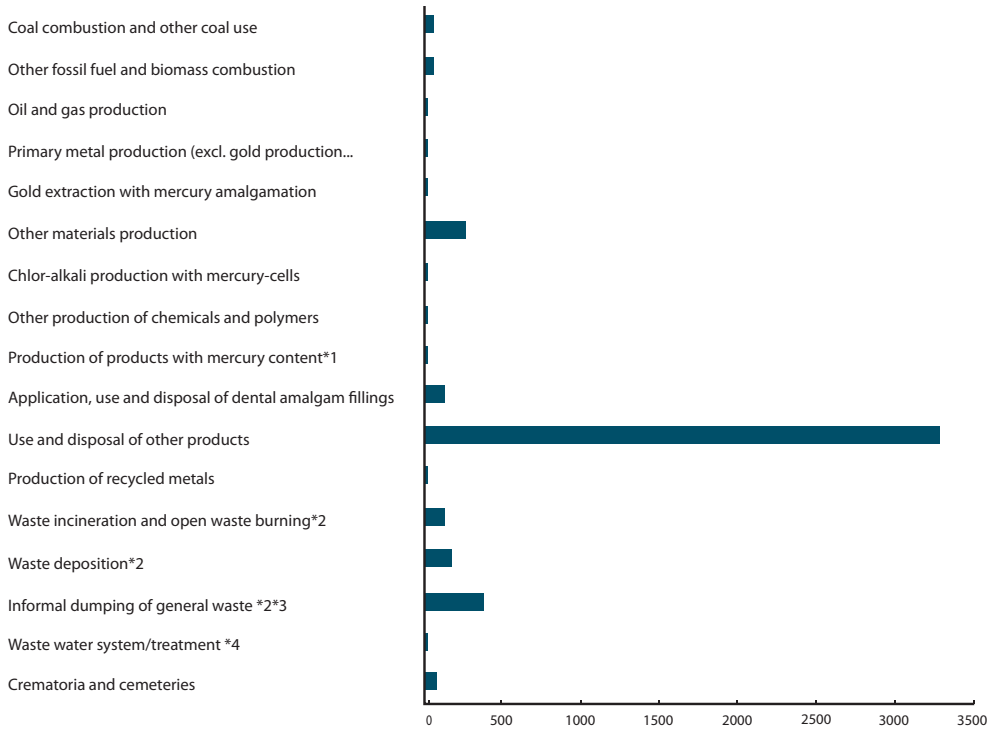
As shown in the Table 2 and Figure 3, the following source groups contribute with the major mercury inputs (except waste and waste water categories):

- Use and disposal of other products (3,288.7 kg Hg/y)
- Other materials production (242.6 kg Hg/y)

The individual mercury releases sub-categories contributing with the highest mercury inputs (except waste and waste water) were:

- Thermometers (2,588 kg Hg/y)
- Electrical switches and relays with mercury (403 kg Hg/y)
- Cement production (243 kg Hg/y)
- Other laboratory and medical equipment with mercury (115 kg Hg/y)
- Polyurethane (PU, PUR) produced with mercury catalyst (86 kg Hg/y)

Figure 3. Estimated mercury inputs (Kg Hg/y)



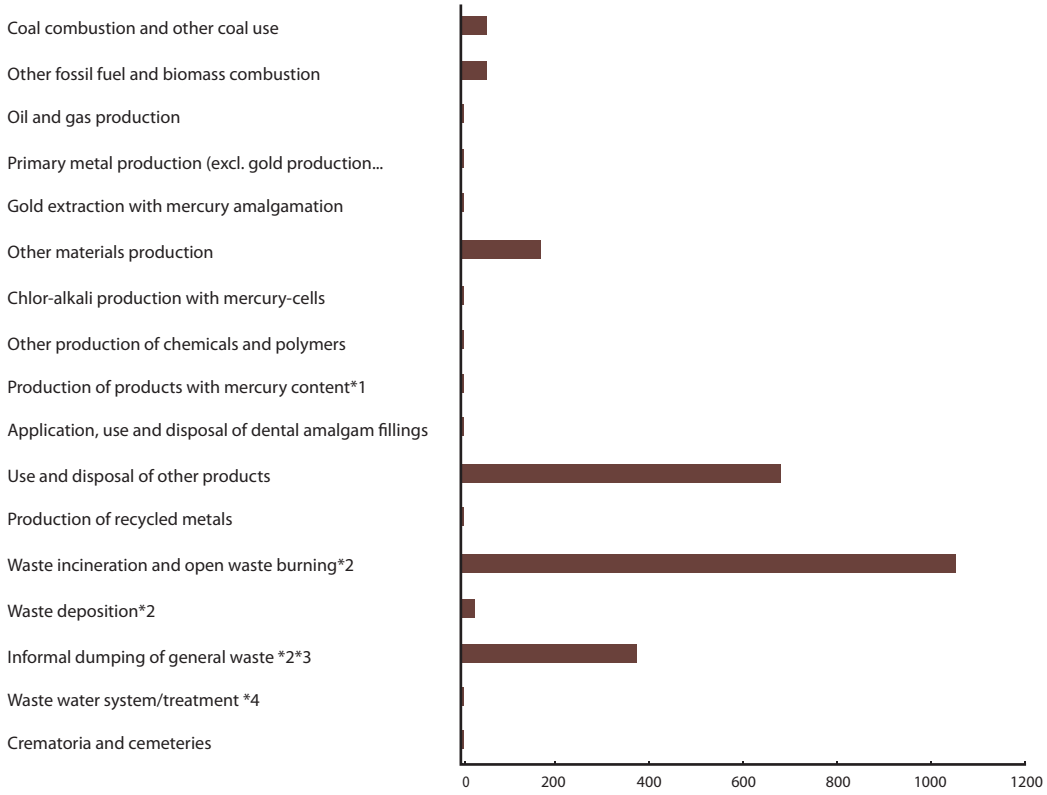
In total, 2370 kg of mercury is released to air in Albania on an annual basis. The estimated mercury releases to air from different sources are presented in Figure 4. The mercury release source categories contributing with the highest mercury releases to the atmosphere were:

- Open waste burning (1070.5 kg Hg/y)
- Use and disposal of other products (672.7 kg Hg/y)
- Informal dumping of general waste (362.5 kg Hg/y)
- Other materials production (182.0 kg Hg/y)

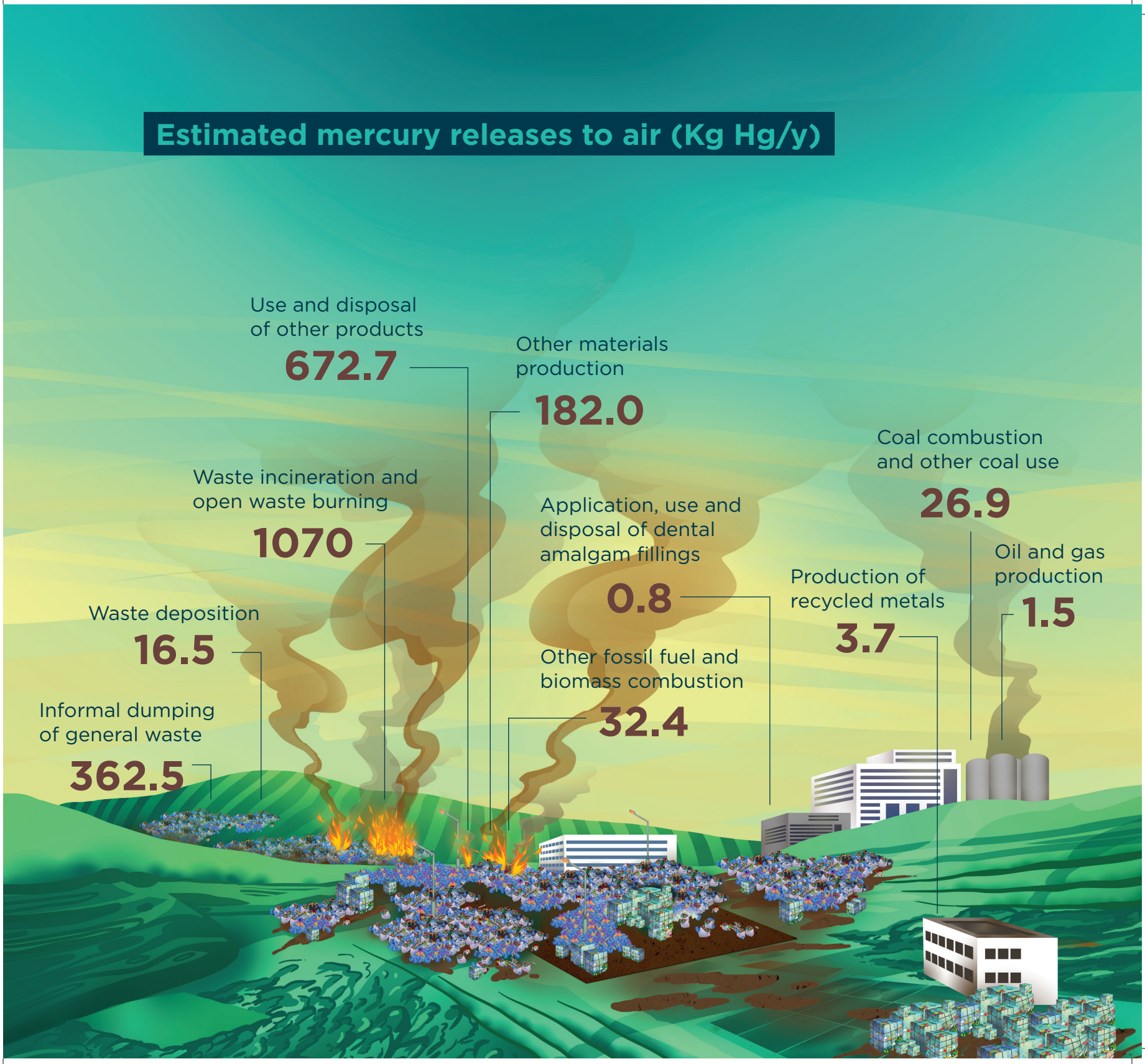
The mercury release sub-categories contributing with the highest mercury releases to the atmosphere were:

- Open fire waste burning (1070.1 kg Hg/y)
- Thermometers (517.7 kg Hg/y)
- Informal dumping of general waste (362.5 kg Hg/y)
- Cement production (182 kg Hg/y)
- Electrical switches and relays (120.8 kg Hg/y)

Figure 4. Estimated mercury releases to air (Kg Hg/y)



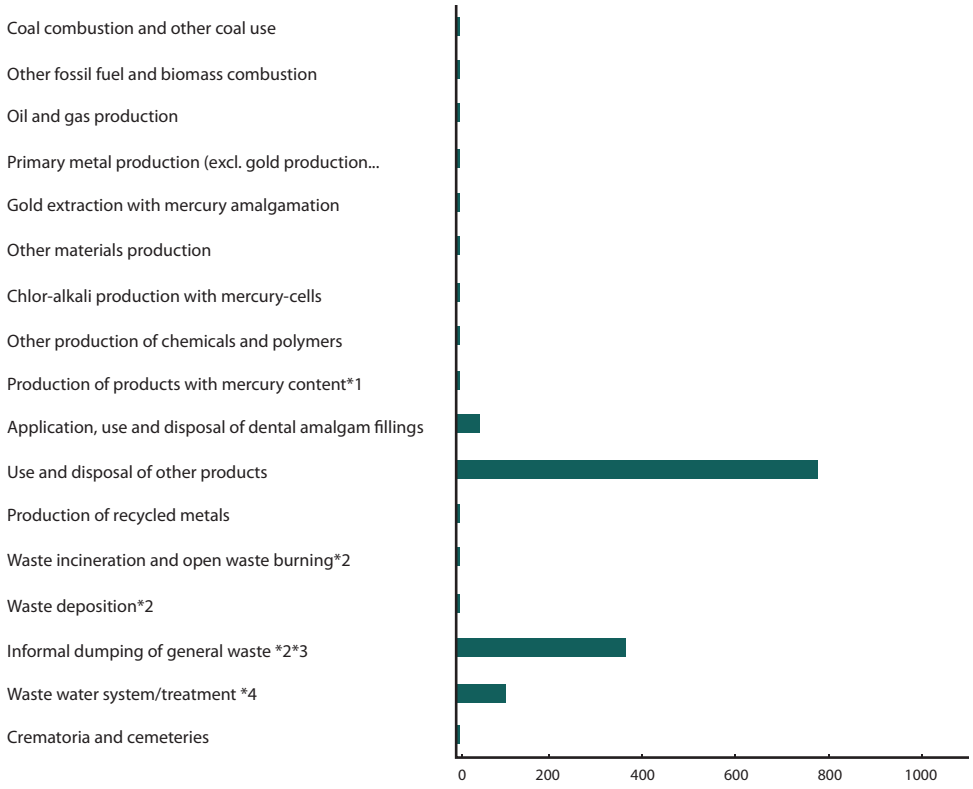
Estimated mercury releases to air (Kg Hg/y)

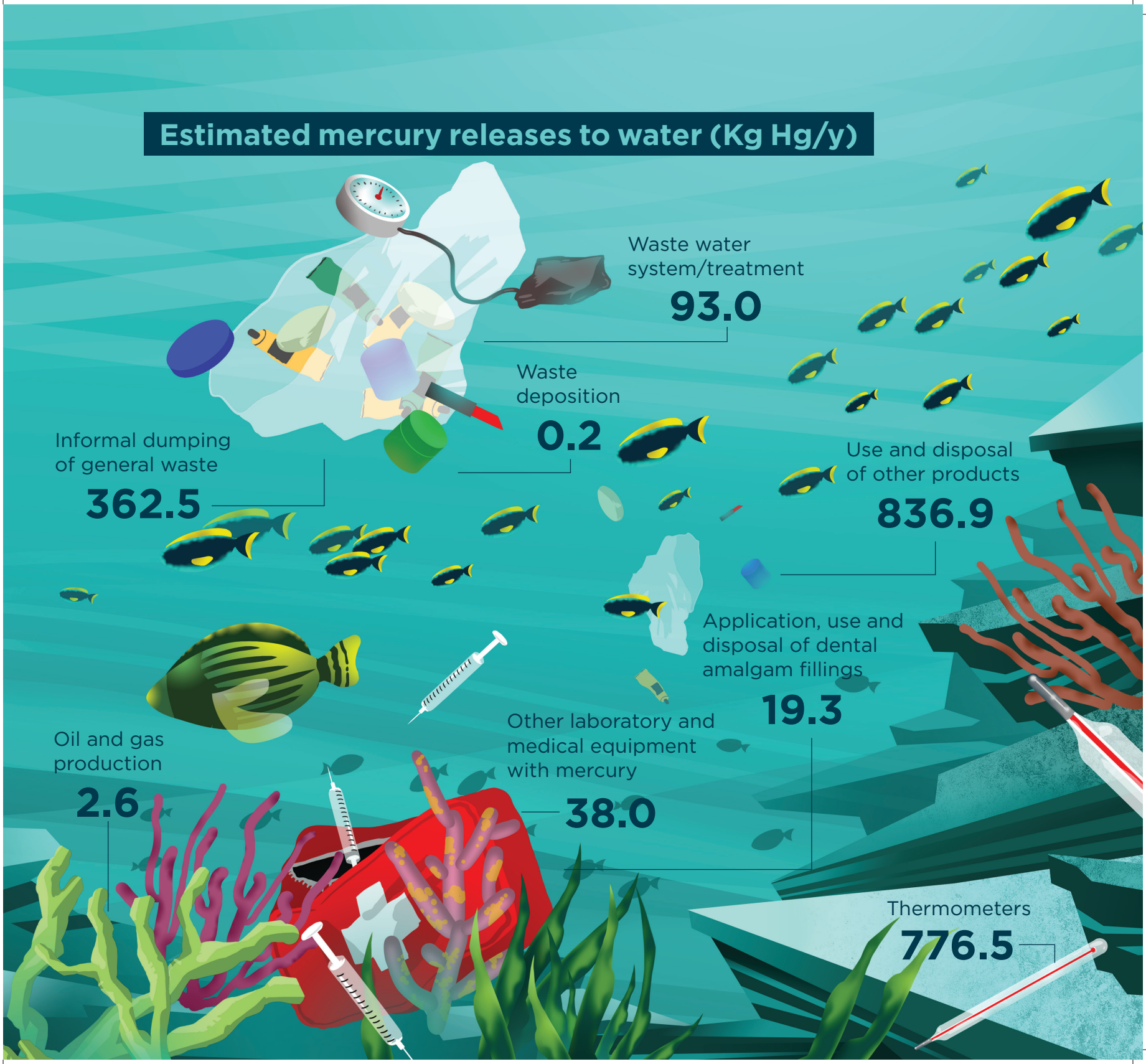


In total, 1220 kg of mercury is released to water in Albania on an annual basis. The estimated mercury releases to water from different sources are presented in Figure 5. The mercury releases sub-categories contributing with the highest mercury releases to the water were:

- Thermometers (776.5 kg Hg/y)
- Informal dumping of general waste (362.5 kg Hg/y)
- Other laboratory and medical equipment with mercury (38.0 kg Hg/y)

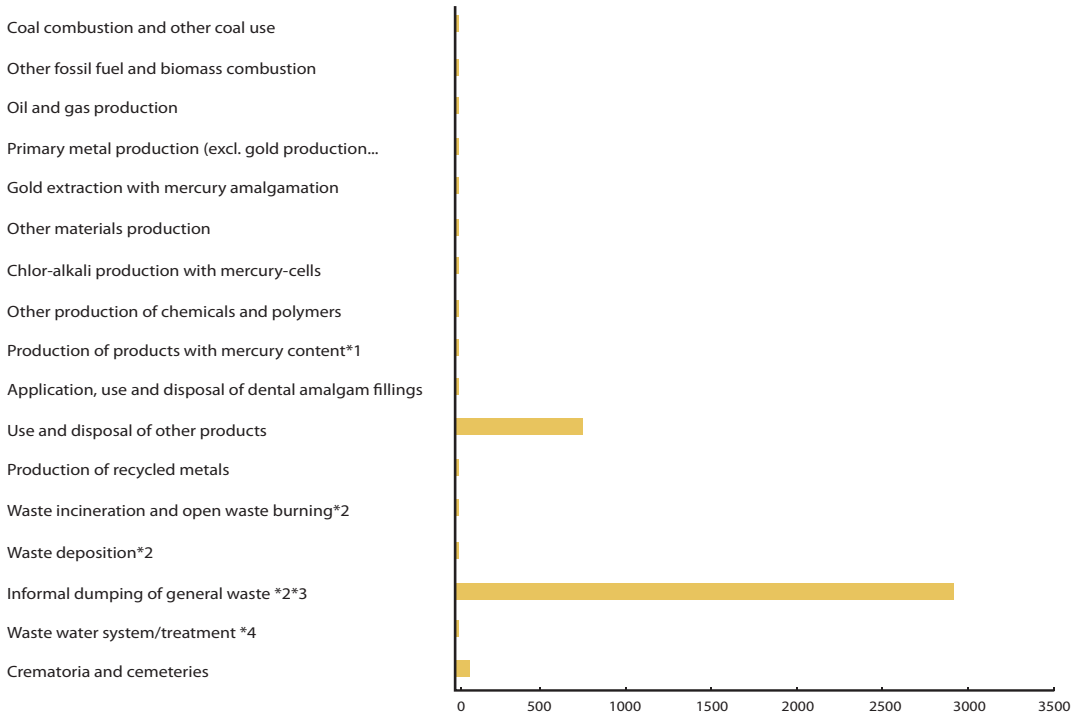
Figure 5. Estimated mercury releases to water (Kg Hg/y)




Estimated mercury releases to water (Kg Hg/y)
Waste water system/treatment
93.0
Waste deposition
0.2
Informal dumping of general waste
362.5
Use and disposal of other products
836.9
Application, use and disposal of dental amalgam fillings
19.3
Other laboratory and medical equipment with mercury
38.0
Oil and gas production
2.6
Thermometers
776.5

In total, 790 kg of mercury is released to land in Albania on an annual basis. The estimated mercury releases to land from different sources are presented in Figure 6. The mercury releases sub-categories contributing with the highest mercury releases to the land were: informal dumping of general waste, mercury-containing thermometers, electrical switches and relays with mercury and cemeteries.

Figure 6. Estimated mercury releases to land (Kg Hg/y)

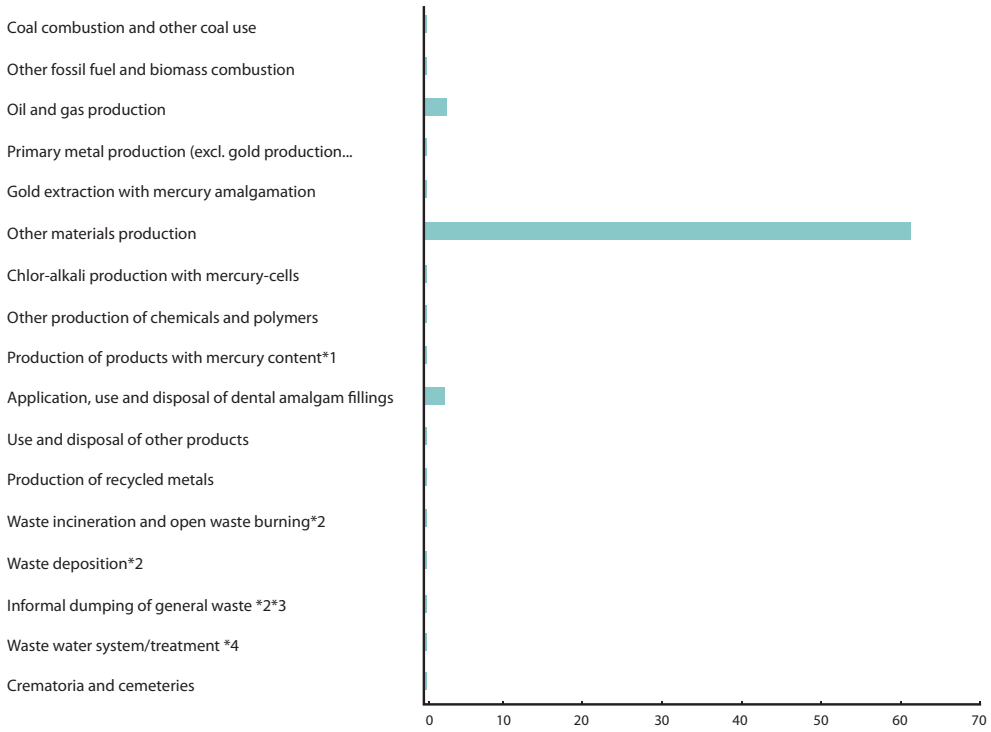


In total, only 70 kg of mercury is released in the environment through by-products and impurities in Albania on an annual basis, as presented in Figure 7, with the main contribution from cement production.

Estimated mercury releases to land (Kg Hg/y)



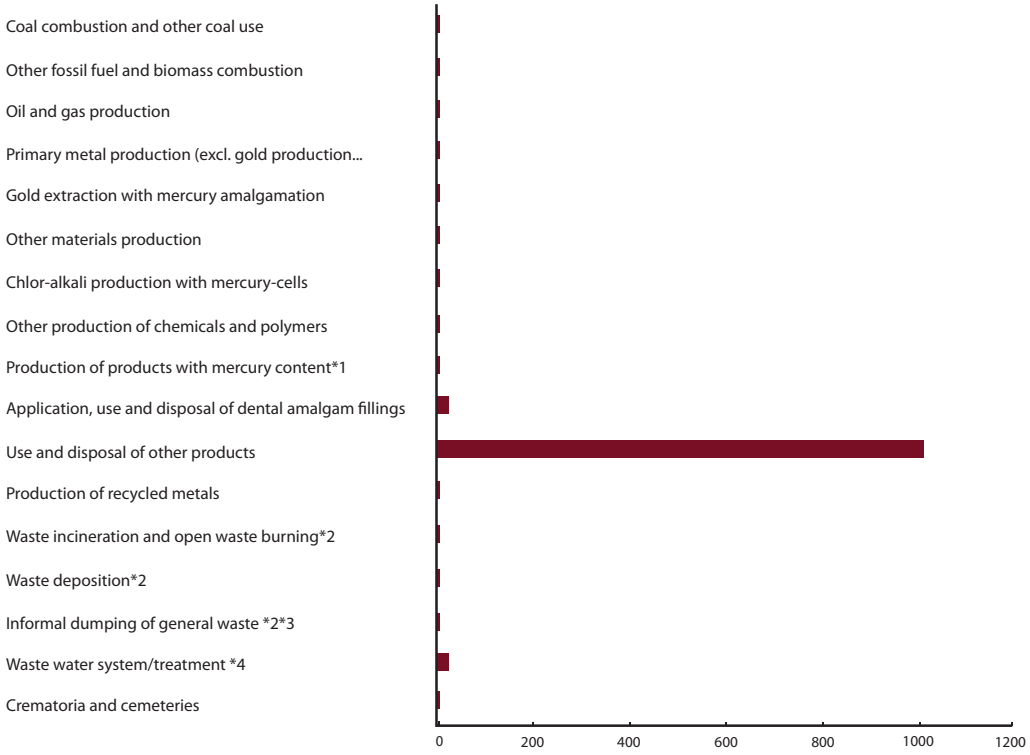
Figure 7. Estimated mercury outputs to by-products and impurities (Kg Hg/y)



The total mercury flow to general waste accounted for 1020 kg Hg/y. The estimated mercury releases to general waste are illustrated in Figure 8. The use and disposal of mercury-containing products were found to be the major flows of mercury in waste and waste water. The major contributing sub-categories to releases to the general waste were:

- Thermometers (776.5 kg Hg/y)
- Electrical switches and relays with mercury (120.8 kg Hg/y)
- Other laboratory and medical equipment with mercury (38.0 kg Hg/y)
- Polyurethane produces with mercury catalyst (25.9 kg Hg/y)
- Batteries with mercury (18.5 kg Hg/y)

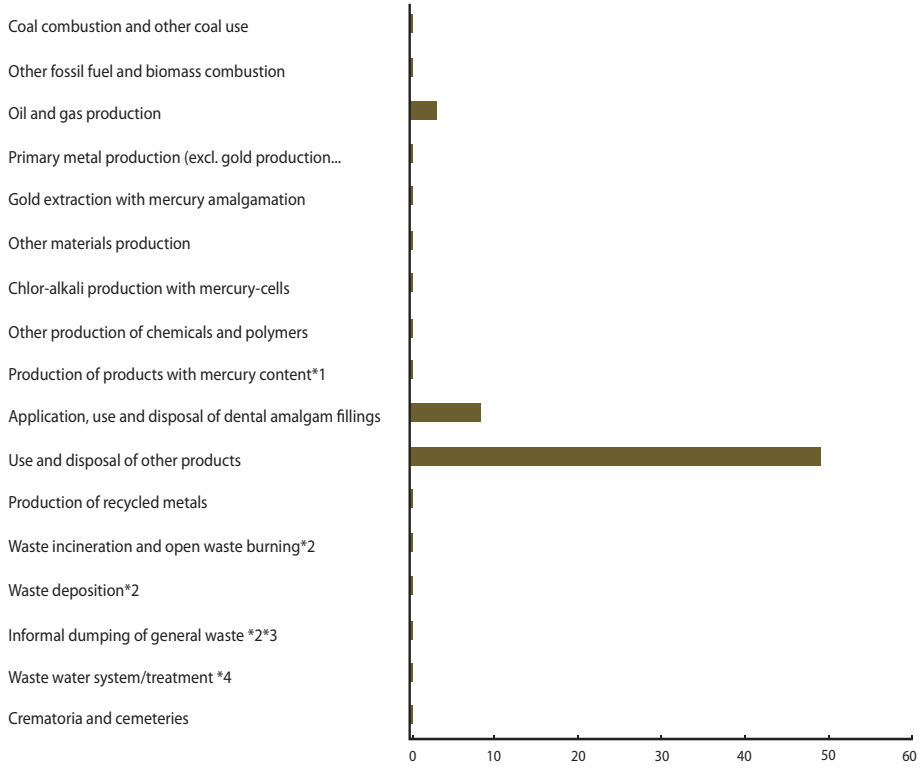
Figure 8: Estimated mercury releases to general waste (Kg Hg/y)



The origin of mercury in waste and waste water produced in the country is mercury in products and materials. Waste fractions and waste water do therefore not represent original mercury inputs to society. Waste and waste water may however represent substantial flows of mercury through society. The controlled landfills and informal dumping of general waste were found to be the major flows of mercury in waste. In this inventory, default input factors were used for the estimation of mercury releases from general waste treatment. The default factors were based on literature data of mercury contents in waste and wastewater, and these data were only available from developed countries. The calculations made indicate that the default input factors for general waste may overestimate the mercury releases from these sources (see the section on waste data in this report).

In total, only 60 kg of mercury is released in sector specific waste in Albania on an annual basis, as presented in Figure 9, with the main contributions from laboratory/medical equipment with mercury, dental amalgam fillings and laboratory chemicals.

Figure 9. Estimated mercury releases, sector specific waste (Kg Hg/y)



1. Waste is not an original source to mercury input to society. To avoid double counting of mercury inputs from waste and products in the graphs, only 10% of the mercury input to waste incineration, waste deposition and informal dumping is included in the chart for mercury inputs. These 10% represent approximately the mercury input to waste from materials which were not quantified individually in Inventory Level 1 of this Toolkit. See Appendix 1 to the Inventory Level 1 Guideline for more explanation.

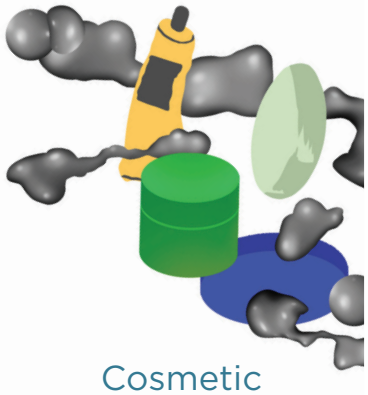
2. Waste is not an original source to mercury input to society. The estimated quantities include mercury in products which has also been accounted for under each product category. To signal the importance of this release pathway, the release to land from informal dumping of general waste has NOT been subtracted in the charts.
3. Wastewater is not an original source to mercury input to society. The estimated input and release to water include mercury amounts which have also been for under each source category. To avoid double counting, input to waste water system/treatment have been subtracted automatically in the charts. Accounted to signal the importance of this release pathway, releases to water via waste water system/treatment has not been adjusted in the charts in spite of double counting.
4. Includes petroleum coke, heavy oil, diesel, gasoil, petroleum, kerosene, natural gas, charcoal and other biofuels.
5. Includes production of cement and pulp and paper.
6. Includes production of VCM and acetaldehyde
7. Includes thermometers, electrical switches and relays, light sources, batteries, polyurethane with Hg catalyst, paints and skin creams with Hg, blood pressure gauges and other manometers, lab chemicals, and other lab and medical uses.

Detailed presentation of mercury inputs and releases for all mercury release source types present in the country are shown in the following report sections.

2.3. Data gaps

There were some data gaps in preparing this inventory:

- The main gaps were for import data. It was not possible to get information related to the quantity of some mercury containing products imported to Albania, i.e. electrical and electronic switches, laboratory chemicals, paints. There is no specific HS Customs Code for these mercuries containing products. This is principally because Customs use these codes to calculate tariffs, not for inventory of items entering the country. For paints, manufacturers use trade names and often do not indicate the level of mercury. Better estimation methods are necessary;



Cosmetic sectors need to be better regulated in terms of imports and **targeting products that may contain harmful substances** including mercury

- There is a lack of chemical composition data for imported cosmetics, soaps and pharmaceutical products (except vaccines), as well as for imported laboratory mercury chemicals. The input approximations according the population can be improved in a near future;
- There is a lack of scientific and research data about the mercury concentrations in cosmetics and drugs in Albania;
- There is a lack of data regarding miscellaneous potential mercury sources not included in the quantitative inventory as there is preliminary indication of possible presence in the country;
- Data gaps exist on activity rates of biomass combustion (other than firewood);
- There is no recent scientific data regarding the coal mercury content and mercury emissions during combustion. There is a high degree of uncertainty related to these values and very high potential for improvement;
- Limited information was found about the applied cement production technologies and presence/type of pollution control devices in all production facilities;
- Waste data gaps are related to lack of accurate systems to weigh the waste and get precise information on the amount being deposited in landfills, informal dumping sites, recycled and incinerated ;

Recommendations for follow-up

The following recommendations aim to strengthen subsequent inventory reporting on mercury:

- Improve import data collection by having more detailed entries on the various products listed. A sub classification within the HS code to capture mercury-containing products would be ideal;
- NEA should implement a system to capture charcoal production figures for permits issued;
- NEA should improve data collection on illegal dumpsites and waste open burning;
- MoTE and the Ministry of Health and Social Welfare can develop systems to quantify better the medical waste that is incinerated and to receive information on smaller incinerators located in the country;
- More scientific information is needed on the mercury levels in available skin lightening products. Legal requirements for the presence and concentration of mercury is necessary;
- More detailed information on cement production technologies and pollution control devices will enable the refining of estimated input and distribution factors for future inventories;
- Cosmetic sectors need to be better regulated in terms of imports and targeting products that may contain harmful substances including mercury;

- Capacity building of relevant bodies in Albania to enable collection of data and information on mercury through development of legislation, to regulate the circulation of mercury and its compounds: import, circulation, transport, storage, disposal for contaminated lands is vitally important;
- Increase of financial resources for annual data collection and dissemination of mercury related information;
- Researchers would require training, not only to create the proper information dissemination framework, but also to conduct research and monitoring;

2.4. Mercury release source types present in Albania

Table 3 shows which mercury release sources were identified as present or absent in Albania for the reference years considered in this inventory. If the source is present it is labelled "Y", if absent it is labelled "No", and if the source is possible but not positively identified, it is labelled "?". Only source types positively identified as present are included in the quantitative assessment.

Table 3. Identification of mercury release sources in Albania

Source category	Source presence
Energy consumption	
Coal combustion in large power plants	N
Other coal uses	Y
Combustion/use of petroleum coke and heavy oil	N
Combustion/use of diesel, gasoil, petroleum, kerosene, LPG and other light to medium distillates	Y
Use of raw or pre-cleaned natural gas	Y
Use of pipeline gas (consumer quality)	N
Biomass fired power and heat production	Y
Charcoal combustion	Y
Fuel production	
Oil extraction	Y
Oil refining	Y
Extraction and processing of natural gas	Y

Source category	Source presence
Primary metal production	
Mercury (primary) extraction and initial processing	N
Production of zinc from concentrates	N
Production of copper from concentrates	N
Production of lead from concentrates	N
Gold extraction by methods other than mercury amalgamation	N
Alumina production from bauxite (aluminium production)	N
Primary ferrous metal production (pig iron production)	N
Gold extraction with mercury amalgamation - without use of retort	N
Gold extraction with mercury amalgamation - with use of retorts	N
Other materials production	
Cement production	Y
Pulp and paper production	N
Production of chemicals	
Chlor-alkali production with mercury-cells	N
VCM production with mercury catalyst	N
Acetaldehyde production with mercury catalyst	N
Production of products with mercury content	
Hg thermometers (medical, air, lab, industrial etc.)	N
Electrical switches and relays with mercury	N
Light sources with mercury (fluorescent, compact, others: see guideline)	N
Batteries with mercury	N
Manometers and gauges with mercury	N
Biocides and pesticides with mercury	N
Paints with mercury	N
Skin lightening creams and soaps with mercury chemicals	N
Use and disposal of products with mercury content	
Dental amalgam fillings (“silver” fillings)	Y
Thermometers	Y
Electrical switches and relays with mercury	Y

Source category	Source presence
Light sources with mercury	Y
Batteries with mercury	Y
Polyurethane (PU, PUR) produced with mercury catalyst	Y
Paints with mercury preservatives	?
Skin lightening creams and soaps with mercury chemicals	?
Medical blood pressure gauges (mercury sphygmomanometers)	N
Other manometers and gauges with mercury	Y
Laboratory chemicals	Y
Other laboratory and medical equipment with mercury	Y
Production of recycled metals	
Production of recycled mercury ("secondary production")	N
Production of recycled ferrous metals (iron and steel)	Y
Waste incineration	
Incineration of municipal/general waste	N
Incineration of hazardous waste	N
Incineration and open burning of medical waste	Y
Sewage sludge incineration	N
Open fire waste burning (on landfills and informally)	Y
Waste deposition/landfilling and waste water treatment	
Controlled landfills/deposits	Y
Informal dumping of general waste *1	Y
Waste water system/treatment	Y
Crematoria and cemeteries	
Crematoria	N
Cemeteries	Y

It should be noted however, that the presumably minor mercury release source types shown in Table 4 were not included in the detailed source identification and quantification work of this inventory. These may however be present in Albania. No specific data were found from Customs, or from major suppliers for all these sub-categories assigned with a question mark (?).

Table 4. Miscellaneous potential mercury sources not included in the quantitative inventory; with preliminary indication of possible presence in the country.

Source category	Source presence
Combustion of oil shale	N
Combustion of peat	N
Geothermal power production	N
Production of other recycled metals	N
Production of lime	Y
Production of light weight aggregates (burnt clay nuts for building purposes)	N
Production of other chemicals (than chlorine and sodium hydroxide) in Chlor-alkali facilities with mercury-cell technology	N
Polyurethane production with mercury catalysts	N
Seed dressing with mercury chemicals	N
Infrared detection semiconductors	N
Bougie tubes and Cantor tubes (medical)	Y
Educational uses	Y
Gyroscopes with mercury	?
Vacuum pumps with mercury	Y
Mercury used in religious rituals (amulets and other uses)	N
Mercury used in traditional medicines and homeopathic medicine	N
Use of mercury as a refrigerant in certain cooling systems	N
Light houses (levelling bearings in marine navigation lights)	?
Mercury in large bearings of rotating mechanic parts in for example older waste water treatment plants	N
Tanning	?
Pigments	?
Products for browning and etching steel	N
Certain colour photograph paper types	N
Recoil softeners in rifles	N
Explosives (mercury-fulminate a.o.)	?
Fireworks	Y
Executive toys	?

2.5. Summary of mercury inputs to society

Mercury inputs to society should be understood here as the mercury amounts made available for potential releases through economic activity in the country. This includes mercury intentionally used in products such as thermometers, blood pressure gauges, fluorescent light bulbs, etc. It also includes mercury mobilized via extraction and use of raw materials which contain mercury in trace concentrations.

Table 5. Summary of mercury inputs to society

Source category	Source presence Y/N/?	Activity rate	Unit	Estimated Hg input, Kg Hg/y Standard estimate
Energy consumption				
Coal combustion in large power plants	N	0	Coal combusted, t/y	-
Other coal uses	Y	202,000	Coal used, t/y	27
Combustion/use of petroleum coke and heavy oil	N	0	Oil product combusted, t/y	-
Combustion/use of diesel, gasoil, petroleum, kerosene, LPG and other light to medium distillates	Y	999,000	Oil product combusted, t/y	5
Use of raw or pre-cleaned natural gas	Y	32,927,429	Gas used, Nm^3/y	3
Use of pipeline gas (consumer quality)	N	0	Gas used, Nm^3/y	-
Biomass fired power and heat production	Y	786,800	Biomass combusted, t/y	24
Charcoal combustion	Y	263	Charcoal combusted, t/y	0
Fuel production				
Oil extraction	Y	1,055,360	Crude oil produced, t/y	4
Oil refining	Y	170,767	Crude oil refined, t/y	1
Extraction and processing of natural gas	Y	91,800,335	Gas produced, Nm^3/y	9
Primary metal production				
Mercury (primary) extraction and initial processing	N	0	Mercury produced, t/y	-
Production of zinc from concentrates	N	0	Concentrate used, t/y	-
Production of copper from concentrates	N	0	Concentrate used, t/y	-
Production of lead from concentrates	N	0	Concentrate used, t/y	-

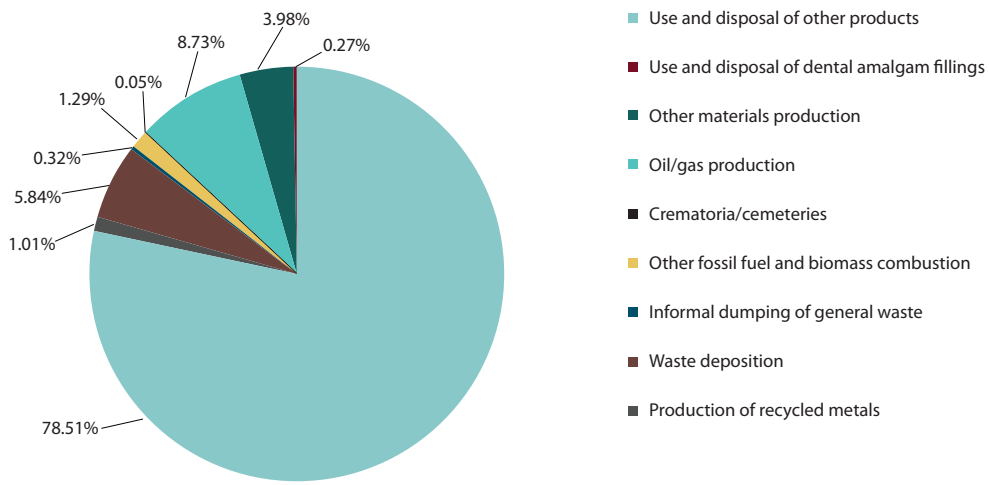
Source category	Source presence Y/N/?	Activity rate	Unit	Estimated Hg input, Kg Hg/y Standard estimate
Gold extraction by methods other than mercury amalgamation	N	0	Gold ore used, t/y	-
Alumina production from bauxite (aluminium production)	N	0	Bauxit processed, t/y	-
Primary ferrous metal production (pig iron production)	N	0	Pig iron produced, t/y	-
Gold extraction with mercury amalgamation - without use of retort	N	0	Gold produced, kg/y	-
Gold extraction with mercury amalgamation - with use of retorts	N	0	Gold produced, kg/y	-
Other materials production				
Cement production	Y	1,866,170	Cement produced, t/y	243
Pulp and paper production	N	0	Biomass used for production, t/y	-
Production of chemicals				
Chlor-alkali production with mercury-cells	N	0	Cl2 produced, t/y	-
VCM production with mercury catalyst	N	0	VCM produced, t/y	-
Acetaldehyde production with mercury catalyst	N	0	Acetaldehyde produced, t/y	-
Production of products with mercury content				
Hg thermometers (medical, air, lab, industrial etc.)	N	0	Mercury used for production, kg/y	-
Electrical switches and relays with mercury	N	0	Mercury used for production, kg/y	-
Light sources with mercury (fluorescent, compact, others: see guideline)	N	0	Mercury used for production, kg/y	-
Batteries with mercury	N	0	Mercury used for production, kg/y	-
Manometers and gauges with mercury	N	0	Mercury used for production, kg/y	-
Biocides and pesticides with mercury	N	0	Mercury used for production, kg/y	-
Paints with mercury	N	0	Mercury used for production, kg/y	-
Skin lightening creams and soaps with mercury chemicals	N	0	Mercury used for production, kg/y	-
Use and disposal of products with mercury content				
Dental amalgam fillings (“silver” fillings)	Y	2,876,101	Number of inhabitants	42
Thermometers	Y	338,871	Items sold/y	2,588
Electrical switches and relays with mercury	Y	2,876,101	Number of inhabitants	403
Light sources with mercury	Y	1,345,448	Items sold/y	16

Source category	Source presence Y/N/?	Activity rate	Unit	Estimated Hg input, Kg Hg/y Standard estimate
Batteries with mercury	Y	115	t batteries sold/y	37
Polyurethane (PU, PUR) produced with mercury catalyst	Y	2,876,101	Number of inhabitants	86
Paints with mercury preservatives	?	0	Paint sold, t/y	?
Skin lightening creams and soaps with mercury chemicals	?	0	Cream or soap sold, t/y	?
Medical blood pressure gauges (mercury sphygmomanometers)	N	0	Items sold/y	-
Other manometers and gauges with mercury	Y	2,876,101	Number of inhabitants	14
Laboratory chemicals	Y	2,876,101	Number of inhabitants	29
Other laboratory and medical equipment with mercury	Y	2,876,101	Number of inhabitants	115
Production of recycled metals				
Production of recycled mercury ("secondary production")	N	0	Mercury produced, kg/y	-
Production of recycled ferrous metals (iron and steel)	Y	10,275	Number of vehicles recycled/y	11
Waste incineration				
Incineration of municipal/general waste	N	0	Waste incinerated, t/y	-
Incineration of hazardous waste	N	0	Waste incinerated, t/y	-
Incineration and open burning of medical waste	Y	21	Waste incinerated, t/y	1
Sewage sludge incineration	N	0	Waste incinerated, t/y	-
Open fire waste burning (on landfills and informally)	Y	214,013	Waste burned, t/y	1070
Waste deposition/landfilling and waste water treatment				
Controlled landfills/deposits	Y	330,158	Waste landfilled, t/y	1,651
Informal dumping of general waste *1	Y	724,968	Waste dumped, t/y	3,625
Waste water system/treatment	Y	19,673,500	Waste water, m3/y	103
Crematoria and cemeteries				
Crematoria	N	0	Corpses cremated/y	-
Cemeteries	Y	21,388	Corpses buried/y	53
TOTAL of quantified inputs*1*2*3				4,340

1. To avoid double counting of mercury inputs from waste and products in the input TOTAL, only 10% of the mercury input to waste incineration sources, waste deposition and informal dumping is included in the total for mercury inputs. These 10% represent approximately the mercury input to waste from materials which were not quantified individually in Inventory Level 1 of this Toolkit. See Appendix 1 to the Inventory Level 1 Guideline for more explanation.
2. The estimated quantities include mercury in products which has also been accounted for under each product category. To avoid double counting, the release to land from informal dumping of general waste has been subtracted automatically in the TOTALS.
3. The estimated input and release to water include mercury amounts which have also been accounted for under each source category. To avoid double counting, input to, and release to water from, waste water system/treatment have been subtracted automatically in the TOTALS.

As illustrated in the Table 4, "Use and disposal of products with mercury content" is the source category with the major mercury inputs to society (3289 kg Hg/y).

Figure 10. Share of different source categories on quantified mercury input (total quantified input=4340 t/y).



2.6. Summary of mercury releases

In the Table 6 below, a summary of mercury releases from all source categories present is given. The key mercury releases here are releases to air (the atmosphere), to water (marine and freshwater bodies, including via waste water systems), to land, to general waste, and to sectors specific waste treatment. An additional output pathway is "by-products and impurities" which designates mercury flows back into the market with by-products and products where mercury does not play an intentional role. See Table 6 below for a more detailed description and definition of the output pathways.

Table 6. Summary of mercury releases

Source category	Estimated Hg releases, standard estimates, Kg Hg/y					
	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment / disposal
Energy consumption						
Other coal uses	26.9	0.0	0.0	0.0	0.0	0.0
Combustion/use of diesel, gasoil, petroleum, kerosene, LPG and other light to medium distillates	5.5	0.0	0.0	0.0	0.0	0.0
Use of raw or pre-cleaned natural gas	3.3	0.0	0.0	0.0	0.0	0.0
Biomass fired power and heat production	23.6	0.0	0.0	0.0	0.0	0.0
Charcoal combustion	0.0	0.0	0.0	0.0	0.0	0.0
Fuel production						
Oil extraction	0.0	0.7	0.0	0.0	0.0	0.0
Oil refining	0.1	0.0	0.0	0.0	0.0	0.1
Extraction and processing of natural gas	1.4	1.8	0.0	2.8	0.0	3.2
Other materials production						
Cement production	182.0	0.0	0.0	60.7	0.0	0.0

Use and disposal of products with mercury content						
Dental amalgam fillings ("silver" fillings)	0.8	19.3	3.4	2.5	8.4	8.4
Thermometers	517.7	776.5	517.7	0.0	776.5	0.0
Electrical switches and relays with mercury	120.8	0.0	161.1	0.0	120.8	0.0
Light sources with mercury	4.9	0.0	4.9	0.0	6.5	0.0
Batteries with mercury	9.3	0.0	9.3	0.0	18.5	0.0
Polyurethane (PU, PUR) produced with mercury catalyst	17.3	8.6	34.5	0.0	25.9	0.0
Paints with mercury preservatives	?	?	?	?	?	?
Skin lightening creams and soaps with mercury chemicals	?	?	?	?	?	?
Other manometers and gauges with mercury	2.9	4.3	2.9	0.0	4.3	0.0
Laboratory chemicals	0.0	9.5	0.0	0.0	9.5	9.8
Other laboratory and medical equipment with mercury	0.0	38.0	0.0	0.0	38.0	39.1
Production of recycled metals						
Production of recycled ferrous metals (iron and steel)	3.7	0.0	3.8	0.0	3.7	0.0
Waste incineration						
Incineration and open burning of medical waste	0.5	0.0	0.0	0.0	0.0	0.1
Open fire waste burning (on landfills and informally)	1070.1	0.0	0.0	0.0	0.0	0.0
Waste deposition/landfilling and waste water treatment						
Controlled landfills/deposits	16.5	0.2	0.0	-	-	-
Informal dumping of general waste *1	362.5	362.5	2899.9	-	-	-
Waste water system/treatment *2	0.0	93.0	0.0	0.0	10.3	0.0
Crematoria and cemeteries						
Cemeteries	0.0	0.0	53.5	-	0.0	0.0
TOTAL of quantified releases*1*2	2370.0	1220.0	790.0	70.0	1020.0	60.0

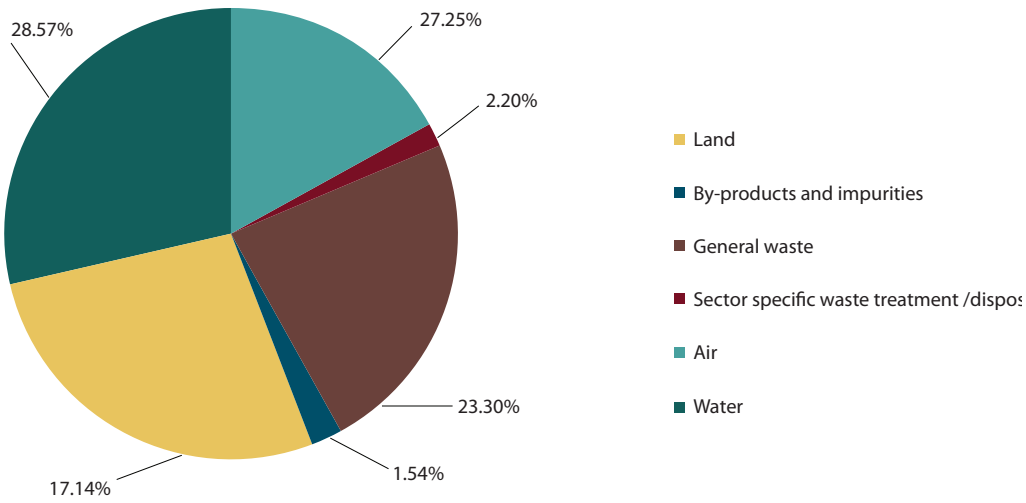
Notes to table above:

1. The estimated quantities include mercury in products which has also been accounted for under each product category. To avoid double counting, the release to land from informal dumping of general waste has been subtracted automatically in the TOTALS.
2. The estimated release to water includes mercury amounts which have also been accounted for under each source category. To avoid double counting, input to, and release to water from, waste water system/treatment have been subtracted automatically in the TOTALS.

According to the data presented in Table 6 and Figure 11, the phase media with major mercury releases are as following:

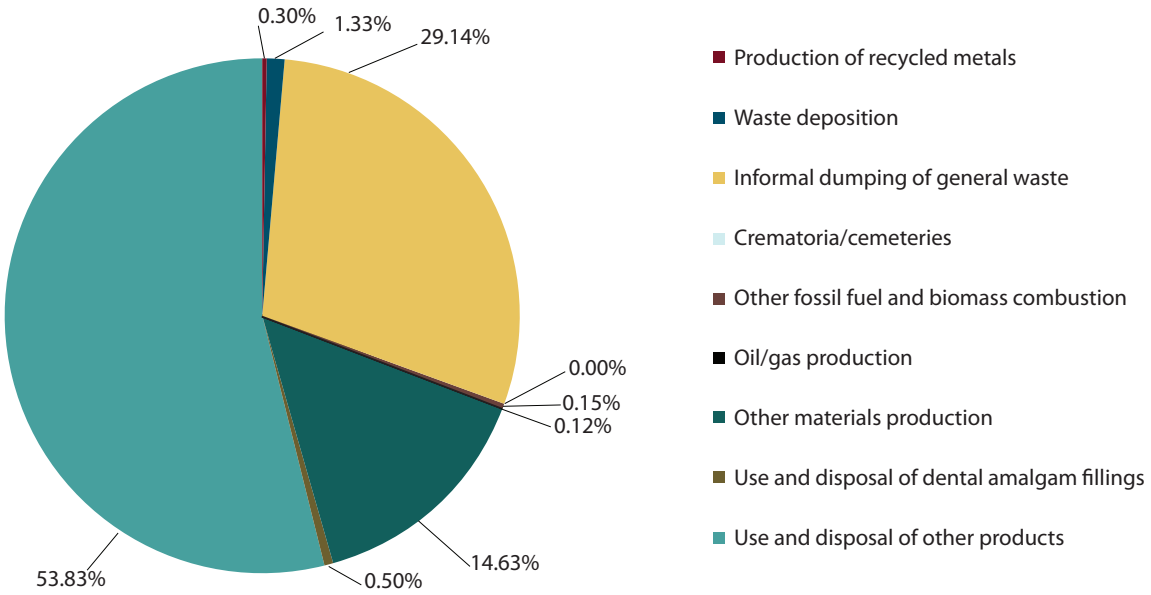
- air (2370 kg Hg/y)
- water (1220 kg Hg/y)
- general waste (1020 kg Hg/y)
- land (790 kg Hg/y))

Figure 11. Release of mercury into different phase media (total release=4340 Hg t/y).



The share of different source categories on mercury releases to air is presented in Figure 12.

Figure 12. Share of different source categories on quantified mercury releases to air (2370 kg Hg/y)



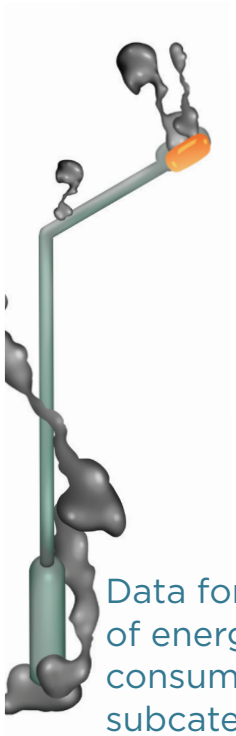
Note that the following source sub-categories made the largest contributions to mercury releases to the atmosphere:

- Open fire waste burning (1070.1 kg Hg/y)
- Thermometers (517.7 kg Hg/y)
- Informal dumping of general waste (362.5 kg Hg/y)
- Cement production (182 kg Hg/y)
- Electrical switches and relays with mercury (120 kg Hg/y)

General descriptions and definitions of the output pathways are presented in Table 7.

Table 7. Description of the types of results

Calculation result type	Description
Estimated Hg input (Kg Hg/y)	The standard estimate of the amount of mercury entering this source category with input materials, for example calculated mercury amount in coal used annually in the country for combustion in large power plants.
Air	Mercury emissions to the atmosphere from point sources and diffuse sources from which mercury may be spread locally or over long distances with air masses; for example, from: Point sources such as coal fired power plants, metal smelter, waste incineration; Diffuse sources such as small-scale gold mining, informal burning of waste with fluorescent lamps, batteries, thermometers.
Water	Mercury releases to aquatic environments and to waste water systems; point sources and diffuse sources from which mercury will be spread to marine environments (oceans), and freshwaters (rivers, lakes, etc.)., for example, releases from: Wet flue gas cleaning systems on coal fired power plants; Industry, households, etc. to aquatic environments; Surface run-off and leachate from mercury contaminated soil and waste dumps
Land	Mercury releases to the terrestrial environment: General soil and ground water. For example, releases from: Solid residues from flue gas cleaning on coal fired power plants used for gravel road construction. Uncollected waste products dumped or buried informally Local un-confined releases from industry such as on site hazardous waste storage/burial Spreading of sewage sludge with mercury content on agricultural land (sludge used as fertilizer) Application on land, seeds or seedlings of pesticides with mercury compounds
By-products and impurities	By-products that contain mercury, which are sent back into the market and cannot be directly allocated to environmental releases, for example: Gypsum wallboard produced from solid residues from flue gas cleaning on coal fired power plants. Sulphuric acid produced from desulphurization of flue gas (flue gas cleaning) in non-ferrous metal plants with mercury trace concentrations Chlorine and sodium hydroxide produced with mercury-based chlor-alkali technology; with mercury trace concentrations Metal mercury or calomel as by-product from non-ferrous metal mining (high mercury concentrations)
General waste	Also called municipal waste in some countries. Typically household and institution waste where the waste undergoes a general treatment, such as incineration, landfilling or informal dumping. The mercury sources to waste are consumer products with intentional mercury content (batteries, thermometers, fluorescent tubes, etc.) as well as high volume waste like printed paper, plastic, etc., with small trace concentrations of mercury.
Sector specific waste treatment / disposal	Waste from industry and consumers which is collected and treated in separate systems, and in some cases recycled; for example: Confined deposition of solid residues from flue gas cleaning on coal fired power plants on dedicated sites. Hazardous industrial waste with high mercury content which is deposited in dedicated, safe sites Hazardous consumer waste with mercury content, mainly separately collected and safely treated batteries, thermometers, mercury switches, lost teeth with amalgam fillings, etc. Confined deposition of tailings and high volume rock/waste from extraction of non-ferrous metals



Data for most of energy consumption subcategories were also taken from IEA for 2015. According to the data, **1253 TJ of natural gas and 202,000 t of coal were combusted** in Albania in 2015.

2.7. Data and inventory on energy consumption and fuel production

2.7.1. Energy consumption

According to the official data provided in the questionnaire from National Environmental Agency (NEA), there are no coal-fired power plants operating in Albania. However, the coal is used in industry, in total 202,000 t/y coal was used in 2015, as for IEA statistics[7]. There are no gas pipelines in the country. IEA data were used for the activity rate of 999,000 t/y for the "Combustion use of diesel, gasoil, petroleum, kerosene, LPG and other light to medium distillates" sub-category, for the year 2015.

Data for most of energy consumption subcategories were also taken from IEA for 2015. According to the data, 1253 TJ of natural gas and 202,000 t of coal were combusted in Albania in 2015. Unit conversion from TJ to cubic meters of natural gas was done online in EIA website[8]. According to this conversion, 32,927,429 Nm^3/y of natural gas were used in 2015.

According to FAO[9], 1,124,000 M3/y of biomass was used in 2015 for heating, which is converted to 786,800 t/y using a FAO softwood conversion factor of 0.7 t/m3. According to national statistics[10], 263 t of charcoal were combusted in 2015.

These data were entered into the Toolkit, which calculated a total of 59 kg Hg/y being emitted to air from the energy consumption sub-categories (Table 8).

7. /www.iea.org/statistics
8. https://www.eia.gov/energyexplained/index.cfm?page=about_energy_conversion_calculator
9. FAO Book of Forest products (2016)
10. www.instat.gov.al

Table 8. Estimated mercury input and releases for energy consumption

Sub-category	Source presence	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Energy consumption	Y/N/?	Annual consumption/ production	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Other coal uses	Y	202,000	Coal used, t/y	27	26.9	0.0	0.0	0.0	0.0	0.0
Combustion/use of diesel, gasoil, petroleum, kerosene, LPG and other light to medium distillates	Y	999,000	t/y	5	5.5	0.0	0.0	0.0	0.0	0.0
Use of raw or pre-cleaned natural gas	Y	32,927,429	Nm^3/y	3	3.3	0.0	0.0	0.0	0.0	0.0
Biomass fired power and heat production	Y	786,800	Biomass combusted, t/y	24	23.6	0.0	0.0	0.0	0.0	0.0
Charcoal combustion	Y	263	t/y	0	0.0	0.0	0.0	0.0	0.0	0.0

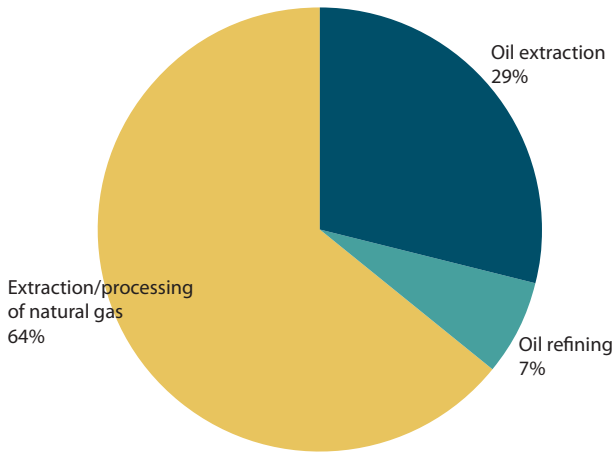
2.7.2. Fuel production

According to the official data provided from the Ministry of Infrastructure and Energy for the year 2015, an estimated 1,055,360 t/y of oil was extracted in Albania and 170,767 t/y was refined in Ballsh and Fier Refineries. In the year 2016, approximately 91,800,335 Nm^3/y natural gas was extracted in Albania. The estimated amount of mercury input from the fuel production sub-category in the Toolkit was calculated 14 kg Hg/y (Table 9). The extraction of natural gas contributes to 64% of total mercury input of fuel production source category (Figure 13).

Table 9. Estimated mercury input and releases for fuel production

Sub- category	Source presence	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Fuel production	Y/N/?	Annual consumption/production	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Oil extraction	Y	1,055,360	t/y	4	0.0	0.7	0.0	0.0	0.0	0.0
Oil refining	Y	170,767	t/y	1	0.1	0.0	0.0	0.0	0.0	0.1
Extraction/processing of natural gas	Y	91,800,335	Nm^3/y	9	1.4	1.8	0.0	2.8	0.0	3.2

Figure 13. Relative contribution of fossil fuel extraction in estimated mercury input.



2.7.3. Data gaps and priorities for potential follow-up

Data gaps exist on activity rates of biomass combustion (other than firewood). These numbers are not included in Albanian national statistics. Only data related to firewood combustion are reported in this inventory. There is no recent scientific data regarding the coal mercury content and mercury emissions during combustion. There is a high degree of uncertainty related to these values and very high potential for improvement.

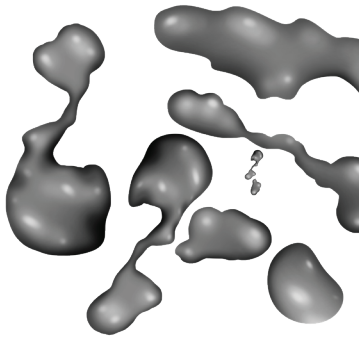
National statistical data on fuel combustion need to be refined. NEA should implement a system to capture charcoal production figures for permits issued.

2.8. Data and inventory on domestic production of metals and raw materials

2.8.1. Data description and inventory calculation on domestic production of metals and raw materials

According to the Ministry of Infrastructure and Energy, there is neither primary metal, pulp or paper production in Albania. However, this inventory does not include burnt lime because it was not included in the Level 1 Toolkit. The only sub-category present in Albania from the Toolkit Step 3, relating to the production of metals and raw materials, is cement production.

The estimated amount of mercury input from Cement production in Albania was calculated to be 243 kg Hg/y (Table 10). The default input factor used in the Toolkit 1 for the input calculations was equal to 0.13 g Hg/ t for cement produced, presuming that cement production is done without co-incineration of waste. For this inventory, cement production represents the third largest contributor of mercury releases to the atmosphere. An estimated 182.0 kg of mercury per year are presumed to be released in the atmosphere and 60.7 kg of mercury per year are released in the produced cement.



An estimated 182.0 kg of mercury per year are **presumed to be released** in the atmosphere and 60.7 kg of mercury per year are released in the produced cement.

Table 10. Estimated mercury input and releases from cement production

Sub- category	Source presence	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Other materials production	Y/N/?	Annual consumption/production	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Cement production	Y	1,866,170	t/y	243	182.0	0.0	0.0	60.7	0.0	0.0

2.8.2. Data gaps and priorities for potential follow up

Limited information was found relating to the applied cement production technologies and the presence or type of pollution control devices in the production facilities. In the case of more detailed inventories outlined in the Level 2 Toolkit, this information would contribute to the refining of estimated input factor and distribution factors. More detailed information on cement production technologies and pollution control devices will enable the refining of estimated input and distribution factors for future inventories.

2.9. Data and inventory on domestic production and processing with intentional mercury use

As per the National Environmental Agency, in summary, there is no domestic production of chemicals and processing activity with intentional use of mercury catalyst or mercury cells in Albania.

2.10. Data and inventory on waste handling and recycling

2.10.1. Production of recycled metals

The inventory of this subcategory was based on the number of vehicles that undergo recycling. According to the General Directorate of Road Transport Service[11], the number of end to life vehicles in Albania during 2016 was 10,275. According to the information provided by the Ministry of Energy and Industry, the total amount of ferrous metal scrap smelted there was 272,915 tons in 2015 and 114,200 tons in 2016. According to the calculation of this inventory, 11 kg Hg entered into the environment from this sub-category in 2016. The estimation of mercury output releases from this sub-category were 3.7 kg, 3.8 kg and 3.7 kg respectively for air, land and waste (Table 11).

Table 11. Estimated mercury input and releases from production of recycled of metals

Sub- category	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
	Annual production/waste disposal	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Production of recycled ferrous metals (iron and steel)	10,275	No. vehicles recycled/d	11	3.7	0.0	3.8	0.0	3.7	0.0

2.10.2. Waste incineration and open fire burning

According to the data provided in the filled questionnaires from the Ministry of Health and Social Welfare for medical waste incineration, the total amount of waste incinerated in 2015 and 2016 was 21 tons and 8 tons, respectively. The highest number (as for 2015) is inserted in this inventory. The estimated release of mercury in air under this sub-category was 1 kg Hg/y. The open burning of municipal waste is not allowed in Albania, as waste has to be transported and discharged to landfills. According to rough estimations from

11. http://www.dpshtrr.gov.al/

Wiedinmeyer et al (2014)[12], approximately 214,013 ton of wastes are burned in open fire. The estimated input of mercury from this sub-category is 1,070 Kg Hg/y. All of it is considered released in air.
Estimated mercury input and releases from the waste incineration source category are presented in Table 12.

Table 12. Estimated mercury input and releases from incineration and open burning of medical waste

	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Waste incineration	Annual production/ waste disposal	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Incineration and open burning of medical waste	21	t/y	1	0.5	0.0	0.0	0.0	0.0	0.0
Open fire waste burning	214013	t/y	1070	1070.1	0.0	0.0	0.0	0.0	0.0

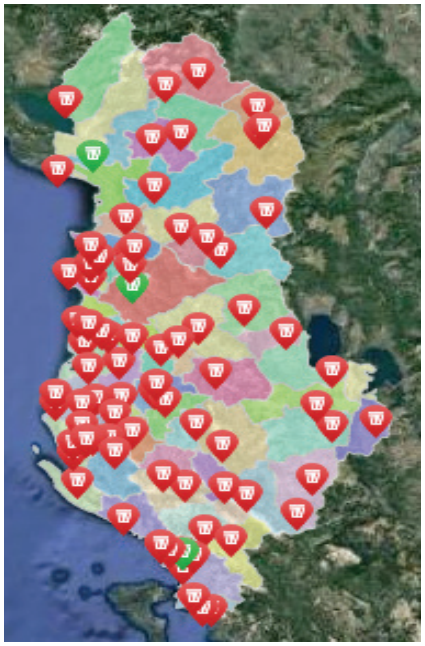
2.10.3. Waste deposition/landfilling and waste water treatment

Sanitary landfills and waste depositions represent the major pathways for mercury to enter the environment in Albania.

Based on the data provided by the Ministry of Infrastructure and Energy and the NEA in Albania[13], 92 waste disposal sites are identified in Albania and only three of them comply with environmental standards (Landfill of Sharra, Landfill of Bushat and Landfill of Bajk). In Figure 14, the sanitary landfills are presented in green, whereas the disposal sites which do not comply with the environmental standards are presented in red.

12. Wiedinmyer, Christine; Yokelson, Robert J.; Gullett, Brian K. (2014). Global Emissions of Trace Gases, Particulate Matter, and Hazardous Air Pollutants from Open Burning of Domestic Waste. Environmental Science & Technology, vol. 48, issue 16, pp. 9523-9530
13. http://akm.gov.al/cil%C3%ABsia-e-mjedisit.html#raporte_publikime

Figure 14. Municipal disposal waste sites in Albania 14



According to data provided by the Ministry of Infrastructure and Energy (former Ministry of Transport and Industry), the total amount of waste generated in Albania in 2016 was equal to 1,055,126 tons, from which 330,158 tons of waste were discharged into controlled landfills and the rest was deposited into informal dumps. According to the NEA, there were no waste water treatment facilities in Albania in years 2015-2016. According to United Nations Environment Statistics[15], 53,900 m^3 waste water/day (equal to 19,673,500 m^3/y were generated in Albania in 2015. Detailed results for waste deposition/landfilling and waste water system sub-categories are presented in the Table 13.

14. http://mbetjet.zhvillimiurban.gov.al/GISDefault.aspx?idTheme=28297
15. https://unstats.un.org/unsd/envstats/qindicators.cshtml



According to United Nations Environment Statistics, **53,900 m3 waste water/day (equal to 19,673,500 m3/y were generated** in Albania in 2015.

Table 13. Estimated mercury input and releases from waste deposition/landfilling

Sub- category	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Waste deposition/landfilling and waste water treatment	Annual production/ waste disposal	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment / disposal
Controlled landfills/deposits	330,158	t/y	1,651	16.5	0.2	0.0	-	-	-
Informal dumping of general waste	724,968	t/y	3,625	362.5	362.5	2899.9	-	-	-
Wastewater system/treatment	19,673,500	m3/y	103	0.0	93.0	0.0	10.3		

Table 13 indicates that informal waste dumping represents the highest contribution of mercury emissions into the atmosphere (362.5 kg/y). These estimates are higher than those calculated for the incineration of medical waste (0.5 kg Hg/y) and emissions to the air from landfills (16.5 kg Hg/y). Less than 2/3 (67%) of the general waste is collected and deposited on lined landfills or incinerated with pollution abatement controls in Albania.

The calculation was based on the formula proposed by the Toolkit 1. In our case: the sum of activity rates of controlled waste handling < 2/3 of activity rates for general waste 330,158 < 0.67(330,158+724,968).

2.10.4. Data gaps and priorities for potential follow up

There is some uncertainty in the provided data for amount of the incinerated and open burning of medical waste. Waste data gaps are related to lack of accurate systems to estimate the waste and get precise information on the amount being incinerated and incineration technology with potential for improved estimation on Inventory Level 2.

NEA should improve data collection on illegal dumpsites and waste open burning. MoTE and the MoHSW can develop systems to quantify better the medical wastes that are incinerated and to receive information on smaller incinerators located in the country.

2.11. Data and inventory on general consumption of mercury in products as metal mercury and as mercury containing substances

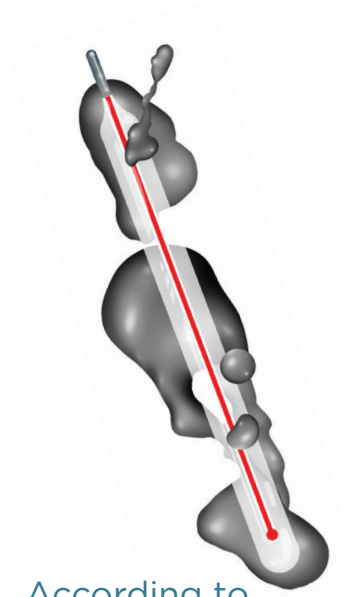
2.11.1. Consumer products with intentional use of mercury

There are several source sub-categories addressed in the UNEP Toolkit regarding consumer products with intentional use of mercury, such as: thermometers with mercury, electric switches and relays with mercury, light sources with mercury, batteries containing mercury, polyurethane produced with mercury catalyst, paints, cosmetics and related products.

Data provided from Albanian Customs for these sub-categories pointed out the following information:

- the presence/usage of medical thermometers with mercury, air, laboratory, dairy;
- the presence/usage of light sources with mercury such as fluorescent tubes (double end); compact fluorescent lamp (CFL single end) etc.;
- the presence/usage of batteries with mercury.

It was not possible to get information related to the quantity of other mercury containing products imported to Albania, i.e. electrical and electronic switches, laboratory chemicals, paints, and cosmetic. According to Albanian National Commodity Nomenclature 2017[16], there is no specific HS Customs Code for these mercuries containing products.



According to Customs data, **338,871 units of mercury thermometers are imported in Albania in 2016,** from which, 134,380 units were medical Hg thermometers and 204,491 were other glass Hg thermometers.

16. http://www.dogana.gov.al/dokument/610/nk-2017-totali-me-paketen-e-2017

2.11.1.1. Thermometers with mercury

Mercury thermometers have a wide use for educational and medical purposes (fever thermometers, chemical experiments, water and acid baths, blood banks, etc.), as well as for industrial purposes (heating and cooling equipment's, chemical tanks and vats, bakeries, candy making etc.). According to Customs data, 338,871 units of mercury thermometers are imported in Albania in 2016, from which, 134,380 units were medical Hg thermometers and 204,491 were other glass Hg thermometers (air, laboratory etc.). Most likely, the used customs code also include alcohol-filled thermometers; as a conservative estimate, they are however all considered as mercury-containing. This is most likely an over-estimation. As reported in Table 14, mercury releases in air, water and land were respectively 517.7 kg/y, 776.5 kg/y and 517.5 kg/y.

Table 14. Estimated mercury input and releases from thermometers with mercury

Sub- category	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Thermometers	Annual consumption/ population	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Thermometers containing mercury	338.871	t/y	2,588	517.7	776.5	517.5	0.0	776.5	0.0

2.11.1.2. Electrical switches and relays

The mercury is used in electrical switches and relays, because of its electrical conductivity, low volatility, and fluid properties over a large temperature range. Because of the lack of information on the distribution of mercury switches and relays in Albania, the mercury input and release from this sub-category was quantified using the default method of the Toolkit Level 1. For this sub-category this factor is 0.14 g mercury per inhabitant and the mercury input calculated was 403 kg/y. The major part of the mercury was released to land. The detailed information is given in Table 15.

Table 15. Estimated mercury input and releases from electrical switches and relays

Sub- category	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Electrical switches and relays with mercury	Annual consumption/ population	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Electrical switches and relays with mercury	2, 876,101	No. of inhab-itant	403	120.8	0.0	161.1	0.0	120.8	0.0

2.11.1.3. Light sources with mercury

According to data provided by Customs, 1,345,448 pieces of mercury containing lights were imported in Albania in 2016. Of this total, 158,534 pieces were fluorescent tubes (double end), 1,152,518 pieces were compact fluorescent lamps (CFL single end) and 34,396 pieces belong to the sub-category "other Hg-containing light sources". The estimated mercury input for this sub-category was 16 kg Hg/y (Table 16). The calculations were based on default factors of UNEP Toolkit Level 1.

Table 16. Estimated mercury input and releases from lights containing mercury

Sub- category	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Light sources with mercury	Annual consumption/ population	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Lights containing mercury	1, 345,448	t/y	16	4.9	0.0	4.9	0.0	6.5	0.0

2.11.1.4. Batteries with mercury

There are a variety of button-cell batteries that contain mercury, including zinc air, silver oxide, and alkaline manganese oxide batteries. Button-cell batteries are small, thin, energy cells that are not rechargeable. They are most commonly used in watches, toys, hearing aids, and other small and portable electronic devices. The creation of small electronic devices is possible due to the size of the button-cell batteries. Below is a brief description of the types of relevant batteries found on the market.

- **Zinc Air miniature batteries** are mostly used in hearing aids because of their high-energy concentration and their ability to continuously discharge energy. This type of battery uses oxygen from the air to produce electrochemical energy. A hole in the cell allows the surrounding air to enter the battery and react with the cathode. They are also used for small devices, such as wristwatch pagers and ear speech processors.
- **Silver Oxide button-cell batteries** are used in various devices, such as hearing aids, watches, cameras, and clocks. In these batteries, the silver oxide makes up the cathode, and the powdered zinc provides the anode. Usually sodium hydroxide or potassium hydroxide is added as an alkaline electrolyte. Silver oxide batteries can come in a large size as well as the button-cell size; however, the manufacture of the larger batteries is limited due to the high price of silver.
- **Alkaline Manganese Oxide button-cell batteries** are used in toys, calculators, remote controls, and cameras. In these batteries, the cathode consists of manganese dioxide, which is produced through an electrolytic process, and the anode is made up of powdered zinc metal. The electrolyte typically used in this type of button-cell battery is potassium hydroxide. Gas can form in all of these types of button batteries due to the corrosion of zinc. Zinc in the battery gets corroded into the electrolyte as the battery is used. This corrosion can cause electrolysis and can cause the generation of hydrogen gas in the canister. Build-up of hydrogen gas can cause the battery to leak, limiting the ability of the battery to function. Mercury suppresses this zinc corrosion, which is why it is added to button-cell batteries. These batteries may contain mercury in the insulating paper surrounding the battery, or mercury may be mixed in the anode itself.
- **Mercuric Oxide batteries** contain mercury in the electrode and are useful in applications that require a high energy density and a flat voltage curve. In the past, mercuric oxide button-cell batteries were used in hearing aids, watches, calculators, electronic cameras, and other personal electronic items requiring a small battery.
- **Other batteries**, such as AAA, AA, C, and D alkaline, general purpose, and carbon-zinc; lead-acid; lithium-ion; and nickel metal halide and nickel-cadmium, do not contain mercury[17].

17 http://www.newmoa.org/prevention/mercury/imerc/factsheets/batteries_2015.pdf

The data for this subcategory were taken from UN Comtrade database [18], as for 2016. According to it, mercury oxide and silver oxide batteries were not imported after 2013 in Albania.

A small import of mercury oxide button cells is reported in 2013. Imports and consumption do not always happen in the same year, and probably these batteries are in the disposal phase, mirroring consumption a few years back in time. This is the reason we added the data of 2013 for the import of mercury oxide cells, equal to 0.025 t/y. The data of 0.041 t of air-zinc button-cell batteries imported in 2016 were added in "other button cell sub-category" (as for HS850660). According to the Toolkit Guideline for Inventory Level 1, the data for "Other batteries with mercury" sub-category, were found for commodity "Primary cells and primary batteries" (HS8506) subtracting air-zinc batteries, equal to 115 t/y.

According to the UNEP Toolkit 1 calculations, the estimated Hg input for this sub-category was 37 kg Hg/y. Table 17 indicates that the amount of mercury released to waste (18.5kg Hg/y) is much higher than the amount of mercury released to air or land.

Table 17. Estimated mercury input and releases from batteries containing mercury

Sub- category	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Batteries with mercury	Annual consumption/ population	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Batteries with mercury	115	t/y	37	9.3	0.0	9.3	0.0	18.5	0.0

2.11.1.5. Dental amalgam fillings

Mercury dental amalgam fillings are still in use in Albania. Because of a unique HS Custom Code for all amalgam fillings, we could not use for this sub-category the data provided from Customs. Our inventory was based on the questionnaires completed by dental clinics and amalgam suppliers. The information

18 http://comtrade.un.org/db/default.aspx

for mercury amalgam fillings was taken from dental clinics established in different geographical areas in Albania, as well as in the capital, Tirana. In our calculations we have assumed that this control group of clinics is representative of the overall situation in the country.

The methodology used for the calculation was as following:

- Total number of patients in dental clinics = 41,361 patients
- Total number of patients to whom mercury amalgam fillings were applied = 3,392 patients
- Mercury supply used for amalgams in total = 693 gr

We have assumed the patient application frequency is once a year.

Step 1. Calculation of the quantity of mercury used in amalgam filling per patient, per year:

$$\frac{\text{grHg used for amalgam}}{\text{patients to whom mercury amalgam were applied} * y} = \frac{\text{grHg}}{\text{patient} * y}$$

$$\frac{693 \text{ grHg}}{3392 \text{ patient}} = \frac{0.20 \text{ grHg}}{\text{patient} * y}$$

The calculated value is equal to maximum default input factor used in the Level 2 Toolkit (Range of default input factor is from 0.05 to 0.2 gr/inhabitant*y).

Step 2. Calculation of percentage of patients to whom mercury amalgam fillings were applied compared to total number of patients in clinics.

$$\frac{\text{Number to patients to whom mercury amalgam filling were applied}}{\text{Number of patients treated in clinics}} \times 100 = \%\ \text{patients}$$

$$\frac{3392 \text{ patients}}{41361 \text{ patients treated in clinics}} \times 100 = 82\%$$

According to the above calculations, 8.2% of patients have used mercury amalgam fillings.

Step 3. Extrapolation of mercury amalgam usage in all Albanian population for 2016

Population of Albania (2016) = 2,876,101
Number of inhabitants (0-4 age) = 167,513
Number of inhabitants (above 75) = 149,645 inhabitants

To calculate the amount of mercury used in amalgam fillings in the Albanian population for 2016, we have excluded two age groups (0-4 years old and > 75years old), to which mercury amalgam filling is rarely/ never used.

Thus, gr Hg/y = [Population – (no. of inhabitants 0 to 4 age + no. of inhabitants above 75)] x percentage of patients to which mercury amalgam fillings were applied x gr Hg used per patient, per year g Hg/y = [2,876,101- (167,513 +149,645)] x 0.082 x 0.20gr/(patient*y) = 41,960 gr Hg

The approximate amount of mercury used in amalgam fillings in Albania for 2016 was calculated to be 42 kg Hg/y, and this amount was assumed representative of earlier dental amalgam use still resulting in mercury releases (included as per Toolkit methodology). The output releases of mercury under this sub-category are calculated using output distribution default factors of Toolkit 2 for preparation, use and disposal of amalgam fillings. Detailed information is given in Table 18.

Table 18. Estimated mercury input and releases from dental amalgam fillings

Sub- category	Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Dental amalgam fillings	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
	42	0.84	19.32	3.36	2.52	8.40	8.40

2.11.1.6. Manometers with mercury

According to the information taken from laboratory questionnaires received from universities and research institutions, the number of manometers with mercury is very low (Table 19). The data on their use in factories and hospitals are missing and could potentially form the main source of consumption. This should be further investigated in future inventories.

Table 19. The number of manometers ordered by universities and research institutions

Name of University/ Research Institution	Manometers with mercury (Unit/year)	
	2015	2016
University of Tirana (Faculty of Natural Science)	0	0
University of Shkodra	0	0
University of Vlora	0	0
Medical University of Tirana (Faculty of Medical Sciences)	4	5
Tirana Agricultural University	0	0
Food Safety and Veterinary Institute	0	0
University Medical Centre of Tirana	2	2
The Institute of Public Health	0	0
Intermedica 1-private Laboratory	0	0
Total	6	7

Additionally, gross suppliers that import chemicals, equipment, and medical devices have declared that the number of imported manometers with mercury is extremely small, or zero. The calculation of mercury input for this sub-category in Toolkit 1 was done according to the number of inhabitants in Albania and was estimated to be 14 kg Hg/y. According to Table 20 the majority of mercury is estimated to be released to water and waste (4.3 kg Hg for each of them).

Table 20. Estimated mercury input and releases from manometers and other gauges

Sub- category	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Manometers and gauges with mercury	Annual consumption/ population	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment / disposal
Manometers and gauges with mercury	2, 876,101	No. of inhabitants	14	2.9	4.3	2.9	0.0	4.3	0.0

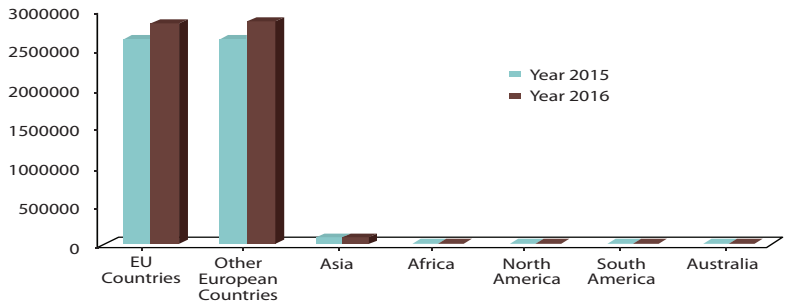
2.11.1.7. Paints/pigments

According to Albanian Customs data, 78,135 kg of pigments were imported in 2015 and 68,865 kg in 2016. Due to the lack of chemical specifications in imported items, the inventory team took a survey in the market, targeting major suppliers regarding the chemical composition of paints and pigments. In the cases of paints with declared composition on their labels no mercury content was found. In other cases, there was no declared composition in the label, or there was no label at all. No additional scientific research data were found on this issue. It was not possible to obtain accurate information, suitable to be inserted as an activity rate in Toolkit 1.

2.11.1.8. Skin lightening creams and soaps with mercury chemicals

According to Albanian Customs data, the total amount of skin creams and soaps imported in Albania was 5,252,153 kg in 2015 and 5,757,261 kg in 2016, without any specification on their composition. To identify skin lightening creams and soaps containing mercury, the inventory team took a survey in the market. According to the survey in major suppliers and cosmetic shops (Rossman, Conad, Spar, Avon, LR Albania, Well, Coin, Yves Rocher Albania, etc.) skin lightening creams and soaps didn't have data on mercury in their declared composition. A summary of imported amounts of skin creams and soaps in Albania is presented in Figure 14. Detailed information about individual countries of origin is found in Annex 2.

Figure 15. The total imported amount of skin creams and soaps for different regions



There is some scientific research data for pharmaceutical and cosmetic products in Albania that was published in 2014. According to the research,[19] mercury has been found in pharmaceutical products in a range between 0.08-18.5 ppm, as shown in Table 21.

Table 21. The mercury content in pharmaceutical and cosmetic products in Albania

	Utilization	Hg (ppm)
Tetramil	Eye drops	18.50+0.26
Septober	Eye drops	6.38+0.03
Betabioptal	Eye drops	4.62+0.14
Antibioptal	Eye drops	3.50+0.22
Polydexa	Eye drops	3.16+0.15
Operil	Nasa drops	1.31+0.13
Galsud	Nasa drops	1.94+0.05
Canesten	Antibiotic skin cream	0.15+0.016
Bivacin	Antibiotic skin cream	0.32+0.019
Hand Frost Cream (Chinese product)	Cosmetic product	0.10+0.012
Lubride Cream	Cosmetic product	0.08+0.015

19 http://www.journalcra.com/sites/default/files/6027.pdf

Glicerine Avon	Cosmetic product	0.13+0.018
NIVEA Cream	Cosmetic product	0.16+0.020
SODALCO liquid soap	Cosmetic product	0.18+0.018
Lobello (red lipstic)	Cosmetic product	1.04+0.10
Eosan gel	Cosmetic product	0.21+0.022
Colistar (red lipstick)	Cosmetic product	0.27+0.022
Ordiner (red lipstick)	Cosmetic product	0.23+0.015
Lens Cleaner	Cosmetic product	0.95+0.094

2.11.1.9. Laboratory chemicals

According to Customs information, a total amount of 26.2 kg of mercury chemicals was imported in 2015 without chemical specifications. Without chemical names, it was not possible to calculate the mercury amount. In 2016, no mercury chemicals were imported in Albania. From questionnaires addressed to Universities and Research Institutions, no mercury chemicals were ordered in 2015 and 2016. The inventory used the default method specified in the Toolkit Level 1, which assumed 0.14 g mercury per inhabitant for this source category. The input of mercury from this sub-category was 29kg/y and the majority of it would be released to the water and the waste (Table 22).

Table 22. Estimated mercury input and releases from laboratory chemicals

Sub- category	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Laboratory chemicals	Annual consumption/ population	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Laboratory chemicals	2, 876,101	No. of inhabi-tants	29	0.0	9.5	0.0	0.0	9.5	9.8

2.11.1.10. Mercury sphygmomanometers

According to our surveys, mercury sphygmomanometers are no longer in use in hospitals, medical clinics, etc., so they have been phased out. Aneroid or electronic sphygmomanometers are widely used by professionals and for household use. According to Customs, 26,956 pieces were imported in 2015 and 51,060 pieces in 2016 in total, with no specifications. There is no information regarding the manner and locations where they are stored.

2.11.1.11. Other laboratory and medical equipment with mercury

Due to the lack of information on this sub-category and taking into the consideration that mercury is used in laboratory and medical equipment, to estimate mercury releases the inventory used the default method of Toolkit 1. Table 23 shows that the majority of this mercury would be released in water, general waste and sector specific treatment.

Table 23. Estimated mercury input and releases from laboratory and medical equipment with mercury

Sub- category	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Laboratory chemicals	Annual consumption/ population	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Laboratory chemicals	2, 876,101	No. of in-habitants	115	0.0	38.0	0.0	0.0	38.0	39.1

2.11.1.12. Polyurethane produced with mercury catalyst

According to MoTE, there was no private/state industrial activity registered to produce polyurethane in Albania in 2015 and 2016. However, polyurethane containing products can be incorporated in imported products (i.e. shoe soles, gym hall flooring, conveyer belts, etc.). The calculation in the Toolkit Spreadsheet was done based on the number of inhabitants in Albania. The input of mercury from this sub-category was 86 Kg Hg/y and the estimated releases in air, water, land and general waste were calculated 17.3 kg/y, 8.6 kg/y, 34.5 kg/y and 25.9, respectively.

2.12.2. Data gaps and priorities for potential follow up

The main data gaps were for import data. It was not possible to get information related to the quantity of some mercury containing products imported to Albania, i.e. electrical and electronic switches, laboratory chemicals, paints. There is no specific HS Customs Code for these mercuries containing products. This is principally because Customs use these codes to calculate tariffs, not for inventory of items entering the country. For paints, manufacturers use trade names and often do not indicate the level of mercury. Better estimation methods are necessary.

There is also a lack of chemical composition data for imported cosmetics, soaps and pharmaceutical products (except vaccines), as well as for imported laboratory mercury chemicals. The input approximations according to the population can be improved in a near future.

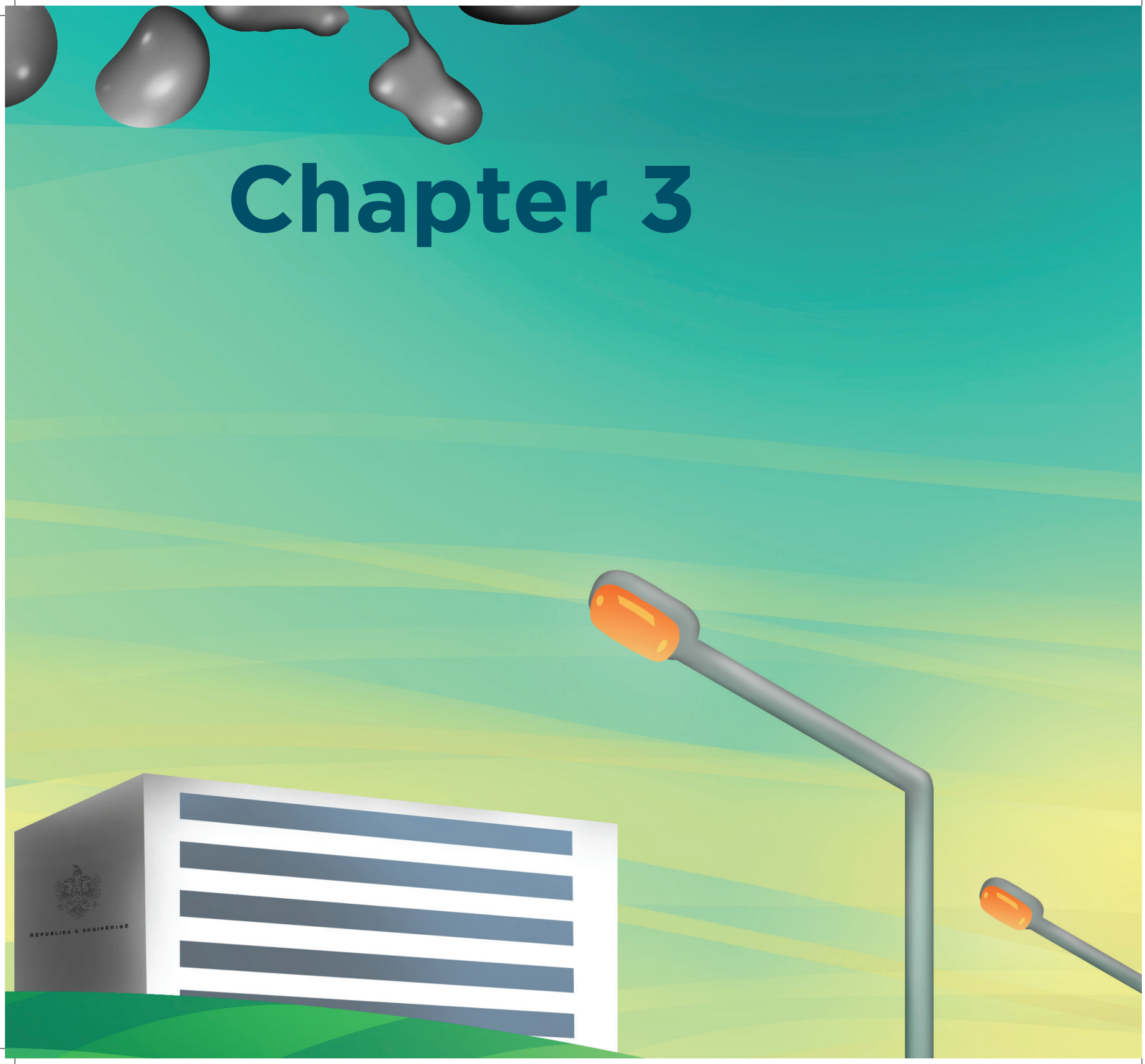
2.12. Data and inventory on crematoria and cemeteries

In Albania, cremation is not conducted for both cultural and religion reasons. The data used for this category was total death per annum. According to INSTAT, the number of deaths in 2016 was 21,388. The total estimated Hg input from this source category was 53.5 kg Hg/y, all released in land. The results presented in Table 15 for this sub-category are calculated according to UNEP Inventory Toolkit 1.

Table 24. Estimated mercury input and releases from cemeteries

Sub- category	Source presence	Activity rate		Estimated Hg input, Kg Hg/y	Estimated Hg releases, standard estimates, Kg Hg/y					
Crematoria and cemeteries	Y/N/?	Annual number of deaths	Unit	Standard estimate	Air	Water	Land	By-products and impurities	General waste	Sector specific waste treatment /disposal
Cemeteries	Y	21,388	Corpses buried/ year	53	0.0	0.0	53.5	-	0.0	0.0

Chapter 3



POLICY, REGULATORY AND INSTITUTIONAL FRAMEWORK ASSESSMENT

3.1. Policy and Regulatory Assessment

Minamata Convention on mercury was adopted by the Conference of the Plenipotentiaries on 10 October 2013 in Japan after being discussed in five sessions of Intergovernmental Negotiation Committee. The Minamata Convention, hereafter the Convention, shall enter into force on the ninetieth day after the date of deposit of the fiftieth instrument of ratification, acceptance, approval or accession.

Albania signed the Minamata Convention on mercury on 09/10/2014. In frame of the Minamata Initial Assessment project Albania aims to accelerate the preparations for ratifying the Minamata Convention and fulfilling the obligations which derive from this ratification.

3.1.1. International Chemical Convention and EU acquis approximation

Albania has signed the Minamata Convention on mercury on 09/10/2014. Rotterdam Convention, Basel Convention and Stockholm Convention have been ratified by the Albanian Parliament through laws, in compliance with Article 122 of the Constitution of Albania. The Convention of Long-Range Transboundary Air Pollution and five protocols of CLRTAP are also ratified by Albania. Two other protocols of CLRTAP are under procedure of ratification: Protocol on Persistent Organic Pollutants (POPs), and Protocol on Heavy Metals.

Recently Albania has approximated at a great extent the EU chemicals legislation. The obligation of Albania for the approximation of the Albanian legislation on the environment with the EU derives from the Article 108 of the Stabilisation and Association Agreement between the European Union and Albania. The recently approved chemicals legislation is listed below:

- Law No. 27/2016 on chemicals management, of 17.03.2016;
- Decision of the Council of Ministers (DCM) No. 488 of 29.06.2016 "On the classification, labelling and packaging of chemicals;
- Decision of the Council of Ministers No. 489 of 29.06.2016 "On the approval of the list of substances of very high concern (SVHC) and of the criteria for the inclusion of the substances in the SVHC list, and of the issuing of a conditioned authorization for continuing the use of SVHCs;
- Decision of the Council of Ministers No. 665 of 21.09.2016 "On the export and import of hazardous chemicals".

The adoption of the Regulation (EC) No. 1102/2008 of the European Parliament and of the Council "On banning of exports of metallic mercury and certain mercury compounds and mixtures and the safe storage of metallic mercury" is foreseen in the National Plan for the European Integration 2016-2020, approved with the Decision of Ministerial Council No. 74, of 27/01/2016, as part of approximation of the Albanian legislation with the acquis communautaire on chemicals.

3.1.2. Methodology

The outlook and methodology of this assessment of the existing Albanian legislation related to the implementation of Minamata Convention is based on the Minamata Initial Assessment Report Suggested Structure and Contents, February 2017 and on the NRDC Checklist of legal authorities to implement Minamata Convention on Mercury.

A table is prepared for each article of the Convention, putting together and comparing the requirements of the Convention with the relevant legislation in place in Albania. At the final row of each table, a comment/conclusion is made on the relevant legislation, how far it fulfils the requirements of the Convention (and EU draft Regulation on mercury) and remaining gaps. The respective tables are given at in Annex 4 of this report.

3.1.3. Summary of findings

The findings of the analysis of the Albanian legislation relevant to Minamata Convention are summarised below. These findings and the recommendations for filling the identified gaps are listed according to the relevant Article.

ARTICLE 3

MERCURY SUPPLY SOURCES AND TRADE

There are no known existing or new primary mercury mining or stocks of mercury or mercury compounds exceeding 50 metric tons (MT), and mercury supply generating stocks exceeding 10 MT/yr in Albania.

Some provisions related to import and export of mercury and some mercury compounds are already covered by the Law No. 10 277, dated 13.05.2010 on the accession of the Republic of Albania to the Rotterdam Convention "On the procedure of prior informed consent for some hazardous chemicals and plant protection products in international trade" and DCM No. 665, dated 21.09.2016 "On import and export of hazardous chemicals".

Rules for banning the export of metallic mercury, compounds and certain mercury mixtures, safe storage of metallic mercury and specific criteria for the storage of metallic mercury considered as waste are planned to be prepared under the Law No. 27/2016 "On chemicals management", dated 17.03.2016. An advanced draft of the DCM "On rules on the banning of exports of metallic mercury and certain mercury compounds and mixtures and the safe storage of metallic mercury and specific criteria for the storage of metallic mercury considered as waste" transposing Regulation (EC) No. 1102/2008 and according to the requirements of Minamata Convention, is developed.

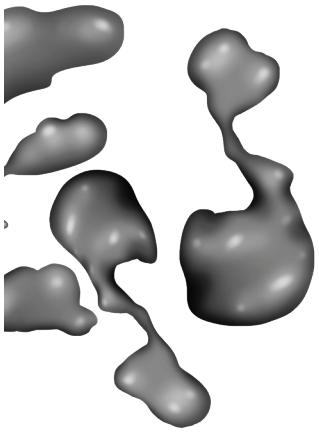
ARTICLE 4

MERCURY-ADDED PRODUCTS

With respect to part I of Annex A "Mercury added products" of Minamata Convention regarding the phase-out of the manufacture, import or export of mercury containing products, some provisions on mercury content in batteries and accumulators are in place in Albania through DCM No. 866 of 04.12.2012 "On batteries, accumulators and their waste".

Some provisions related to the mercury containing electrical components and fluorescent lamps are in place from DCM No. 957 of 19.12.2012 "On the waste of electrical and electronic equipment". These provisions are mostly related to the waste management of these components, including the proper labelling, and promote the replacement of heavy metals with suitable alternatives.

Pesticides (plant protection products) undergo a registration process in Albania before being imported or put on the market. Only pesticides containing active ingredients allowed in EU are allowed to be registered



An explicit ban of mercury **containing pesticides and biocides, similarly with the one required** by the Minamata Convention and the Proposal for a Regulation of the European Parliament and of the Council on mercury.

in Albania. A similar situation is for biocidal products, which legislation is under revision. Yet, an explicit ban of mercury containing pesticides and biocides, similarly with the one required by the Minamata Convention and the Proposal for a Regulation of the European Parliament and of the Council on mercury and repealing Regulation (EC) No. 1102/2008 could be part of the legal measures for the implementation of Minamata Convention.

With respect to part II of Annex A "Mercury added products" on measures to be taken to phase down the use of dental amalgam, it was not found any legislation in place in Albania on dental amalgam. Based on the mercury inventory, it is necessary to prepare provisions to phase down the dental amalgam. The measures provided by the proposed Regulation of the European Parliament and of the Council on Mercury and repealing Regulation (EC) No. 1102/2008 should be taken in consideration, that are the use of dental amalgam only in encapsulated form and that dental facilities be equipped with amalgam separators to retain and collect mercury containing amalgam residues.

Rules for reducing mercury in products are planned to be prepared under the Law No. 27/2016 "On chemicals management", dated 17.03.2016, in compliance with the proposed Regulation of the European Parliament and of the Council on Mercury and repealing Regulation (EC) No. 1102/2008 and according to the requirements of Minamata Convention.

ARTICLE 5

MANUFACTURING PROCESSES IN WHICH MERCURY OR MERCURY COMPOUNDS ARE USED

Law No. 10448, dated 14.07.2011 "On environmental permits" establishes measures for permitting the operation of certain groups of polluting activities, measures designed to prevent or, where that is not practicable, to reduce emissions to the air, water and land from such activities, including measures concerning waste as well.

ARTICLE 7

ARTISANAL AND SMALL-SCALE GOLD MINING

It was not found any ASGM related legislation in Albania.

ARTICLE 8

EMISSIONS

Albania has in place the legislation addressing the emissions to the air. Law No. 10448, dated 14/07/2011 "On environmental permits" revised, which establishes measures for permitting the operation of certain groups of polluting activities, measures designed to prevent or, reduce emissions to the air, water and land from such activities, including measures concerning waste. According to the law on environmental permits, the industrial operators have the obligation to monitor and report the environmental emissions of their activities based on the conditions set in the respective environmental permit. Article 5 of this law foresees the preparation of Best Available Technologies (BAT) in Albanian language according to the EU BAT Reference Documents (BREF-s) or other reference documents for the specific activities in the country.

Albania has ratified the Convention on Long-Range Transboundary Air Pollution and has partially transposed the Regulation of the Council and the European Parliament EC/166/2006 on the European Pollutant Release and Transfer Register amended by Regulation 596/2009. In frame of these international commitments, Ministerial Guidance on BAT for cement manufacture and other industries need to be prepared.

Best available techniques/best environmental practices (BAT/BEP) taking into account any difference between new and existing sources listed in Annex D of the Minamata Convention (coal-fired power plants, coal-fired industrial boilers, non-ferrous metal smelting and roasting processes, waste incineration, and cement production) were adopted by Conference of the Parties(COP) at its first meeting, according to point 8 of Article 8 of the Convention.

ARTICLE 9

RELEASES

Albania has in place the legislation addressing the releases of the pollutants. Law No. 10448, dated 14.07.2011 "On environmental permits" revised, establishes measures for permitting the operation of certain groups of polluting activities, measures designed to prevent or, where that is not practicable, to reduce emissions to the air, water and land from such activities, including measures concerning waste as well.

Article 5 of the Law 10448, dated 14.07.2011 foresees the preparation of Best Available Technologies (BAT) in Albanian language according to the EU BAT Reference Documents (BREF-s) or other reference documents for the specific activities in the country.

The legislation on the integrated pollutant release and transfer register is in place in Albania. DCM No. 742, dated 09.09.2015 "On functioning and management of the PRTR, and approval of the list of activities and pollutants that are subject to this register" establishes the integrated pollutant release and transfer register (PRTR) in Albania in the form of a publicly accessible electronic database.

Guidance on (a) BAT/BEP are to be adopted by the COP in the next years, taking into account any difference between new and existing sources and the need to minimize cross-media effects, and on (b) the methodology for preparing inventories of releases. These guidance documents need to be taken into consideration and adopted in the national legislation / discharge norms.

ARTICLE 10

ENVIRONMENTALLY SOUND INTERIM STORAGE OF MERCURY, OTHER THAN WASTE MERCURY

According to the Law No. 27/2016 of 17/03/2016 "On chemicals management", it is stipulated that rules for the safe storage of metallic mercury will be approved by the Council of Ministers.

The above-mentioned rules can be based on the guidelines on environmentally sound interim storage of mercury and mercury compounds intended for an allowed use (for a Party), which will be adopted by COP in the next years taking into account relevant guidelines under Basel Convention (point 3 of Article 10 of the Convention).

ARTICLE 11

MERCURY WASTES

The Albanian Law No. 10 463, dated 22/09/2011 "On integrated waste management" gives the definition of temporary storage, and also gives the bases for the proper temporary storage of hazardous waste. Technical rules for packing and labelling of hazardous waste in the process of collection, transport and temporary storage are to be approved by a DCM.

According to the Law No. 27/2016 "On chemicals management", specific criteria for the storage of metallic mercury considered as waste will be approved by the Council of Ministers.

The rules for mercury waste management can be based on the guidelines on environmentally sound management of mercury waste which will be reviewed and updated from the COP in the coming years in close cooperation with the relevant bodies of Basel Convention (point 4 of Article 11 of the Convention).

ARTICLE 12

CONTAMINATED SITES

In Albania it's already in place the legal basis for the prevention of new environmental hotspots, as well as for addressing the responsibility on the pollution, for the rehabilitation of polluted sites and for costs.

Law No. 10 431, dated 09/06/2011 "On environmental protection" according to the principle "the polluter pays", defines the obligations and responsibilities of the new waste producers, in order to avoid the creation of new hotspots from the processing industries.

COP shall adopt guidance in the next years on site identification and characterization, engaging the public, human health and environmental risk assessment, options for managing the risks, evaluation of benefits and costs and validation of outcomes.

This guidance needs to be taken into account when developing the national action plan on identifying and assessing contaminated sites from mercury and its compounds and on related risk management.

ARTICLE 13

FINANCIAL RESOURCES AND MECHANISMS

As for the access to financial resources available under the Convention Financial Mechanism since July 2016, with the financial support of the Global Environment Fund (GEF), UNDP- Albania has implemented the project "Minamata Initial Assessment for Albania".

ARTICLE 14

CAPACITY BUILDING, TECHNICAL ASSISTANCE AND TECHNOLOGY TRANSFER

There are provisions for capacity building in areas related to the Convention Implementation, like environment, health care, but there is no specific legislation in place in Albania on capacity



Law No. 10 431, dated 09/06/2011 "On environmental protection" according to the principle "the polluter pays", **defines the obligations and responsibilities of the new waste producers**, in order to avoid the creation of new hotspots from the processing industries.



Law No. 10 431, dated 09/06/2011 "On environmental protection" asks for **support and organization of education and training for environmental protection and sustainable development**, through the educational system, scientific research, forms of learning of the education and training throughout life.

building and technical assistance on implementation of Minamata Convention. Based on the capacity assessment, capacity building is planned as part of Minamata Action Plan.

ARTICLE 16

HEALTH ASPECTS

Legislation in place includes the obligations of the employer for the education and information of employees on the occupational hazards at workplace and on the preventive measures that are required by the Law No. 10 237, dated 18/02/2010 "On the safety and health at work" and the deriving Decisions of Council of Ministers.

Exposure Limit Values for mercury and divalent inorganic compounds of mercury including mercuric oxide and mercuric chloride (measured as mercury) at the workplace are given at Annex 1 of this DCM.

Despite the establishment of the system for the continuing professional education of human resources in health care system, it is necessary to strengthen the institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring of health risks related to the exposure to mercury and its compounds.

ARTICLE 17

INFORMATION EXCHANGE

There is a general provision at point 1 of Article 32 "Information system for chemicals" of the Law No. 27/2016 "On chemicals management", dated 17/03/2016, on the exchange of information with international institutions on chemicals, which is based on the provisions of the agreements ratified by the competent authority of the Republic of Albania.

There are also provisions on information exchange in frame of other Chemical Conventions ratified by Albania; yet, a specific information exchange for the Minamata Convention is needed.

The Convention requires the designation of a national Focal Point. The Minamata Convention National Focal Point in Albania is represented by the Deputy Minister of Tourism and Environment.

ARTICLE 18

PUBLIC INFORMATION, AWARENESS AND EDUCATION

Law No. 27/2016 "On chemicals management", dated 17/03/2016, Law No. 10 431, dated 09/06/2011 "On environmental protection", Law No. 119/2014, dated 18/09/2014 "On the Right of Information", Law No. 146/2014, dated 30/10/2014 "On notification and public consultation", Law No. 8672, dated 26/10/2000 "On adhering of Albania in Aarhus Convention" offer an adequate bases regarding the right to know, transparency, and require public authorities to promote information, awareness and educate the public about environmental protection and sustainable development, potential risks from the use of hazardous chemicals, etc.

Law No. 10 431, dated 09/06/2011 "On environmental protection" asks for support and organization of education and training for environmental protection and sustainable development, through the educational system, scientific research, forms of learning of the education and training throughout life.

ARTICLE 19

RESEARCH, DEVELOPMENT AND MONITORING

Chapter VI "Environmental monitoring" of the Law No. 10 431, dated 09/06/2011 "On environmental protection" stipulates that the monitoring of the state of the environment includes monitoring the impact of environmental pollution on human health. National Environmental Agency develops the annual program for environmental monitoring, which includes heavy metals.

The same law considers the support and organization of education and training for environmental protection and sustainable development, through the educational system, scientific research, forms of learning of the education and training throughout life.The research and monitoring as per Article 19 of the Convention need to develop further.

ARTICLE 21

REPORTING

COP1 decided on both the timeframe and the forms for reporting. The time frame is every two years for reporting on trade, and every four years for everything else. The decision about timing and the reporting forms can be found as Decision MC-1/8, in Annex 1 of the COP1 meeting report.

3.2. Institutional Assessment

3.2.1. Methodology

A questionnaire based on the requirements of the Minamata Convention was used as a primary tool for collecting basic information on national capacities on mercury management. The questionnaire was reviewed at an introductory meeting with representatives of relevant institutions and organizations and distributed via electronic mail to 49 institutions and organizations. The questionnaires were completed by 20 institutions / organizations. The data obtained from the questionnaires, if necessary, were supplemented or clarified through direct communication with the staff who had completed them. The results obtained are summarized below. Based on the institutional analysis and suggestions from the participants in this activity, the relevant recommendations were also prepared. This report is based on the Minamata Initial Assessment Report - Proposal of structure and content, February 2017.

3.2.2. Analysis of Institutions Involved in Mercury Management

According to Law 27/2016 "On chemicals management", cooperation between ministries, customs and inspectorates is required; this is a normal requirement, given the multidisciplinary nature of chemicals management. In order to enable the cooperation of the institutions involved in the management of chemicals, the law requires the establishment of a Cross-cutting Committee on Chemical Safety, which acts as an advisory forum for policy coordination and decision-making, exchange of information and mutual control without a mandate for binding decision-making. The committee has not yet been established.

In the framework of the preparations for the ratification of the Minamata Convention, with the aim of providing institutional and administrative support for the implementation of the project, by the Order of the Minister of Environment No. 106, dated 20.05.2016 "On the establishment of the Steering Committee for Minamata Initial Assessment Project in Albania", the respective Committee was established as a supervisory body for the implementation of the project with representatives from the Ministry of Tourism and Environment, Ministry of Agriculture and Rural Development, Ministry of Infrastructure and Energy, Ministry of Finance and Economy, Ministry of Health and Social Welfare, National Environmental Agency, Faculty of Natural Sciences (FNS) and Civil Society.

A summary of the institutions and other organizations involved in various fields of mercury management is given in Table 25.

Table 25. Stakeholders involved directly or indirectly in various aspects related to mercury

Category	Main possible uses	Stakeholders
Sources, supply and trade	Import and use	The General Directorate of Customs
		Ministry of Infrastructure and Energy
		Ministry of Tourism and Environment
		Ministry of Finance and Economy
		Institute of Statistics (INSTAT)
Products with added mercury	The use of mercury in thermometers, sphygmomanometers, barometers, hygrometers, manometers	Ministry of Health and Social Welfare (Directorate of Hospitals, Directorate of Pharmaceuticals, Directorate for Cosmetic Products)
		National Agency of Medicines and Medical Devices
	Possible pharmaceutical uses	The General Directorate of Customs
		Administration of Hospitals
	Vaccines	Ministry of Tourism and Environment
	Batteries, except as specified in Part I of Annex A	Ministry of Tourism and Environment
		The General Directorate of Customs
	Switches and Relays as specified in Part I of Annex A	Ministry of Finance and Economy
		Chambers of Commerce and Industry
		Market Surveillance Inspectorate (safety of non-food products)
	Compact fluorescent lamps and linear fluorescent lamps	General Directorate of Metrology
	High pressure mercury vapour lamps	
	Cold cathode Fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for electronic screens	
	Possible uses in cosmetics	of Health and Social Welfare
		Importers of cosmetic products
		State Health Inspectorate
	Possible uses in paints (e.g., antifouling paint)	Ministry of Health and Social Welfare (Biocidal products)
		Ministry of Tourism and Environment
		The General Directorate of Customs
		Ministry of Infrastructure and Energy
		Chambers of Commerce and Industry

Category	Main possible uses	Stakeholders
	Dental amalgam	Ministry of Health and Social Welfare Association of Albanian Dental Distributors Suppliers of dental materials Dental clinics
Manufacturing processes where mercury or mercury compounds are used		Ministry of Infrastructure and Energy Ministry of Tourism and Environment National Environmental Agency
Emissions and discharges	PRTR	Ministry of Tourism and Environment National Environmental Agency
Mercury waste temporary storage of mercury		Ministry of Infrastructure and Energy Ministry of Tourism and Environment National Environmental Agency
Contaminated sites	Former Soda Factory - Vlora	Ministry of Tourism and Environment Ministry of Infrastructure and Energy Municipality of Vlora, Regional Health Directorate of Vlora
Health aspects		Ministry of Health and Social Welfare Institute of Public Health Regional Health Directorates
Monitoring, research		National Environmental Agency UT/ Faculty of Natural Sciences Geological Services of Albania
Exchange of information, public awareness		Ministry of Tourism and Environment Ministry of Health and Social Welfare Institute of Public Health Civil Society Organisations

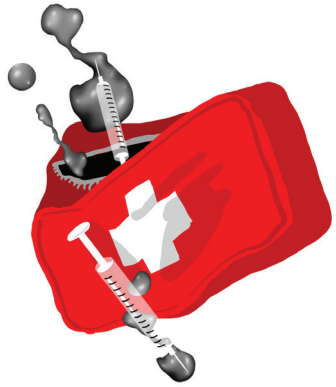
The most important institutions in Albania regarding the aspects of implementing the Minamata Convention are as follows:

Ministry of Tourism and Environment (MoTE) established in 2001 drafts national environmental strategies and policies; MoTE is the competent authority that drafts legislation on chemicals management, as well as relevant policies and action plans. The MoTE is the focal point for the Stockholm Convention, the Rotterdam Convention, the Basel Convention, the Minamata Convention and the Long-Range Transboundary Air Pollution Convention (CLRTAP). Law No. 27/2016, dated 17.03.2016 "On the management of chemicals" plans the preparation by the MoTE and the adoption of rules for the ban on export of metal mercury, compounds and some mercury mixtures, for safe storage of metal mercury, and specific criteria for the storage of metal mercury considered as waste.

In accordance with the Law No. 27/2016 "On chemicals management", a Chemicals Office is to be established at MoTE as a central public institution. The Chemicals Office has a range of responsibilities, such as the preparation of legal acts of the law on chemicals, law enforcement surveillance, inter-institutional coordination and international cooperation on chemicals management, the establishment and maintenance of the national chemicals register, authorization of the use of hazardous substances, helpdesk information for producers, importers, users for their responsibilities and obligations under this law, etc. The Office is also responsible for meeting the obligations of other conventions and international agreements on chemicals management (Stockholm Convention, Rotterdam Convention, and CLRTAP Protocols).

The National Environmental Agency (NEA) was established in 2014, pursuant to Law No. 10431, dated 09/06/2011 "On environmental protection". NEA is a central public institution, independent in decision-making, exercising jurisdiction throughout the territory of Albania. NEA is the competent authority for determining the conditions for the respective environmental permits, and has, inter alia, the following functions: drafting the national environmental monitoring program and the monitoring of the state of the environment, the preparation and publication of annual reports on the state of the environment; conducting environmental pollution measurement services; establishment and management of the environmental information system; establishment and management of the Pollutant Release and Transfer Register; providing environmental information to the public involved in the environmental decision-making process.

The MoHSW is responsible for **obtaining information on the safety and risks of hazardous chemicals** for the purpose of drafting preventive curative measures, especially in cases of health emergencies.



The Ministry of Infrastructure and Energy (MoIE) administers natural resources in the country and defines the policies related to them. MoIE is the competent authority for licensing activities related to chemicals classified as hazardous.

The General Directorate of Customs (GDC) under the Ministry of Finance and Economy is responsible for controlling and enforcing rules related to import and export.

The Ministry of Health and Social Welfare (MoHSW) is the competent authority for drafting primary and secondary legal acts in the field of health care. The MoHSW is responsible for obtaining information on the safety and risks of hazardous chemicals for the purpose of drafting preventive curative measures, especially in cases of health emergencies. This ministry has a network of institutions centrally and locally: Public Health Directorates in 24 districts and Regional Health Directorates in 12 regions.

3.2.3. Sources, Supply and Trade of Mercury

There are no mercury stocks exceeding 50 tonnes and there are no supplies or industrial processes that generate mercury stocks under the responsibility of the Ministry of Infrastructure and Energy, besides the former Soda-PVC landfill. According to MoIE, there is no import or export of mercury to or from the Republic of Albania. There is no mercury source in Albania; some sporadic cases in the Koman region were evidenced by geological studies of the 70s to 80s but these cases were not considered as sources due to the insignificant amount of mercury in them.

According to DCM No. 665, dated 21.09.2016 "On the export and import of hazardous chemicals", the General Directorate of Customs should report annually to the Chemicals Office the previous year's data on the import and export of hazardous chemicals. Even exporters and importers should report to the Ministry of Tourism and Environment each year the imported and exported quantities of hazardous chemicals. GDC owns a database of sources of supply of chemicals.

There is currently no monitoring for imported or exported mercury quantities, but the National Environmental Agency, case by case, requires information from GDC regarding mercury trade. The data serve to draft the annual State of Environment Report.

3.2.4. Mercury-added products

The Ministry of Tourism and Environment will draft legislation regarding the prohibition of the production, import and export of mercury products listed in Part A of Annex A of the Minamata Convention, as well as for the gradual elimination of the use of dental amalgam and discouragement of production and distribution of new products of mercury, as foreseen in Law No. 27/2016, dated 17.03.2016 "On chemicals management".

There is currently no monitoring for mercury import or export, but the NEA, as the case may be, requires information from the GDC regarding mercury trading.

The Ministry of Health and Social Welfare is the competent authority for drafting the legislation in the field of health care, among which on dental services and cosmetic products. Also, MoHSW issues trade authorization for medical devices and import authorization for biocide products. MoHSW capacities regarding the evaluation and authorization of biocidal products are limited and so far, it has no experience with e.g. antifouling paints, which may also contain mercury. Capacity building of relevant staff is needed. The secondary legal basis to enable the implementation of the Law 95/2015 "On Biocide Products and Services in Public Health" regarding the assessment of BP and their authorization is not yet approved.

Pursuant to point 2 of Article 13 of Law No. 26/2017 for cosmetic products, a list of prohibited or restricted substances for cosmetic products should be approved by a DCM.

Secondary legislation on cosmetic products and biocidal products needs to be completed and State Health Inspectorate needs to be informed and built on new legal requirements for cosmetic products, biocidal products and medical devices.

The National Agency for Medicines and Medical Devices (NAMMD) is an institution under the Ministry of Health and Social Welfare specialized in the analysis, registration, control of medicines and inspection of pharmaceutical activities and registration of medical devices. There is no database for previously imported mercury containing medical equipment that can be stocked in stockpiles and there is no report on mercury content. A special inspectorate has been set up for the medical devices under Law 89/2014 "On Medical Devices". Dental amalgam continues to be imported, although its use seems to be limited.

The Institute of Public Health (IPH) has limited capacities regarding the evaluation of biocidal products. These capacities are sufficient for estimating BPs used in public health, such as insecticides, rodenticides or disinfectants, but not for the evaluation of other types of biocidal products, such as antifouling dyes, which potentially may also contain mercury.

The Market Surveillance Inspectorate contains a sector that, among other things, is responsible for controlling the implementation of legislation on the safety of non-food products.

The General Directorate of Metrology performs the calibration / verification of instruments / measuring devices, namely mercury thermometers and possesses several thermometers (10 pieces) that are used for laboratory measurements. Almost all the temperature labs in the GDM, which are mainly testing laboratories of food products, environment, etc., have glass mercury-based thermometers in use.

So far GDM did not have any requests to calibrate or verify such equipment. The role GDM can play in this process is of informative character, informing its clients of the Minamata Convention's requirements regarding mercury-containing products in order to remove thermometers or other mercury containing devices (barometers, etc.) and substitute them with other alternatives.

In the INSTAT database on foreign trade of products, product groups that may be related to mercury are "Chemical and Plastic Products" and "Machinery, Equipment and Spare Parts", which do not enable any guess about the quantities of certain chemicals.

The Association of Albanian Dental Distributors. In dental clinics, the use of amalgam separators should be included. It is necessary to set national targets aimed at preventing dental caries and promoting health, minimizing the need for tooth restoration, and promoting the use of best environmental practices in dental facilities to reduce mercury and mercury discharges into the water and land.

Generally, there is a lack of knowledge and awareness about the health and environmental problems of mercury in products.

3.2.5. Manufacturing processes where Mercury or Mercury compounds are used

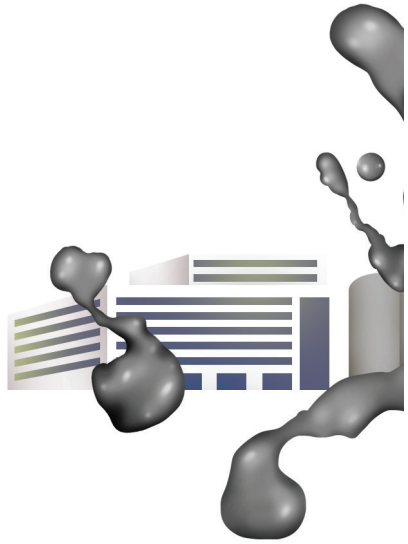
The Ministry of Infrastructure and Energy is the competent authority for licensing activities related to chemicals classified as hazardous. During the process of imposing restrictions on the use of hazardous chemicals, MoIE has a coordinating and consultative role with business and other stakeholders for the optimum development of the manufacturing industry in environmentally friendly conditions.

The National Environmental Agency as the institution that prepares environmental permits has information on industrial activities in the country but does not have a list of activities related to mercury in particular.

There is no small-scale gold mining activity (ASGM) in Albania, therefore there is no need for capacity building for this purpose.

3.2.6. Emissions to air and discharges to land and water

With regard to mercury air emissions and discharges to land and water, the Ministry of Tourism and Environment drafts legislation and policies on emissions control / reduction and use of best available techniques and best environmental practices (BAT / BEP) or emission limit values (ELVs) for new sources. The implementation of BAT / BEP is a requirement of the applicable law on



The National Environmental Agency as the institution that **prepares environmental permits** has information on industrial activities in the country but does not have a list of activities related to mercury in particular.

environmental permits. MoTE establishes the national system for air discharges and coordinates the work with NEA for reporting to the LRTAP Convention.

NEA monitors the environment and issues environmental permits for industrial activities. Within the Long-Range Transboundary Air Pollution Convention (CLRTAP), an inventory of heavy metal discharges, including mercury emissions for the period 1990-2015, was developed based on the EMEP methodology. Within the PRTR there is a national database for discharges in water and land reported by industrial operators.

NEA performs monitoring as well as analyses and reports the data. The data are reported to CLRTAP, the European Environment Agency and are included in the National Environment Report. The PRTR Register is managed by the National Environmental Agency and can be accessed on the NEA or EIMMS websites.

Pursuant to the PRTR Convention, the types of activities that have to report on mercury releases and its compounds (as Hg) on land, air and water are specified. So far, despite the legal obligation to report, only a very small number of operators report discharge data. Capacities of industrial operators related to the control of mercury discharges are low.

The National Environmental Agency still has low technical capacity to address mercury emissions to the air, water or land during setting environmental permit conditions as well as regarding emissions inventories and mercury emissions.

The Environmental Inspectorate is the competent authority for controlling the environmental permit conditions, including the obligation to report emissions to water and land. The capacities of the Environmental Inspectorate and industrial operators related to controlling the emissions of mercury and controlling the implementation of the relevant legislation are low.

3.2.7. Temporary storage of mercury

The MoTE will develop national legislation and policies regarding the temporary storage of mercury and its compounds taking into account relevant guidelines developed under the Basel Convention and the additional requirements for temporary storage that may be adopted by the Conference of the Parties of Minamata Convention.

(Hazardous) Chemicals Collection and Treatment Centre (CCTC) is a MoIE subordinate institution established by DCM No. 843, dated 14.10.2015 "On the closure of the Industry-Mining Supply Enterprise (NFIM) and the Establishment of the Hazardous Chemicals Collection and Treatment Centre. CCTC is the former NFIM, which since 2005 has served as a storage site for some of the hazardous chemicals inherited from the former industry prior to the 1990s, of those found in MoIE's dependent facilities and former industries of that period, currently under the jurisdiction of MoIE on the status of enterprises in liquidation until their full privatization.

Former Nitrogen Fertilizer Enterprise, Fier, in liquidation, monitors two landfills with hazardous waste (Arsenic Waste Landfill, Fier and Mercury Waste Landfill, Vlora). Funding for the maintenance and storage of Mercury Waste Landfill in Former Soda PVC is made by the State Budget through MoIE budget planning.

NEA is responsible for the transfer of waste, including hazardous waste. Since 2015, waste transfer registers have been established. There is no national data base on mercury waste management.

Laboratories at the Department of Chemistry of FNS of the University of Tirana, and other laboratories use mercury-based chemicals or have limited amounts of mercury or its salts from previous uses. Work has to be done to ensure that storage of mercury and its compounds intended for a permitted use is made environmental-friendly.

There is no control over the storage, manipulation and disposal of mercury waste from the laboratories of the institutions.

3.2.8. Contaminated sites

MoTE compiles national environmental legislation and policies. It plays a coordinating role with donors to facilitate the financing of projects that reduce the risk from contaminated sites.

The most polluted area in Albania, the area of the former Soda PVC plant in Vlora, was cleaned by a Dutch-funded project that was completed in 2011 and the contaminated site waste has been collected at the "Hazardous Waste Landfill Of Ex- Soda PVC Plant", on a surface area of 15,000 m^2, which is monitored, stored and maintained by a MoIE subsidiary in liquidation. The Ex-Soda PVC Plant Landfill Monitoring Reports are submitted every 4 months to the NEA from the former Enterprise / Liquidation Plant of nitrogen Fertilizers, Fier, which is charged by MoIE to monitor and store the Landfill of Vlora.

The area of the Ex- Soda Plant in Vlora is therefore considered as rehabilitated but there is no monitoring by the NEA regarding the situation after rehabilitation. Capacities at NEA are low both technically and financially.

The Regional Health Directorate in Vlora does not have the appropriate technical and human capacity to monitor mercury or its health effects in the population of the Ex- Soda PVC Plant area.

The EDEN Centre has been working since 2011 within some projects on the Ex- Soda PVC Plant, Vlora. Mostly the projects consisted in the study of the mercury levels in fish and in the inhabitants of the area. These projects have been implemented with the financial support of IPEN under the "Zero mercury" program and the tests have been carried out in the BRI laboratory (Biodiversity Research Institute, Portland, Maine, USA). The purpose was awareness raising among residents about the risks they are facing living in a polluted site, as well as the creation of updated data and the impact to relevant institutions to take further steps to clear the area and remove the residents from that area.

3.2.9. Resources and financial mechanisms

The Ministry of Tourism and Environment initiates and coordinates projects that are covered by the state budget in accordance with medium-term budget programs, also initiates and coordinates projects with foreign funding.

3.2.10. Health aspects

The Ministry of Health and Social Welfare has as a mission to draft and implement policies and strategies in the healthcare sector. There is no program or strategy in Albania for identifying and protecting populations at risk, nor any education program to prevent occupational mercury exposure, however some provisions are provided in the National Health Strategy 2016-2020. Also, there is lack of sufficient institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring of health risks related to mercury or mercury compounds exposure. The Department of Health and Environment at IPH has conducted in the 90s studies on mercury in hair, but in recent years such studies are lacking. This is also related to the limited capacities of the IPH Laboratory that analyses heavy metals to conduct mercury analysis.

The EDEN Centre has been engaged through several projects in the area of the Ex-Soda PVC Plant, Vlora in order to raise awareness among residents about the risks posed by the area's mercury contamination and the awareness of the relevant institutions to take further steps to clean up the area, as well as for the removal of residents from that area.

There is a lack of an education and information strategy for particularly at-risk communities and the general public.

3.2.11. Exchange of information, awareness and education

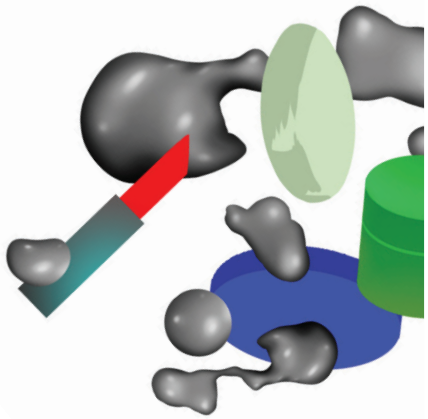
Legislation related to other chemical conventions ratified by Albania also contains provisions for the exchange of information. However, an exchange of information specifically for the Minamata Convention is necessary.

The Ministry of Tourism and Environment is the competent authority for exchanging information and raising public awareness of environmental issues. For this purpose, MoTE has its website, the environmental bulletin and at the same time organizes awareness raising campaigns on various environmental issues. There is a need to increase the technical capacity and information related to mercury as well as the organization of awareness campaigns in this regard.

The Office of Chemicals is tasked, inter alia, with information of the general public on the risks arising from chemicals when considered necessary for the protection of human health or the environment.

As a policy-making institution, the Ministry of Health and Social Welfare regulates through legal and sub legal acts the promotion and facilitation of providing information to the public on public health issues in general and on the factors affecting it.

The Institute of Public Health has a special department on health promotion that needs to be more involved in raising awareness on mercury issues, taking into consideration that the health system seems to be the most relevant, with biocides, medical devices, cosmetic products as well as health aspects in the system.



The health system **seems to be the most relevant,** with biocides, medical devices, cosmetic products as well as health aspects in the system.

There are shortcomings in the provision of information to civil society and the general public, as well as the involvement of civil society in concrete actions for environmental risk management.

There have been civil society efforts particularly in the polluted area of the Ex- Soda PVC Plant, which would be good to replicate and expand. There is a lack of publications on mercury; there is no information about the mercury in school curricula. There is no training material to increase institutional and professional capacity.

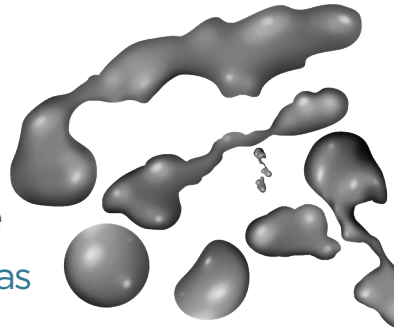
3.2.12. Research, development and monitoring

The National Environmental Agency carries out monitoring of the state of the environment, within which chemical analyses of contaminants, including heavy metals, are carried out. In this context, mercury is also analysed in surface waters. The NEA Laboratory does not perform sampling and analysis of mercury in air and the laboratory is not accredited for determination of mercury.

Ministry of Infrastructure and Energy has a coordinating and consultative role according to the needs and requirements of institutions that monitor health and the environment, including the role of subordinate institutions such as the Albanian Geological Service for monitoring of groundwater; National Agency for Natural Resources to monitor emissions from the mining industry in water and land; Chemicals Collection and Treatment Centre for the safe storage and disposal of hazardous chemicals administered by MoIE, the former Nitrogenous Fertilizer Plant, Fier, which monitors two landfills with hazardous waste (Arsenic Waste Landfill, Fier and Mercury Waste Landfill, Vlore). The Albanian Geological Service Laboratory performs groundwater monitoring but does not conduct mercury analyses.

The Institute for Food Safety and Veterinary (IFSV) carries out monitoring on biota (fish, mollusc and fishery products as well as waters in mollusc farming areas). The internal control of the plants is performed monthly. The tests are carried out at the IFSV Heavy Metal Laboratory. The mollusc production area of the Butrint Lagoon has been regularly monitored for more than 15 years and the area of bivalve mollusc production in Shengjin Bay has been monitored for 2 years. From January 2017, monitoring of 3 new areas of natural growth of bivalve molluscs is envisaged: Karavasta area,

The Faculty of Natural Sciences of the University of Tirana (FSHN / UT) in cooperation with the University of Vlora **has carried out monitoring of mercury levels in the air through bio-monitoring in the framework of the international project ICP-Vegetation.** The mercury analysing laboratory has high-level analytical and human capacities but is not accredited.



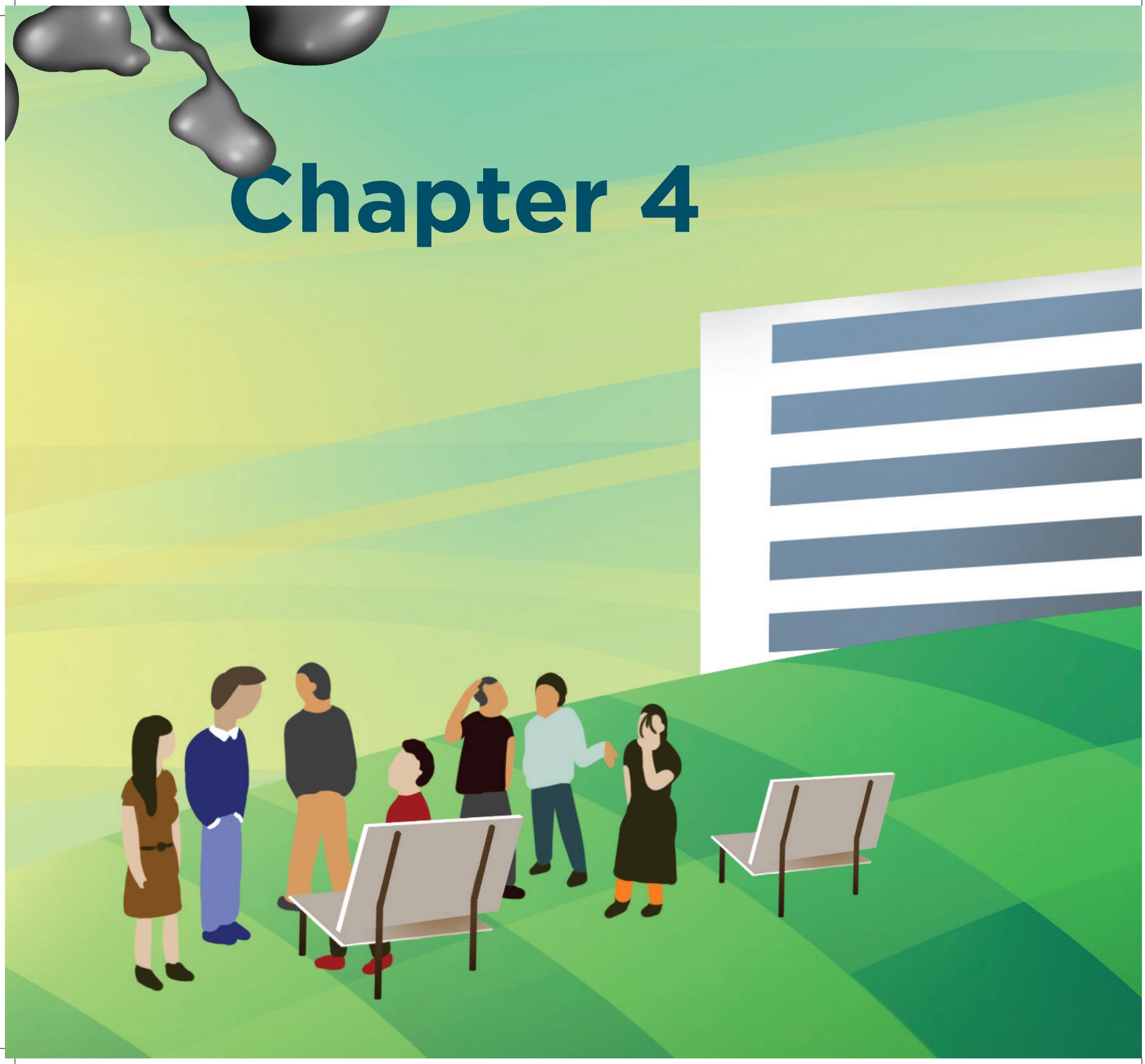
Shkumbin-Spille and Durres Bay. Fishery products are regularly analysed based on the manufacturers' requirements. *Since December 2015, IFSV does not cover this service due to the failure of AAS-instrument operation. It is envisaged buying a new absorber and this service is envisaged to resume in 2018. Shortcomings are observed in the monitoring of freshwater fisheries (rivers, lakes) and there is no monitoring of waters in aquaculture reserves. After the resumption of the monitoring, it would be necessary to extend it to the entire territory of Albania.*

The Faculty of Natural Sciences of the University of Tirana (FSHN / UT) in cooperation with the University of Vlora has carried out monitoring of mercury levels in the air through bio-monitoring in the framework of the international project ICP-Vegetation. The mercury analysing laboratory has high-level analytical and human capacities but is not accredited.

Scientific research institutions may have studies in this field but lacks coordination and cooperation with the competent authorities to make their data public. Strengthening coordination and involvement of scientific institutions in mercury monitoring projects in the environment is a necessity.

In general, there is a lack of technical capabilities of mercury monitoring and testing in various environmental matrices and human exposure indicators. Even those few labs that carry out mercury chemical analyses are not accredited for these analyses. There is a need for accreditation of laboratories carrying out mercury chemical analysis.

Chapter 4



IDENTIFICATION OF POPULATIONS AT RISK AND GENDER DIMENSIONS

4.1. Preliminary review of potential populations at risk and potential health risks

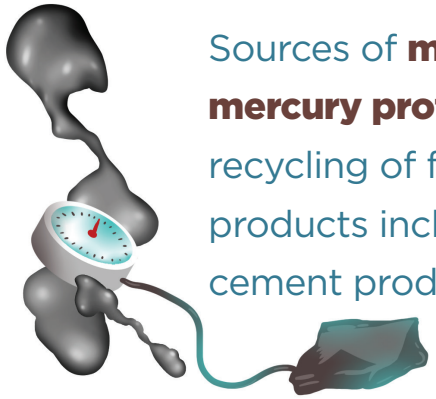
The identification of population at risk and gender dimensions in Albania is based on the "WHO/UNEP Guidance for Identifying Populations at Risk from Mercury Exposure[20]". In general, the category of the population that is more sensitive to the effects of mercury are described below:

Foetuses, infants and children are especially susceptible to mercury exposure because of the sensitivity of the developing nervous system. A pregnant woman`s exposure can impact the development of the foetus in utero. Women of child bearing years should be careful about exposure to methyl mercury, mostly commonly through fish consumption in the diet. Based on WHO/UNEP guidelines, individuals with diseases of the liver, kidney, nervous system, and lung are at higher risk from the toxic effects of mercury.

Albania does not have data about the impact of mercury on the health of the Albanian population except for one IPEN study about mercury pollution in Vlore Bay, Vlore City which is near the Adriatic Sea from the former SODA-PVC enterprise, including a chlor- alkali plant, which has been a significant source of mercury contamination. The amount of mercury discharged in environment from year 1977-1983 was estimated to be 65 tons.

Fish and plants from Vlore Bay and surrounding areas have been analysed and found to have elevated mercury levels attributed to the discharge of the former SODA-PVC plant. Of the women who provided hair samples, 23% exceeded the 1 ppm reference level, with one individual exceeding 4.5 ppm. The mean for the entire group exceeded the proposed 0.58 ppm level at a mean level of 0,668 ppm ±0,85ppm.

20 http://www.who.int/foodsafety/publications/risk-mercury-exposure/en/



Sources of **mercury pollution according to the national mercury profile** include informal dumping of general waste, recycling of ferrous metal scrap smelted, mercury added products including thermometers containing mercury, cement production, etc.

The Albanian legislation does not forbid the use of dental amalgams in dental clinics. The National Mercury Inventory developed as part of the MIA in Albania identified dental amalgams as a source of mercury pollution. Dental amalgams can potentially be a risk for human health, especially for pregnant women. Mercury in dental amalgam can cause risk on three fronts: (i) the individual is exposed to mercury in the body; (ii) dental technicians working with liquid mercury are exposed to risk; and (iii) mercury from dental amalgam can be released into the environment when not safely stored. The level of exposure to patients is higher during placement or removal of the fillings and the exposure is dependent on a number of factors such as age, number and size of fillings, chewing habits, and teeth grinding.

Despite improvements in techniques and precautionary measures, dental technicians who prepare the amalgams may breathe in mercury vapours which puts them at a higher exposure rate.

Sources of mercury pollution according to the national mercury profile include informal dumping of general waste, recycling of ferrous metal scrap smelted, mercury added products including thermometers containing mercury, cement production, etc.

Economically vulnerable people in Albania typically collect waste and metal scrape as a way of making a living, increasing their exposure to mercury from battery leakages and other mercury – containing waste. People in Albania who typically collect waste and metal scrape are mostly from Roma and Egyptian populations.

In Albania, the Roma population represents over 8300 individuals and the Egyptian population represents 3368 which is only 0,5% of the total population in the country.

Below is the table that compares the rate of diseases between Roma and other population in Albania:

Table 26. Diseases among Roma and other Albanian Populations

	Roma	Albanian
Asthma	7	3.6
Chronic bronchitis, chronic obstructive pulmonary disease or emphysema	11.3	4.2
Hypertension	23.8	20.3
Arthritis	27.9	20.3
Depression or chronic anxiety	10.8	4.7
Diabetes	4.9	6.1

The data in Table 26 indicates that more people from the Roma population in Albania are adversely affected by diseases, potentially reflecting factors such as living conditions and work conditions.

Another source of mercury pollution in Albania is mercury added products including mercury thermometers which are widely used for educational and medical purposes in Albania. Especially at risk in this category are students using the thermometers at the school facilities and the staff and patients of hospitals who are potentially exposed to mercury through accidental breakage.

The calculation of mercury input for manometers in Toolkit 1 was done according to the number of inhabitants in Albania and it was estimated to be 14 kg Hg/y. In this category, women are more at risk due to the fact that the majority of nurses in the country are women.

4.2. Assessment of potential gender dimensions related to the management of mercury

Environmental factors influence human health and mercury is a concern for all populations. In Albania, some populations have a greater risk for mercury exposure due to occupation, social and economic factors, and location. Mercury exposure occurs through ingestion, inhalation, dermal or in utero exposure, and varies in severity based on the extent, duration, frequency and magnitude of exposure.

The primary source of mercury exposure among humans is through seafood consumption, with inhalation of elemental mercury vapours (from dental amalgams, broken thermometer and compact fluorescent light bulbs, being a minor route of exposure).

Due to the ease of incorporation into biological tissue, methylmercury (MeHg), the organic form of mercury, is the most toxic form of environmental mercury exposure for humans. Methylmercury is toxic to humans because it biomagnifies in food webs and bioaccumulates over time in organisms. A neurotoxin, methylmercury can cause physiological harm, behavioural disorders, and a reduction in IQ (Intelligence Quotient) in people. Mercury is a known neurotoxic, but its potential long-term effects are still being studied.

Understanding how men and women's roles vary, encourages gender best practices to ensure that participatory planning methods are appropriate, inclusive, and can engage women and men in the process of the awareness-raising. Both women and men can play an important role in community mobilization for environmental issues and women`s voice and their active participation in such issues can be stronger. Also important is proper training about the risk of mercury for human health and environment, which will increase the awareness of the public.

It is essential to ensure that participatory planning for best gender practices methods are appropriate, inclusive, and can encourage women and men to engage in the process of the discussions as follows:

- Environmental policies are relevant to both women and men and the strategy to encourage their equal participation creates a responsible gender-balanced approach in environmental work.
- A focus on gender must exist not only on a national level, but must evolve within a specific local context, taking into account other elements of social differentiation (such as age, disabilities, ethnicity, etc.).

National Action Plan to Improve the Life of Different Groups of the Population

The Health Strategy 2016-2020 was approved by the Decision No. 439, dated 17.05.2017 which promotes improvement of life for the population, with a specific intent to improve maternal health, reduce child mortality, and improve workplace conditions. The following are mostly related to the Articles of the Minamata Convention:

Table 27. Action plan to improve the life of different groups of the population[21]

Activities	Indicators	Baseline	Objective for year 2020	Responsible institution
Objective 1.1: Promoting a healthy lifestyle and facilitating healthy choices				
Objective: Increase awareness and improve attitudes toward sound choices and existing programs especially for early detection and early life support				
Creating conditions for a safe pregnancy	Number of prenatal visits	Number of recommended prenatal visits does not particularly cater to vulnerable pregnant women (with a low social economic level) as well as certain minorities	By the end of 2020 attain a goal of 4 prenatal visits for every pregnant woman	Ministry of Health and Social Welfare (MoHSW)
Promotion of safe workplaces (Occupational Safety and Health Action Plan, percentage of safe workplaces)	Percentage of safe workplaces	Currently many jobs do not guarantee safe measures and do not promote health	By the end of 2020 increase the number of safe workplaces by 10%	
Objective 1.2: Strengthening public prevention and promotion programs (screening, health at school, immunization)				
Objective description: Existing prevention and promotion programs of public health, which are achieving efficient results, will continue to be implemented as part of an integrated strategy. The activities of the new health action plan will focus on improving the lifestyle of the Albanian population, especially in rural areas. This objective will be met as a result of the implementation of early detection programs (e.g., breast, cervical and colorectal cancer check; check-up of the population 40-65 yrs.; national baby and children programs).				
1.2.1. Implementation of strategic document: national program of cancer control 2011-2020 especially breast, cervical, or colorectal cancer	Scientific annual report for situation of cancer in Albania. Designing a cancer register	Objectives and activities set out in the national program document of cancer control 2011-2020	By the end of 2018, a preliminary version of the register of all types of cancer will be drafted. Gradual consolidation and persistence of registers. Draft annual reports on the situation of different types of cancer in Albania.	MoHSW IPH, UHC, HCOF
1.2.2. Implementation of strategic document and action plan on reproductive health 2016-2020 (draft) (breast & cervical cancer, the health of children and newborns)	Annual report for situation of breast and cervical cancer. Percentage of health units that offer basic services for babies and children according to the foreseen standards	The objectives set out in the Action Plan On Reproductive Health 2016-2020	Drafting annual reports for situation of breast and cervical cancer from the end of 2017 and onward. By the end 2020 all health units in the country will offer basic services for babies and children according to the foreseen standards	MoHSW, IPH, UHC, HCOF

21. Strategjia Kombëtare e Shëndetësise 2016-2020, shkurt 2017

1.2.3. Implementation of National Program of regular control for Albanian citizens from 35 to 70 yrs. old	The number of examined people from 0-65 yrs. old	This service will be offered regularly in future years and concrete effects of this Program will be evaluated continuously	By the end of 2020 70% of people aged 40-65 yrs. old will have been examined	MoHSW
Objective 1.4 Reduction of morbidity and mortality by preventable actions				
Description of objective: Concrete actions are undertaken to prevent causes of mortality and morbidity related to cardiovascular, endocrine and cancer diseases, through intervention on modifiable risk factors				
1.4.1 Cancer control. Cardiovascular diseases	Percentage of screening and early diagnosis of breast cancer and cervical cancer.	Early screening and diagnosis of breast cancer and cervical cancer is still opportunistic	By the end of 2020, the level of early diagnosis of breast cancer and cervical cancer will have increased by 10%	Ministry of Health and Social Welfare
1.5.1 Expansion of intervention of a community-based approach to improve the nutrition of babies and children and create suitable environments for their growth and development	The number of community-based interventions to improve the nutrition of infants and children and the creation of suitable environments for their growth and development	The objectives set out in the Health Promotion Action Plan 2016-2020 and in the Reproductive Health Action Plan 2016-2020	By the end of 2020, community-based interventions will be implemented in all Albanian regions	MoHSW
Objective 2.1 Provide financial support for all citizens				
Description of objective: Extension of range of services offered to all citizens free of charge while providing general tax funding				
2.1.2 Breast cancer examination programme	The number of women examined for free at the point where the service is provided	This service will be offered regularly in the following years and the effects of this program will be evaluated	By the end of 2020, 30% of women with high risk of developing breast cancer will be examined	MoHSW
Objective 3.2: Generate evidence used to inform and monitor health policies through the strengthening of the health information system and disease registries				
Objective description: Evidence generated through the health information systems and disease registries is used to influence the definition of health care priorities as well as monitor the implementation of these policies; health information is collected, analysed and shared with all decision-making levels in a timely manner. The quality of information is constantly improved.				
3.2.2. Development of cancer registries and registries of cardiovascular diseases	Annual scientific reports on the situation of cancer and cardiovascular diseases in Albania	Designing a cancer register from cardiovascular disease	By the end of 2018, a prior version of the register of all types of cancer will be drafted. Gradual consolidation and persistence of registers of various types of cancer and cardiovascular diseases by 2020. Drafting annual reports about cancer and cardiovascular diseases	MoHSW IPH

Physiological/ Biological Differences

Based on UNDPs "Chemicals Management- Why and How of Mainstreaming Gender"[22], differences in occupational roles, household responsibilities, and biological susceptibility are factors that contribute to gender differences in terms of exposure of women and men to toxic chemicals and their health impacts.

When chemicals, and in this case metals such as mercury, are not used properly, they can affect women and men differently. The potential impact of exposure to toxic chemicals in women is higher because of the differences in their physiology (i.e., related to their reproductive cycles). The bodies of women during pregnancy, lactation and menopause undergo rapid physiological changes, during which times may incur adverse health impacts from toxic chemicals.

According to a study by the World Health Organization in 2004, the exposure of women and girls to pesticides can cause miscarriages, premature births, birth defects and low birth weight and thereby poses risks to future generations. Chemical substances can cause testicular cancer and a conspicuously high prevalence of this disease and other reproductive disorders in men in more industrialized countries. The maternal exposure to endocrine disrupting may increase the risk of cancer, defects to the external genitalia, as well as impaired sperm function.

Chemicals exposure of children is a high risk for their health, because their rapid development and dynamic periods of growth increase their physiological sensitivity, where chemical exposure can interfere. Another factor which has an impact is foetal exposure at critical times, which may have harmful effects that do not become evident until in school, at puberty or adulthood. Small children may absorb chemicals more efficiently and excrete them more slowly, resulting in greater body burdens of toxic contaminants, and receiving them via water, air and food (relative to body size) further magnifies the risk[23].

Differences in Workplace Exposures

The exposure level of mercury in the workplace often differs by gender because women and men generally work on different tasks. For instance, the health sector is female-dominated, and women represent the

22. UNDP, Chemicals Management- Why and How of Mainstreaming Gender

23. UNDP, Gender Mainstreaming. A key Driver of Development in Environment & Energy

highest average among nurses in hospitals (Table 28), pharmacy workers, and workers in laboratories,that have a greater chance of exposure to mercury as a result of broken thermometers or other medical devices.

Table 28. The number of nurses according to gender in Albania

District	Nurse		Midwife		Physiotherapist		Technical imager		Technical laboratory		Speech therapist	
	F	M	F	M	F	M	F	M	F	M	F	M
Berat	898	158	86	0	4	10	1	8	70	13	2	1
Dibra	865	102	71	1	1	4	0	10	57	3	0	0
Durres	1115	183	59	1	31	17	5	11	90	14	0	0
Elbasan	1664	319	388	7	57	36	14	19	105	24	11	3
Fier	1305	348	172	1	19	9	2	6	108	27	2	1
Gjirokastra	698	200	48	0	0	0	4	5	48	18	5	1
Korça	1368	407	149	1	9	7	6	9	67	24	1	0
Kukes	655	117	48	0	4	5	4	2	34	10	2	0
Lezha	648	74	71	0	11	11	3	10	45	7	3	0
Shkodra	1076	268	180	2	54	20	3	16	63	11	0	1
Tirana	5036	981	596	5	306	232	163	127	764	119	59	15
Vlora	1164	267	72	1	5	9	0	6	46	14	0	1

Data received from Order of Nurses of Albania

A sector dominated by women in Albania is that of services such as dry-cleaning and ordinary cleaning, which imply exposure of women to various chemicals, since women may be at greater risk from hazardous ingredients and chemicals contained in cleaning agents, professional cosmetics and personal care products, and other potential mercury-added products. While in the industry sectors in Albania, men are more exposed than women as they traditionally work in these sectors.

The Involvement of Women in Decision- Making

Legal and Political Framework on Gender Equality legislation in Albania creates legal obligations for local governments. The 2008 Law on Gender Equality in Society, for example, requires local government units to do the following:

- Cooperate with central government institutions to enforce gender legislation and national gender equality policies;
- Cooperate with non-profit organizations working within their territory to achieve gender equality in different fields;
- Collect and analyse sex disaggregated data; appoint one or more local gender equality officers to address gender issues; and
- Take special temporary measures to increase the representation of women in decision-making positions (30% quota).

However, up to the local elections in May 2011, only 14 municipalities (out of 65) had appointed gender equality officers[24]. In 2016, eight out of nineteen ministers in the cabinet were women, and six women were elected as mayors, which is an improvement from previous years and, in fact, the highest number of women in political history in Albania.

As a concluding note for this Chapter, it is important that there is an increased awareness by the general public about the risk of mercury and methyl mercury in health; especially about the risk posed to children, pregnant women, and women in child-bearing years.

Specific efforts are needed to protect these vulnerable groups from mercury exposure. There are gender differences in the exposure of mercury to women and men and different potential health effects. These differences are linked to physiological attributes, differences in workplace exposure, and varying household responsibilities of women and men.

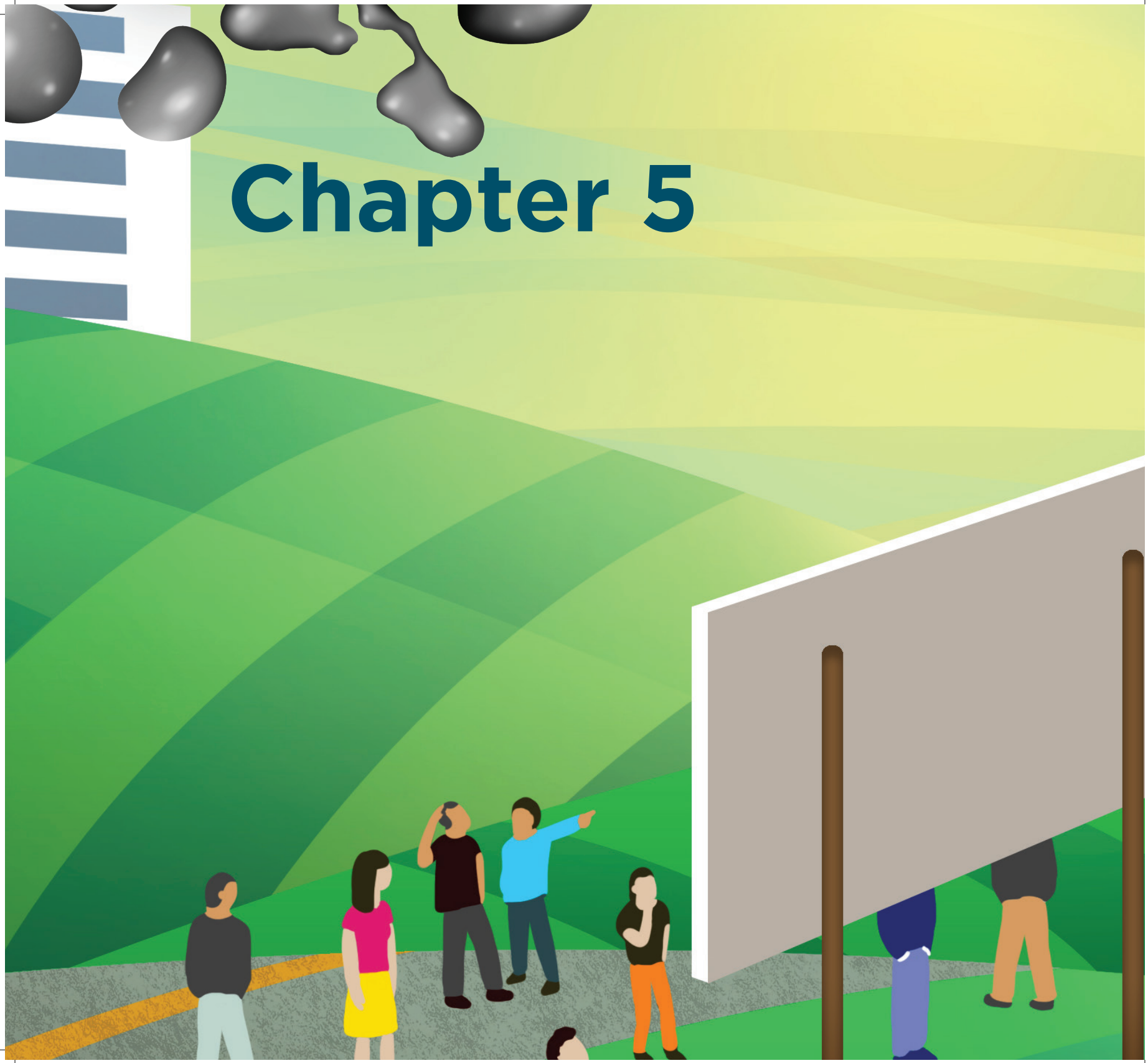
Law No. 10237, dated 18/02/2010 is key in protecting workers from occupational exposure and conduct risk evaluation to prevent accidents related to toxic substances.

The capacity of national laboratories needs to be strengthened to perform in-country studies of mercury in food samples for continued monitoring of mercury exposure in the Albanian population.

The ratification of Minamata Convention is an important step towards the protection of human health and the environment.

24. Jacoba K., Leest V d, Xhelo R, Wittberger D., Barazia Gjinore dhe Qeverisja Vendore, Tiranë 2012

Chapter 5



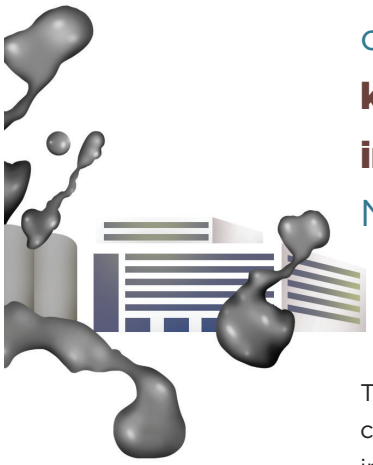
AWARENESS/UNDERSTANDING OF WORKERS AND THE PUBLIC; AND EXISTING TRAINING AND EDUCATION OPPORTUNITIES OF TARGET GROUPS AND PROFESSIONALS

The level of awareness in Albania about mercury exposure and its impacts on human health and environment were evaluated in two ways:

1. through a baseline assessment of stakeholder awareness based on past and on-going awareness raising, stakeholder meetings and opportunities including an analysis of sustainability as well as
2. through the feedback received during the assessment of the legislative framework to support the Convention provisions and the assessment of the capacities of main institutions for the implementation of the Minamata Convention in Albania.

The institutions involved and assessed in Article 3: Sources, supply and trade of mercury demonstrate that even though there is no import or export of mercury to or from Albania reported by the relevant authorities, the level of knowledge of mercury is rather low and there is no monitoring system in place.

The institutions involved and assessed in Article 4: Mercury- added products suggest that given the absence of a robust legal framework and subsequent lack of enforcement and monitoring, there is a need for awareness raising among the regulatory bodies, the private sector, and institutions involved in monitoring mercury-added products e.g. customs, environmental agency, inspectorates, civil society and academia.



Manufacturing processes where mercury or mercury compounds are used note that **the level of mercury knowledge is moderate and there is no separate information on mercury related industries** provided by the National Environmental Agency, and no monitoring in place.

The institutions involved and assessed in Article 5: Manufacturing processes where mercury or mercury compounds are used note that the level of mercury knowledge is moderate and there is no separate information on mercury related industries provided by the National Environmental Agency, and no monitoring in place.

The institutions involved and assessed in Articles 8 and 9: Emissions to air and releases to land and water and Article 11: Mercury wastes suggest a low level of awareness and compliance from the regulatory bodies as well as private sector, e.g. industrial operators related to the control of mercury discharges, government agencies related to addressing mercury emissions to the air, water or land during environmental permitting process, enforcement authorities for controlling the environmental permit conditions i.e. reported emissions to waters and land. The former Soda-PVC plant in Vlora that was closed, and a decade later cleaned-up showed that such interventions are not sustainable if no proper maintenance and monitoring is performed and given the low level of awareness the population exposed to risk is not exercising the right to influence the decision makers and push for law enforcement.

Based on the above mentioned, the assessed level of awareness is very low among the public, communities living nearby the industrial facilities, consumers, regulators, media, industry and government about the health and environmental impacts of mercury and the need to enforce relevant legal and regulatory measures for current and future industrial development of the country in order to be in compliance with the Minamata Convention. In addition, it is worth highlighting that the latest government restructuring

would require a reassessment of the situation related to awareness needs and the level of capacities at central and local level.

An important consideration here relates to the drivers behind the European Union (EU) accession and the 2030 Sustainable Development Agenda to which Albania adheres. It will be necessary to link to EU accession process in Albania to the need to increase awareness of mercury risks and understanding of mercury sources (national, regional and global) and exposure of the general public. In addition, it is important to emphasise the link with Sustainable Development Goals (SDGs) and the Minamata Convention. Since the latter aims to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds, this is important to the final goal of achieving sustainable, inclusive and resilient human development contributing directly to 7 out of 17 SDGs.

Although the adoption of the 2030 Agenda is on voluntary basis, many countries, including Albania, already consider the SDG framework as an important vision for 2030. Goals, targets and SDG indicators are not binding, and countries are free to set their own targets for 2030 in accordance with their specific circumstances and incorporate them in the national planning systems and strategies. Albania is preparing the SDG baseline report and alignment of the 169 SDG targets with the national priorities as approved lately in the parliament and is preparing to develop the voluntary national review as per requested pace.

In this context, a Communication, Education and Public Awareness (CEPAF) Framework Plan presented in Annex 3 was developed that identifies actions and activities to be taken by the government and partners to tackle awareness and training needs.

The CEPAF provides an integrated approach to awareness and training in order to enhance understanding and facilitate communication with the general public and relevant partners while raising awareness on issues related to Minamata Convention and its Ratification. The CEPAF synchronizes joint actions in educational and promotional activities, creating synergy to provide added value while avoiding duplication of effort among key stakeholders. The implementation of CEPAF would require additional resources and a short-to- midterm action plan that includes tools tailored to both genders, with specific focus on vulnerable communities exposed to mercury.


Chapter 6

IMPLEMENTATION PLAN AND PRIORITIES FOR ACTION

6.1. Implementation plan

Albania is party to the Rotterdam, Basel and Stockholm Conventions and signed the Minamata Convention on Mercury in 2014. This enables the country to benefit from the international experience and cooperation on environmentally sound management of chemicals and wastes. The current activities related to mercury that were supported by GEF and UNDP within the Minamata Initial Assessment Project were aimed at: (i) preparing a platform to ratify the Minamata Convention on Mercury in Albania; and (ii) build national capacity to meet reporting and other obligations under the Convention.

The priority areas for successful implementation of the Minamata Convention on Mercury are derived from the major gaps in information identified during the institutional and legislative gap analyses and national mercury inventory. Albania will benefit from new and updated information about the mercury sources, magnitude of mercury, and how it cycles through the air, water, land and waste systems within the country, as well as building capacity in managing the risks of mercury. There exist potential synergies between the Minamata Convention and implementation plans of other chemicals conventions and it will be beneficial for future implementation efforts to take advantage of the overlapping needs of these conventions in order to enhance coordination of chemicals management efforts within the country.

The Implementation Plan and Priority of Action have been developed based on the findings from the mercury inventory report and assessment of the legislation and of the capacities of main institutions for the implementation of Minamata Convention in Albania.

The Implementation Plan considers five priority areas for action:

- Priority 1: Strengthening the policy, legal and institutional framework of mercury management;
- Priority 2: Reducing the use of Mercury containing products and environmentally sound management of mercury waste;
- Priority 3: Building institutional capacity and raising awareness on mercury management;
- Priority 4: Strengthening engagement of the health sector with the sound management of mercury
- Priority 5: Improving the inventory, monitoring and reporting of mercury releases from diffuse and point sources

Table 65. Priority 1: Strengthening the policy, legal and institutional framework of mercury management

Priority 1: Strengthening the policy, legal and institutional framework of mercury management
National baseline: Based on the findings from the Mercury Inventory & Assessment Report of the legislation and of the capacities of main institutions for the implementation of Minamata Convention in Albania, Albania has adopted legislation establishing the framework for compliance with international commitments on chemicals, in particular the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and Stockholm Convention.
The Law on Chemicals Management No. 27/2016 sets the legal framework for the implementation of international conventions in this domain. Aiming at fully aligning the national legal framework with EU legislation, Albania has also adopted subsidiary legislation with regard to: the registration, evaluation, authorization and restrictions of chemicals, export and import of hazardous chemicals; classification, labelling and packaging of substances and mixtures; biocides; POPs and PCBs; mercury content in batteries and accumulators as well as in the electrical components and fluorescent lamps. The cosmetic sector needs to be better regulated in terms of imports and targeting products that may contain harmful substances including mercury;
Article 23 of the law on chemicals management stipulated that rules for banning the export of metallic mercury, compounds and certain mercury mixtures, safe storage of metallic mercury and specific criteria for the storage of metallic mercury considered as waste will be approved by the Council of Ministers. The legal basis for chemicals that addresses the Mercury Convention's requirements must be completed.
Law No. 10 463, dated 22/09/2011 "On integrated waste management" establishes the modalities to manage hazardous waste. Also, Article 25 of this Law stipulates that hazardous waste is collected, transported and stored temporarily only when is packaged and labelled in accordance with this law.
Considering the adoption of the new regulations on chemicals management, the newly designed organizational system is still not fully established, e.g. the Chemicals Office is not working. The law on chemicals management requires the establishment of a Cross-cutting Committee on Chemical Safety. The committee has not yet been established.
Minamata Convention Requirements:
Article 3: Provide provisions for the written consent in export and import of mercury
Article 4: Prohibit the manufacture, import and export of mercury added products as specified in Part I of the Annex A after the phase-out date specified for products to be phased out by 2020.
Article 8: Each Party with relevant point sources shall take measures to control and reduce emissions of mercury into the air from point sources
Article 9: Control and, where feasible, reduce releases of mercury and mercury compounds to land and water from relevant point sources
Article 10: Each Party shall take measures to ensure that the interim storage of such mercury and mercury compounds is undertaken in an environmentally sound manner
Article 11: Each Party shall take appropriate measures so that mercury waste is managed in an environmentally sound manner, restrict mercury derived from the treatment only re-used for a use allowed to a Party under this Convention or for environmentally sound disposal pursuant to paragraph 3(a); (For Parties of Basel Convention) not transported across international boundaries except for the purpose of environmentally sound disposal in conformity with this Article and with Convention.

Proposed Actions/Activities:	Lead Institution	Anticipated budget (US$)	Time Frame
1.1 Adoption by the Parliament of Law on the ratification of Minamata Convention on mercury	MoTE MoTEFA	5,000	After 2019
1.2 Adoption of the DCM "On rules for banning the export of metallic mercury, compounds and certain mercury mixtures, safe storage of metallic mercury and specific criteria for the storage of metallic mercury and its compound/mixtures, considered as waste	MoTE	10,000	2019-2020
1.3 Adoption of the DCM "On the restrictions of the manufacture, placing on the market and use of certain hazardous chemicals and articles"	MoTE MoHSW	10,000	2019 -2020
1.4 Adoption of DCM "On rules for the assessment criteria and the authorization procedure for biocide products" pursuant to Art. 8 of Law 95/2015.	MoHSW	10,000	2019-2020
1.5 Adoption of DCM "On the list of prohibited or restricted substances for cosmetic products" pursuant to article 13 of the law 27/2016 on cosmetics products	MoHSW	10,000	2019-2020
1.6 Develop national standards/guidelines with reference to environmentally sound management of Mercury containing wastes, as stipulated in the Convention;	MoTE	15,000	2021
1.7 Develop national guidelines on the handing of mercury and mercury compounds during use, spillage as well as environmentally sound disposal	MoTE MoHSW	15,000	2021
1.8 Adoption of the DCM "On approval of the National Plan on Safety Management of Chemicals and Contaminated Sites", pursuant to the Article 26 of the Law "On chemicals management" No. 27/2016. Among others this plan will set out the measures to control releases (to air, land and water) of Mercury from the relevant point sources and expected targets, goals and outcomes; (Art 8) (Art 9) Introduce emission limit values for controlling, where feasible, reducing the emissions from the relevant point sources (Art 8), on identifying and assessing contaminated sites from mercury and its compounds and related risk management. To phase out the priority mercury containing products, including budgets, investment plans, and indication of funding opportunities. To phase-down/phase-out dental amalgams	MoTE MoHSW	100,000	2020
1.9 Adoption of the DCM "On rules of organization and functioning of the Chemicals Office" pursuant to the Article 6 of Law No. 27/2016 "On chemicals management".	MoTE	5,000	2019
1.10 Adoption of Prime Minister Order "On the functions, composition, rules and procedures for the functioning of the Cross-cutting Committee on Chemical Safety"	MoTE	5,000	2019
Subtotal priority		185,000	

Table 66. Priority 2: Reducing the use of mercury containing products and sound management of mercury waste

Priority 2: Reducing the use of Mercury containing products and sound management of mercury waste			
National baseline: The results of the inventory for the reference year 2016 in the Republic of Albania, shows that the total releases of the mercury from all source groups, are 4340 Kg Hg/y; of which 76 % are from mercury intentionally used in products such as thermometers, blood pressure gauges, fluorescent light bulbs etc. The individual mercury releases sub-categories contributing with the highest mercury inputs were: Thermometers (2,588 kg Hg/y); Electrical switches and relays with mercury (403 kg Hg/y); Other laboratory and medical equipment with mercury (115kg Hg/y); polyurethane produced with mercury catalyst (84 kg Hg/y). Reducing mercury in products is the most effective means to decrease the emissions into various media, particularly from the mercury containing waste streams. The total mercury flow to general waste accounted for 1020 kg Hg/y. The use and disposal of mercury-containing products were found to be the major flows of mercury in waste and waste water. The major contributing sub-categories to releases to the general waste were: Thermometers (776.5 kg Hg/y); Electrical switches and relays with mercury (120.8 kg Hg/y); Other laboratory and medical equipment with mercury (38.0 kg Hg/y); polyurethane produced with mercury catalyst (25.9 kg Hg/y); Batteries with mercury (18.5 kg Hg/y); Also, the informal dumping of urban waste is the first contributor of mercury release to land, the second contributor of mercury release to water and the third contributor to air; Less than 2/3 (67%) of the general waste is collected and deposited on landfills and incinerated in Albania. Minamata Convention Requirements: Article 4: Prohibit the manufacture, import and export of mercury added products as specified in Part I of the Annex A after the phase-out date specified for products to be phased out by 2020. Article 11: Each Party shall take appropriate measures so that mercury waste is managed in an environmentally sound manner, only recovered, recycled, reclaimed or directly re-used for a use allowed to a Party under this Convention or for environmentally sound disposal pursuant to paragraph 3(a);			
Proposed Actions/Activities:	**Lead Institution**	**Anticipated budget (US$)**	**Time Frame**
2.1 Conduct studies on preferences of staff/general public for cost-effective Hg-free alternatives and share the results.	MoTE MoIE	50,000	2020
2.2 Develop a feasibility study for (i) phasing-out of thermometers, sphygmomanometers and antiseptics and skin-lightening cosmetics that contain mercury (ii) phasing down the use of dental amalgam;	MoTE MoHSW MoFE GDC	100,000	2020-2021
2.3 Develop a feasibility study on phasing out some types of mercury containing products and make available to public institutions of mercury-free or low mercury content cost-effective alternatives. Substitution of the measuring equipment and apparatus in energy sector changing the compact fluorescent lamps (CFLs) within the educational institutions to LED, changing the street lightning from mercury containing light sources to the other non-mercury alternatives	MoTE MoHSW	200,000	2020-2021
2.4 Develop a pilot project on promoting the use of best environmental practices (BET) in dental facilities, such as the use of dental amalgam only in encapsulated form and that dental facilities be equipped with amalgam separators to retain and collect mercury containing amalgam residues.	MoHSW IPH AADD MSI	150,000	2019-2020
2.5 Develop a feasibility study and develop a project for identification and construction of a disposal site for hazardous waste chemicals including mercury waste;	MoHSW	150,000	2019-2020
Subtotal priority		650,000	

Table 67. Priority 3: Institutional capacity building and awareness-raising on mercury management

Priority 3: Institutional capacity building and awareness-raising on mercury management			
National baseline: Generally, there is a lack of knowledge and awareness about the health and environmental problems of mercury in products. At the moment the country lacks the information and prevention programs to protect the population at risks with reference to mercury and mercury management; Currently, there is no qualification or specific training programs on mercury management for the sector in MoTE that deals with chemicals, customs, inspectors, staff of the NEA, and other authorities in the country. Lack of laboratory capacity for determination of mercury in products as well as food items is lacking. Capacities for evaluating antifouling paints as biocide products are very limited. The establishment of the legal and institutional framework should be followed by capacity-building in relation to the implementation and enforcement of the new legislation and Minamata Convention requirements. Following the findings from capacity assessment and the Hg inventory report that are related to Art 3/ Art 4/ Art 8/ Art 10/ Art 11/Art 14/Art 17 of the Convention; the Ministry of Tourism and Environment through the envisaged Chemicals Office should implement the necessary capacity-building and organizational development activities on chemicals management. Minamata Convention Requirements: Article 18 of the Convention stipulates that Each Party shall undertake the actions on improving education, training and public awareness in the field of mercury.			
Proposed Actions/Activities:	**Lead Institution**	**Anticipated budget (US$)**	**Time Frame**
3.1 Conduct training on the management (generating, handling, clean-up, storage, disposal, treatment, transport) of elemental Mercury as well as mercury containing products and wastes for institutions and entities responsible for mercury management; (Art 3) (Art 8) (Art 10)	MoTE MoIE MoHSW MARD	30,000	2019-2020
3.2 Conduct training for control authorities, custom officers, environmental inspectors and market surveillance inspectors on control for the import and export of mercury and mercury compounds (Art 3)	MoTE MoFE GDC	20,000	2019-2020
3.3 Develop and implement a training programme for the National Environmental Agency and Environmental Inspectorate: on setting the environmental permit conditions of mercury emissions to the air, water or soil, emissions inventories and mercury emissions, controlling the emissions of mercury from industrial operators	MoTE NEA SIEFW	30,000	2020
3.4 Conduct specific training on Mercury management for risk groups (e.g. waste handlers, dentists, schools, power generation sector, jewellery sector, mirror production, laboratory personnel involved in mercury analysis in products including food, etc.) (Art 10)	MoHSW IPH MoTE NEA	50,000	2019-2020
3.5 Conduct awareness raising among the larger public: on the human health and environmental effects of mercury and mercury compounds; on the proper management of Mercury containing products and their wastes (e.g. thermometers, CFLs, tubes, batteries, etc.)(Art 8)(Art 10); on mercury in cosmetics; targeting local importers and users of cosmetics	MoHSW MoTE	50,000	2019-2020
Subtotal priority		180,000	

Table 68. Priority 4: Strengthening engagement of the health sector with the sound management of mercury

Priority 4: Strengthening engagement of the health sector with the sound management of mercury			
National baseline: Obligations of the employer for the education and information of employees on the occupational hazards at workplace and on preventive measures are already required by the Law 10 237/ 2010 "On the safety and health at work" and secondary legislation. Exposure Limit Values for mercury and mercury compounds at the workplace are established. Although it is understood that a system for the continuing professional education of human resources in the health care system is needed, there are insufficient institutional and professional capacities for the prevention, diagnosis, treatment and monitoring of health risks related to the exposure of mercury and mercury compounds. For example: There is no program or strategy for identifying and protecting populations at risk from mercury in their diet; There is no educational program to prevent mercury exposure as a potential occupational hazard, and No activity has been undertaken since 2010 to promote the prevention and treatment of potentially affected populations of Hg exposure. According to the 2016 mercury inventory, the use of mercury thermometers is the largest sub-category contributor of mercury input to the environment (2588kg Hg/y) and the amount of mercury used in amalgam fillings was 42 kg Hg/y. Following the results of mercury inventory, the compilation of a strategy and relevant action plan to identify and protect populations at risk regarding mercury and its compounds, particularly vulnerable populations is a need; Minamata Convention Requirements: Article 16. Parties are encouraged to: Promote the development and implementation of strategies and programs to identify and protect populations at risk; Promote the development and implementation of educational and preventive programs on occupational exposure to mercury and mercury compounds; Appropriate health-care services for prevention, treatment, and care services for affected populations. Establish and strengthen, as appropriate, the institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring of health risks related to the exposure to mercury and mercury compounds.			
Proposed Actions/Activities:	**Lead Institution**	**Anticipated budget (US$)**	**Time Frame**
4.1 Develop and implement a programme/action plan to identify and protect populations at risk.	MoHSW IPH	10,000	2019-2020
4.2 Conduct a feasibility study and an action plan for establishing the institutional and professional capacities for prevention, diagnosis, treatment and monitoring of health risks associated with exposure to mercury and mercury compounds.	MoHSW IPH	30,000	2019-2020
4.3 Develop health guidelines on exposure reduction, setting targets for Hg exposure reduction and public education.	MoHSW IPH	20,000	2020
4.4 Conduct the health risks assessment and the health impacts for the inhabitants near factories and facilities associated with exposure to mercury and mercury compounds.	MoHSW IPH NEA	150,000	2020-2021

4.5 Conduct mercury monitoring in air, water, sediments (Vlora bay) and biota in the area of confined disposal facilities in former Soda – PVC plant in Vlora.	IPH NEA	50,000	2020-2021
4.6 Establish national targets aimed at preventing dental cavities and promoting health, minimizing the need for tooth restoration and minimize mercury exposure.	MoHSW IPH AADD	30,000	2022
4.7 Conduct regular bio-monitoring of high-risk groups (e.g. waste handlers, dentists, school's children, power generation sector, laboratory personnel involved in mercury analysis, etc.) and develop guidelines for protection of the each risked category;	IPH NEA FNS	50,000	2020
4.8 Develop and implement a training programme for State Health Inspectorate on the implementation of the new legal requirements on cosmetic and biocidal products.		10,000	2020
Subtotal priority		350,000	

Table 69. Priority 5: Improving the monitoring and reporting of mercury releases from diffuse and point sources

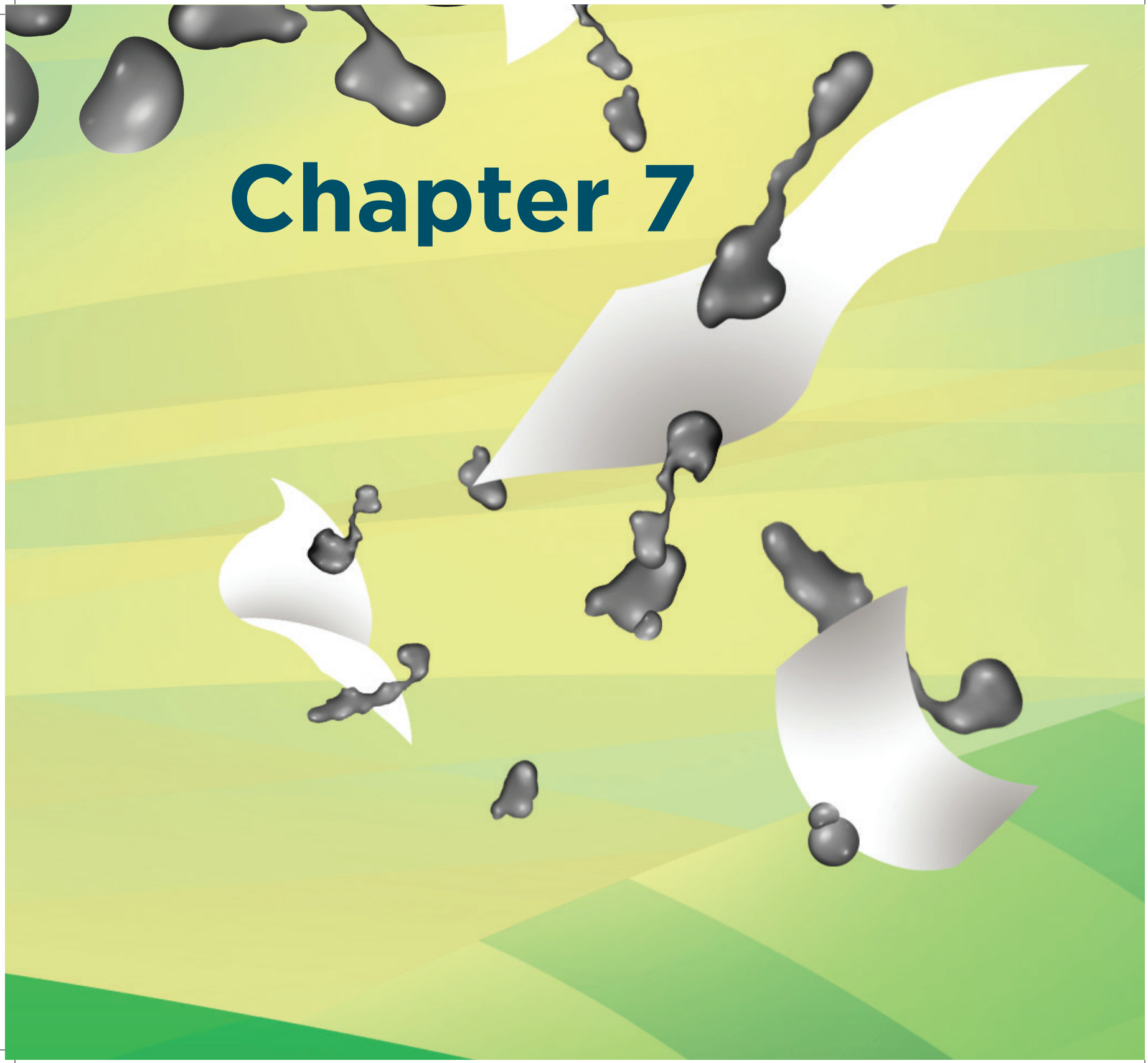
Priority 5: Improving the monitoring and reporting of mercury releases from diffuse and point sources			
National baseline: In general, there is a lack of technical capabilities of mercury monitoring and testing in various environmental matrices and human exposure indicators. Even those few labs that carry out mercury chemical analyses are not accredited. There is a need for accreditation of laboratories carrying out mercury chemical analyses. The main gaps and findings from the Mercury Inventory are the following: It was not possible to get information related to the quantity of some mercury containing products imported to Albania, i.e. electrical and electronic switches, laboratory chemicals, paints. There is no specific HS Customs Code for mercury containing products. This is principally because Customs use these codes to calculate tariffs, not for inventory of items entering the country. For paints, manufacturers use trade names and often do not indicate the level of mercury. Better estimation methods are necessary. There is also a lack of chemical composition data for imported cosmetics, soaps and pharmaceutical products (except vaccines), as well as for imported laboratory mercury chemicals. Despite the legal provisions on the management of specific waste streams that are considered hazardous, the amount and origin of generated hazardous waste is unknown, mostly due to the lack of data collection, which is partly due to the lack of separate collection of hazardous waste. The lack of data hampers the establishment of sound management of hazardous waste. Minamata Convention Requirements: The convention requires Parties to control and reduce releases of mercury to air (art 8) and to land (Art 9). In response, the capacity of the country needs to be improved in order to be able to measure and monitor levels of mercury in environmental media on a regular basis.			
Proposed Actions/Activities:	Lead Institution	Anticipated budget (US$)	Time Frame

5.1 Update and improve the national inventory on mercury emissions and releases, through: Improving data collection on illegal dumpsites and waste open burning sites; Improving imports data collection from customs, by developing a sub classification within the HS code to capture subcategories of the various products listed; Developing a system to weigh the medical wastes that are incinerated and receive information on smaller incinerators; Developing a system to capture charcoal production figures for permits issued; Developing detailed information on cement production technologies and pollution control devices;	MoTE NEA	50,000	2019-2020
5.2 Strengthening regular environmental monitoring and reporting requirements of point sources associated with the specificity of mercury.	NEA SIEFW	10,000	2019-2020
5.3 Establish regular monitoring for determination of the MeHg content at seafood and other food items and develop guidelines such as: Smart Seafood Buying Guide	MoHSW IPH MoA	30,000	2020-2021
5.3 Develop BAT for the following industrial activities: cement production; waste incineration; non-ferrous industry, pursuant to the Article 5 of the Law 10448/2011	MoHSW IPH	60,000	2019-2020
5.4 Create capacity of national laboratories and private sector organizations (in terms of human capacity as well as technology capacity) to enable the analysis of mercury concentrations in water, soil, air and biotic (e.g., fish) samples	MoTE NEA MoHSW IPH	150,000	2021-2022
5.5 Support the accreditation of laboratories carrying out mercury chemical analysis based on GLP international system	IPH NEA	150,000	2020-2021
Subtotal priority		450,000	

6.2. Summary (Activities, budget, timeframe and responsibility)

Table 70. Total budget, implementing responsibility and timeframe

Priorities	Lead Institution	Anticipated budget (US$)	Time Frame
Strengthening the policy, legal and institutional framework of mercury management;	MoTE MoHSW	185,000	2018-2022
Reducing the use of mercury containing products and environmentally sound management of mercury waste;	MoTE MoHSW	650,000	2019-2021
Capacity building and awareness raising on mercury management;	MoTE MoHSW	180,000	2019-2020
Strengthening health sector engagement in the sound management of mercury	MoTE MoHSW	350,000	2019-2022
Improving the inventory, monitoring and reporting of mercury releases from diffuse and point sources	MoTE MoHSW	450,000	2019-2022
TOTAL		1,815,000	


Chapter 7

MAINSTREAMING OF MERCURY PRIORITIES

Meeting the obligations of the Minamata Convention will require an integrated approach to chemicals management that engages the public and private sector in all aspects of the implementation of the Convention.

Mainstreaming the priorities in the national, regional or sectorial development plans is very important, as it will contribute to: improving the quality and sustainability development of the economy; reducing the negative impacts on human health, environment, impacts which are associated with chemicals' use.

The environmental issues are mainstreamed in the National Strategy for Development and Integration II (2015–2020). Pillar 4 of the NSDI-II aims at ensuring growth through connectivity, the sustainable use of resources and territorial development through improved water supply, sewerage and waste management systems.

The vision and strategic objectives of the National Strategy for Development and Integration 2015–2020, are related to the waste management and chemicals:

- An efficient and effective integrated waste management system that contributes to the protection and conservation of the environment, the protection of human health and safety, and supports the rational use of natural resources "through reuse, reduction, recycling and recovery."
- In the field of chemicals priority is the establishment of a national system for the management of chemicals, in compliance with EU regulations, the Rotterdam Convention and the Global Harmonized System (GHS).

The draft strategy for non-food industry for the period 2018–2025 contains an action plan for development, ranging from rehabilitation of abandoned former industrial sites to the technological progress of new industries.

In 2013, the Government updated its National Chemicals Management Profile, including aspects related to mercury, with the support of UNITAR.

Some mercury issues are already mainstreamed in the Law on Chemicals Management No. 27/2016 which has entered into force in March 2018. It ensures that the legislation is aligned with EU requirements on REACH, export and import of dangerous chemicals, classification, labelling and packaging of substances, POPs, asbestos, biocides and mercury.

In the Article 23 "Prevention and reduction of environmental pollution from chemicals" of the Law No. 27/2016 on Chemicals Management is stipulated that, for the reduction of the pollution and gradual elimination, till the complete ban of mercury, measures shall be induced to ban exports, to reduce mercury in products, processes, and in industries which use, discharge or emit mercury to the atmosphere or release in an uncontrolled way technological waste that contain mercury, as well as the responsibility for storage and safe disposal of mercury.

Article 23 stipulates that rules for banning the export of metallic mercury, compounds and certain mercury mixtures, safe storage of metallic mercury and specific criteria for the storage of metallic mercury considered as waste will be approved by the Council of Ministers.

Mainstreaming of mercury will be achieved through the national implementation plan on mercury developed within this MIA. The preliminary priority actions foreseen in this plan provide basis for mainstreaming the mercury issues in the National Plan on Safety Management of Chemicals and strengthening health sector engagement in the sound management of mercury.

The draft National Strategy on Integrated Waste Management (2018-2033) has already mainstreamed mercury issues, defining the goals and the relevant measures to be taken in medium and long term for the management of hazardous waste including mercury coming from products, industrial processes, etc.

The preliminary priority actions foreseen in Minamata Action Plan provide basis_for mainstreaming the mercury issues in the National Plan on Safety Management of Chemicals_and other policy documents; mercury related priorities realistically will happen during project implementation and mainstreaming can only take place once stakeholders have agreed upon national priorities.

ANNEXES

ANNEX 1: ASSESSMENT OF CAPABILITIES FOR A NATIONAL MONITORING NETWORK OF MERCURY IN ALBANIA

The methodology for the assessment, in connection with Article 19 of the Minamata Convention on Mercury, follows the guidelines of the Minamata Initial Assessment Report – specifically, "Suggested Structure and Contents (February 2017)". As stated in the above report the same approach should be used for Article 19 of the Convention.

The following steps would be undertaken:

- Analysis of Article 19 of the Convention;
- Review of the sources of mercury pollution in Albania;
- Assessment of mercury monitoring capacities in the country;
- Presentation of a national scheme for the monitoring of the levels of Hg and Hg compounds in vulnerable populations and in environmental media in Albania;
- Presentation of a monitoring scheme on the potential impact of mercury in human health and the environment in Albania.

Analysis of Article 19 of the Convention. Research, development and monitoring

1.1. Article 19. Research, development, and monitoring:

Parties shall endeavour to cooperate, to develop and improve, taking into account their respective circumstances and capabilities:

- Inventories of use, consumption, and anthropogenic emissions to air and releases to water and land of mercury and mercury compounds;
- Modelling and geographically representative monitoring of levels of mercury and mercury compounds in vulnerable populations and in environmental media, including biotic media such as fish, marine mammals, sea turtles and birds, as well as collaboration in the collection and exchange of relevant and appropriate samples;
- Assessments of the impact of mercury and mercury compounds on human health and the environment, in addition to social, economic and cultural impacts, particularly in respect of vulnerable populations;
- Harmonized methodologies for the activities undertaken under subparagraphs;
- Information on the environmental cycle, transport (including long-range transport and deposition), transformation and fate of mercury and mercury compounds in a range of ecosystems, taking appropriate account of the distinction between anthropogenic and natural emissions and releases of mercury and of remobilization of mercury from historic deposition;
- Information on commerce and trade in mercury and mercury compounds and mercury-added products; and (g) Information and research on the technical and economic availability of mercury-free products and processes and on best available techniques and best environmental practices to reduce and monitor emissions and releases of mercury and mercury compounds.

Parties should, where appropriate, build on existing monitoring networks and research programmes in undertaking the activities identified in paragraph 1.

1.2. Analysis of Article 19

1.2.1. Sub article 1b.

This sub article asks the contracting party to develop and improve modelling and geographically representative monitoring of levels of mercury and mercury compounds in vulnerable populations and in environmental media.



The global potential **sources of mercury pollution** are either natural (fire, geological faults and volcanic eruptions) or anthropogenic (human activities).

Multiple steps are needed by the contracting party:

- Conduct an inventory of existing mercury data within the country. Based on newly proposed guidelines for monitoring; mercury data most important for collection include air, biota as identified in Article 19, and humans;
- Determine the sources of Hg pollution in the country (e.g., from the mercury inventory conducted as part of the Minamata Initial Assessment);
- Develop a national monitoring scheme aimed at using existing mercury data to identify critical spatial and temporal gaps in key bioindicators for future monitoring purposes.

1.2.2. Sub article 1c

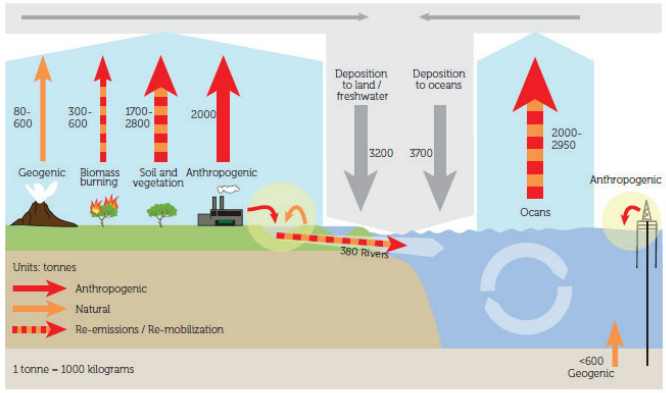
The sub article 1c asks for the contracting party to develop and improve the assessments of the impact of mercury and mercury compounds on human health and the environment. For more details about this sub article, please see responses within 3.2.1.

Short review of the release sources of mercury in Albania

The global potential sources of mercury pollution according to the text of the Minamata Convention are either natural (fire, geological faults and volcanic eruptions) or anthropogenic (human activities).

According to UNEP (2013a), the majority or 60% of the emissions in 2010 were those belonging to the "re-emissions" of mercury accumulated in the landscape and oceans from both natural and anthropogenic deposition. Most emissions, whether current or fluxes from legacy deposition, have an anthropogenic origin (Fig. 16).

Figure 16 Global Mercury Emissions (UNEP 2013a)



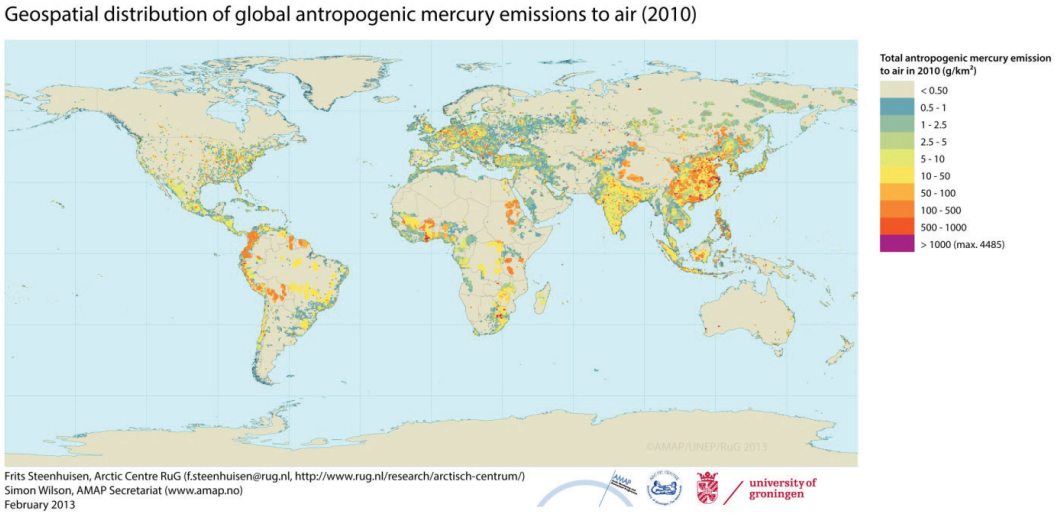
Source: UNEP, 2013a.

In aquatic systems, atmospheric deposition is one of the most important pathways of mercury. Mercury deposited in the landscape may be carried through the watershed (e.g., superficial runoff systems), however a considerable amount is retained by plants and soil. Soils and sediments can also be significantly enriched in mercury as a result of isolated releases from local industrial facilities and other activities such as metal and gold mining. Mercury in soil and sediments is also a source of contamination of freshwater systems (rivers, lakes, creeks) through soil leaching and erosion, and through sediment suspension.

In 2010 the atmospheric deposition of mercury was 3200 tons/year to land and 3700 tons/year to the oceans. The regions with the highest mercury emissions are south-east Asia with China and India as the main contributors, North America with the highest emissions from eastern United States, and from Colombia and Bolivia in South America. Emissions from Western, Central and Southern Europe are relatively low (Fig. 17). Nevertheless, due to volatility, mercury is transported by air and impacts countries with low emissions. This is the case for Albania, despite its limited contribution of mercury emissions.

The emission sources in Albania are similar to the global sources modelled by UNEP (Figure 17) and are presented in a detailed form in the National Inventory, Chapter II of this report.

Figure 17 Geospatial distribution of global anthropogenic mercury emissions to air



Assessment of the institutional monitoring capacities for mercury and Hg compounds in Albania

This chapter aims to undertake an assessment of the mercury institutional monitoring capacities in Albania. The assessment was undertaken through a research in existing literature and specific interviews with experts from the field of chemistry, biology, agriculture, veterinary and geology.

National Environmental Agency and its branches

The National Environmental Agency carries out monitoring of the state of the environment, within which chemical analyses of contaminants, including heavy metals, are performed. In this context, mercury is also analysed in surface waters. The NEA Laboratory does not perform sampling and analysis of mercury in the air, soil and biota.

Meanwhile, the branches of NEA (i.e. Regional Environmental Agencies) have neither the human nor the laboratory capacities to undertake monitoring of mercury and mercury compounds.

Tirana University

The Faculty of Natural Sciences (University of Tirana) has undertaken monitoring of mercury levels in the air and in plant material (Shehu et al. 2014). The laboratory conducting the mercury analyses has the necessary infrastructure and human capacities but is not yet accredited.

Agricultural University

The department of Agro-Environment and Ecology (Faculty of Agriculture and Environment, Tirana Agricultural University) through its accredited laboratory undertakes the monitoring of soil, water and including mercury.

Shkodra University

The University has a department of Biology and Chemistry under the Faculty of Natural Sciences. Despite its technical and human capacities, this university is not able to undertake the analyses of mercury in air, water or biota.

Vlora University

The University has a department of Biology and Chemistry under the Faculty of Natural Sciences. Despite its technical and human capacities, this university is still unable to undertake and analyse mercury concentrations in air, water or biota.

Korca University

The University has a department of Biology and Chemistry under the Faculty of Natural Sciences. Despite its technical and human capacities, this university is still unable to undertake and analyse Hg concentrations in air, water or biota.

Elbasan University “Aleksander Xhuvani”

The university has human capacity based at the Departments of Chemistry and Department of Biology (Faculty of Natural Sciences). Nevertheless, there is not yet sufficient technical infrastructure to undertake analysis of Hg and Hg compounds.

Durres University

There are neither technical nor human capacities to perform analyses of Hg and Hg compounds.

Institute of Public Health and its branches

The Institute of Public Health has both human and technical capacities to undertake Hg monitoring in samples of water and air. Its branches, distributed in regions, do not have the appropriate technical and human capacity to monitor mercury or its health effects in the population of the Ex- Soda PVC Plant area.

The Institute for Food Safety and Veterinary (IFSV)

The Institute, through its Laboratory on Heavy Metals carries out monitoring on biota including fish, molluscs and fishery products as well as waters in molluscs farming areas. Since December 2015, the IFSV has not been able to monitor mercury due to the failure of Atomic Absorption Spectrometer. The service will resume in 2018. As a result, there are shortcomings in the monitoring of water quality in fisheries and aquaculture.

Non-governmental Organizations

EDEN Centre, an Albanian NGO based in Tirana, is part of the International POPs Elimination Network (IPEN) and has been involved since 2011 in a global campaign whose purpose is to raise awareness among residents about the risks they are facing while living in a polluted site, as well as the creation of updated data and identifying relevant institutions that can take further steps to clean sites and even assist with moving residents from contaminated area.

EDEN projects also included the study of the mercury levels in fish of Vlora bay and humans of the area. Sample of fish were collected to determine mercury exposure in aquatic wildlife. Mercury exposure in humans was evaluated through samples of human hair. EDEN projects have been implemented with the financial support of IPEN under the “Zero Mercury Working Group” and the tests have been carried out at the BRI laboratory (Biodiversity Research Institute, Portland, Maine, USA).

According to Eden (2013), the average mercury levels in mullets are 2.8 times higher than human health safety thresholds used in the United States (e.g., 0.22 to 0.95 ppm of methylmercury in seafood should have a consumption guidance of 170 g meal per month (or one meal) for a 60 kg person; Great Lakes Advisory Workgroup 2007). The maximum mercury values observed in mullet are more than four times higher than the reference dose. Two of the mullet samples also exceeded the EU limit (data not shown). Four of the cod samples also exceeded the reference dose as indicated by for example the maximum mercury value. Other studies have also found high mercury levels in fish in this area. In the 1990s, mercury levels of 0.14 ppm - 3.39 ppm were found in small sharks (Galeus melastomus) from the Adriatic Sea (Storelli, Ceci et al. 1998).

Ultimately, understanding the potential of methylmercury contamination in the environment will be important because elevated methylmercury levels in humans have the ability to impact the nervous, renal, and cardiovascular systems, specifically on (1) cognitive abilities – e.g., lowered IQ; (2) neuro-behavior – e.g., slower response abilities to stimuli; (3) visual and auditory impairment; (4) insomnia, depression, tremors, and (5) in extreme cases, mental retardation, paralysis, mortality. Presentation of an integrated Hg national monitoring scheme for environmental media including biota.

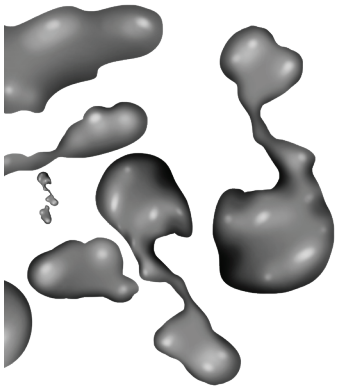
Past and current monitoring efforts for mercury traces in environmental media including biota.

The analysis demonstrated in chapter 5 could lead us to differentiate the past and current contribution of different institutions in monitoring mercury levels in environmental media.

Only three institutions are currently capable of undertaking the analysis of mercury in different environmental parameters as those institutions have all the needed capacities in terms of human, technical and infrastructure (Table 71). For the remaining institutions, human capacities are available, but they lack the appropriate infrastructure to be involved in monitoring of mercury levels in air, water, soil or biota.

Table 71. National human and technical capacities for monitoring Hg levels

Institutions and NGOs	Air	Water	Soil	Biota	Humans
National Environmental Agency		-			
Faculty of Natural Sciences (University of Tirana)	+	+		+	
Faculty of Agriculture and Environment (Agricultural University of Tirana)		+	+		
Institute of Public Health	+	+			+
Institute of Food Safety and Veterinary		-		-	
Institute of Applied Nuclear Physics	-	-			
Faculty of Natural Sciences (University of Shkodra)		-			
Faculty of Natural Sciences (University of Vlora)		-			
Faculty of Natural Sciences (University of Elbasan)		-			
Faculty of Natural Sciences (University of Korca)			-		
NGOs (as supporting partners)				-	-



The monitoring of atmospheric mercury within EU Member States is based on the existing national air quality monitoring stations. In total, **there are more than 8,000 stations across the EU.** Combined, the European region has a high coverage of monitoring stations compared with other regions.

Proposed scheme for the integrated mercury national monitoring in environmental media including biota.

The aim of this proposal is to contribute to building a national scheme for an integrated monitoring of mercury, improve the geographical coverage of national mercury monitoring systems (thus allowing for better assessment), and gathering baseline data to evaluate projects aiming to reduce mercury pollution in the country.

1.2.3. Cases from global mercury monitoring networks

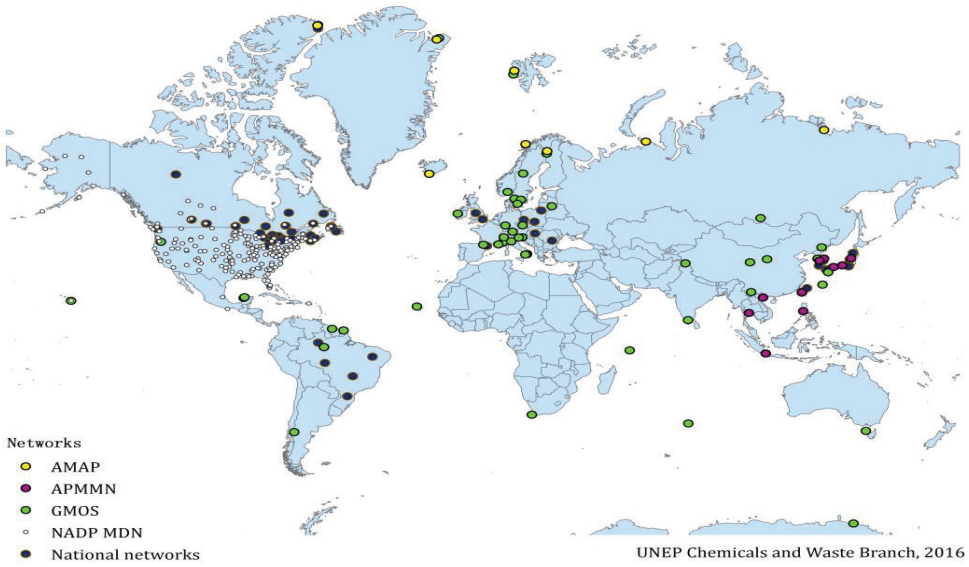
Atmospheric monitoring networks (according to UNEP 2016)

Mercury is present in the atmosphere either as gaseous elemental mercury (GEM), gaseous oxidized mercury (GOM), also known as reactive gaseous mercury or particulate-bound mercury (PBM). GEM is by far the most common mercury species in the atmosphere. It is not water soluble and can be transported over long distances due to its long atmospheric lifetime – ranging from several months to a year (AMAP/UNEP, 2013). GOM has high water solubility and is removed from the air phase by dissolution rapidly at the air-water interface. Due to its higher density, PBM is easily removed from the atmosphere by wet and dry deposition (AMAP/UNEP, 2013).

From the above, it is of utmost importance to monitor the wet deposition of mercury due to its strongest implications in contributing to the methylation process in aquatic ecosystems, aquatic biota and human health. Methylmercury is particularly dangerous as it biomagnifies in the food chain, bio-accumulates in organisms over time, and thus its poisonous effects are magnified when digested by humans.

The national networks for monitoring of mercury in the atmosphere differ from one country to another (Fig. 18).

Figure 18 Global networks for monitoring mercury levels



In Hungary, atmospheric mercury is monitored by the Hungarian Meteorological Service within the framework of Hungarian Air Quality Monitoring Network. In Poland, atmospheric mercury is being monitored since 2000 by the State Environmental Monitoring program established since 1991 by the Inspection of Environmental Protection.

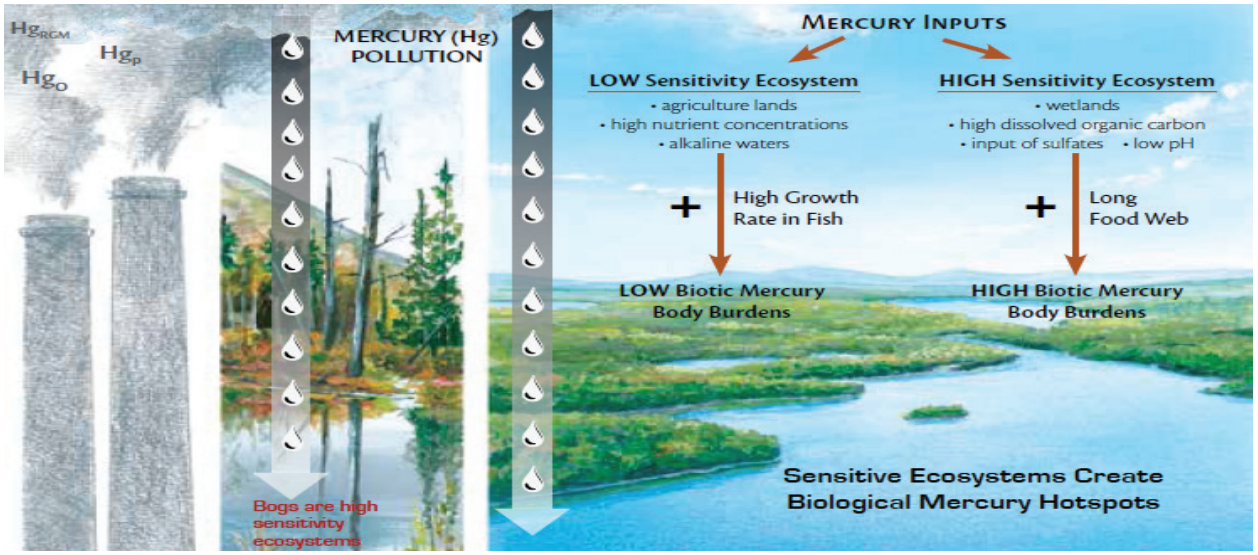
The monitoring of atmospheric mercury within EU Member States is based on the existing national air quality monitoring stations. In total, there are more than 8,000 stations across the EU. Combined, the European region has a high coverage of monitoring stations compared with other regions.

Biota monitoring networks

Monitoring of mercury concentrations in atmosphere and its depositions seems not sufficient to understand the scale of mercury impact on ecosystems, biodiversity and human health. As stated before, it is of crucial importance thus to measure the amount of methylmercury in the food web where it can bio magnify and contaminate ecosystems.

Methylmercury concentrations in the food web depend on the sensitivity of the habitat to mercury input. Areas of high sensitivity and high mercury exposure are called biological mercury hotspots. Wetlands are generally ecosystems of high sensitivity (Fig. 19) therefore monitoring of biotic methylmercury levels is usually undertaken in wetlands to determine the extent of concern for human and ecological health.

Figure 19 Ecosystems and their sensitivity to mercury contamination (Evers et al. 2017)



Fish and wildlife provide important information on the environmental impacts of mercury pollution and potential risks related to human and ecological health. According to Evers et al. (2017), young fish (<1 year) can reflect rapid changes of environmental mercury loads, while long-lived predatory fish commonly consumed by humans may indicate concern for human health.

Birds and mammals are, on the other hand, good indicators of both terrestrial and aquatic ecosystems as they can forage at the top of the food web and suffer also from the biomagnification and bioaccumulation of methylmercury.

Mammals could be of great interest for monitoring both ecosystems. Some of them are relevant indicators of ecological integrity such as piscivorous species, otter (Lutra lutra), which is a good indicator of fresh water ecosystems, or insectivorous species (bats, Order Chiroptera) for terrestrial ecosystems. Other mammals such as the toothed whales are good indicators for human health purposes.

The majority of monitoring systems and networks try to measure methylmercury concentrations in fish populations as it provides evidence for both the ecosystems and human health. Methylmercury generally constitutes more than 95% of total mercury found in fish and seafood (Bloom, 1992). According to the U.S. EPA, only fish at a concentration below 0.3 ppm of mercury per kilogram of body weight is safe to consume on a daily basis (based on a 17.5 g/day consumption). Above that value and below 1 ppm, certain restrictions of consumption should apply. Above 1 ppm, consumption is not recommended.

In general, mercury accumulation is lower in smaller, short-lived fish (including anchovies, sardines, salmon etc.), which can be consumed on a more regular basis. By contrast, large, long-lived species, many of which are pelagic, accumulate higher mercury concentrations.

Different monitoring systems are in place in different countries, but we give particular attention to the EU countries as mercury is a priority hazardous substance in the European Union according to the European Water Framework Directive (WFD) and an indicator of the environmental quality. According to the WFD, mercury levels need to be measured in fish (because air, sediment and water mercury concentrations cannot be reliably linked to methylmercury exposure in the diet of human). The same should apply also to Albania, as the country aims for EU integration in the near future.

In Poland, the State Environmental Monitoring System measures and assesses the state of the environment as well as collects, processes and disseminates information on the environment. As part of this program, mercury levels are monitored in biota – including marine molluscs, phytobenthos and herring – since 1998.

In Norway, the Norwegian National Institute of Nutrition and Seafood Research program controls mercury levels in seafood. Moreover, the Norwegian Institute for Air Research and Norwegian Institute for Water Research on behalf of Norwegian Environment Agency monitor mercury in biota.

In the European Union, continuous collection of chemical contaminants occurrence data in food and feed mercury measurements are regularly reported to the European Food Safety Authority (EFSA) whose correspondent in Albania is the Institute of Food Safety and Veterinary (ISUV).

Hg monitoring networks in humans

People are exposed to mercury mainly through consumption of methylmercury accumulated in seafood such as fish, and ingestion or inhalation of elemental or inorganic mercury mainly through occupational exposure. Freshwater fish, saltwater fish and other marine species are an important, nutritious and beneficial component of the human diet. Due to the bioaccumulation of mercury along the food web, the higher the trophic level, the higher the concentration of mercury in the marine species. Older and/or larger predators (e.g. shark or tuna) and fish consuming mammals (e.g. seal, whale) among other, exhibit increased level of accumulated methylmercury (UNEP, 2002; US Environmental Protection Agency (EPA), 2003, Evers et al. 2017).

Methylmercury negatively affects the nervous system, especially during its development phase. Once ingested, methylmercury forms an aggregate with cysteine, which can pass through the blood-brain barrier.

Different countries have different monitoring systems. Herein are examples of EU countries, considering that Albania will be part of the EU in the near future we will want to adopt a monitoring system similar to those in the EU.

In Sweden, the Swedish Environmental Protection Agency, as part of its National Monitoring Program, monitors the mercury levels in human blood, urine and hair. In Austria and Slovakia, mercury and methyl mercury has been measured in blood of mothers and their new-borns.

At global scale, the Global Fish and Community Mercury Monitoring Project - GFC MMP - is a result of the joint efforts of BRI and the International POPs Elimination Network (IPEN). The sampling sites represent all UN regions and are associated with releases of mercury to air, land and water. Hair samples were analysed in at least 9 countries, namely: Cameroon, Cooks Islands, Indonesia, Japan, Mexico, Russia, Thailand and Tanzania and Albania. The selection of sampling sites has been guided by the presence of point sources of

mercury emissions. In Albania, IPEN and BRI have evaluated mercury in humans through samples of human hair collected in Vlora area, where a former PVC factory considered as industrial hotspot was located. Further human biomonitoring efforts can be continued for Albania as a partner within such global efforts.

1.2.4. Proposed national scheme for the monitoring of Hg

Monitoring of Hg in atmosphere

Based on the capacities of different institutions regarding the, it seems that for the moment best institution to undertake the monitoring of mercury in the air are the National Environmental Agency, given its central role in air quality monitoring in the country and the Institute of Public Health. The institute has technical and human capacities to undertake the monitoring and it is in line with its central role in monitoring the impact of different environmental parameters upon the public health. While further capacities technical and in equipment should be built for NEA.

As in other countries, sampling sites could coincide with air monitoring stations. Samples collected by different institutions should be analysed by the Institute of Public Health because of technical and logistical capacities.

Monitoring Hg concentrations in biota

Based on different publications about measuring mercury contamination the bio-monitoring process should follow several steps:

Selecting the site and the target species

Fish are good indicators for wetlands, while birds and mammals are effective bio-indicators for terrestrial ecosystems.

Among fish, See Bass could represent both freshwater and brackish water ecosystems. Other species, Atlantic bluefin tuna (Thunnus thynnus), bullet Tuna (Auxis rochei) and leerfish (Leccia amia) are used for monitoring of salt water ecosystems.

Focal taxa for aquatic ecosystems could be water birds such as (plovers, sandpipers and herons), sea ducks and see birds (gulls, terns, pelicans, petrels and shearwaters). Focal taxa for terrestrial ecosystems could be insectivorous species including swallows (Hirundo sp.) and warblers (Acrocephalus sp. Phylloscopus sp).

Collecting and preparing samples

This step includes collecting fish and marine mammal muscle tissue samples through nonlethal biopsies. For birds, blood samples are recommended for short-term exposure while for long-term exposure researchers use mostly feathers and eggs. Proper labelling and storage of samples is imperative to ensure quality results. Researchers should adhere to protocols that may vary according to sample type.

Analysing samples

Toxicology lab capabilities should include:

- total mercury analysis (using a Direct Mercury Analyser or similar instrument);
- tissue moisture determination (using a freeze dryer);
- tissue homogenization (using a cryogrinder); and
- a sensitive scale that can weigh small samples (e.g., 0.00001 g)

For fish samples, fillets (or muscle tissue) can be analysed on a wet weight or dry weight basis. While much of the literature uses wet weight mercury concentrations, dry weight is a preferred analysis to avoid the tissue being compromised by loss of moisture. For either wet weight or dry weight analysis, it is key to completely homogenize the sample. A dry weight analyses can either use the measured moisture or a rule of thumb moisture content of 80% to convert dry weight to wet weight Hg concentrations.

When aquatic bird samples are available, the analysis should focus on all tissues for total Hg because the form of mercury is primarily MeHg (>95%). Blood should be tested as wet weight; feathers do not need to be dried and should be measured as is unless external contamination is of concern (e.g., museum skins); and eggs can be tested as wet weight as long as they are fresh, if not, they should be frozen dried and tested as dry weight. Complete homogenization of eggs is key for replicable comparisons.

Data analysis and management

Analysts should ensure the quality control of the data during processing and management.

Reporting of results

Reporting of results is crucial for both decision-making institutions and public at large. In this context it

is of utmost importance to popularize the results of the research through clear language that engages all the readers and helps convey complex scientific topics.

Fulfilling the obligations of Minamata Convention

Article 19 of the Convention states that "Modelling and geographically representative monitoring of levels of mercury and mercury compounds in vulnerable populations and in environmental media, including biotic media such as fish, marine mammals, sea turtles and birds, as well as collaboration in the collection and exchange of relevant and appropriate samples." This report is contributing to the fulfilment of the obligations of Albania with regards to Article 19.

Monitoring mercury concentration in humans

Considering the adverse effects of methylmercury, it is worthwhile that the monitoring networks expand to identify potential mercury sources in the country. In accordance with chapter 2 the potential sources are:

- Large urban areas where mercury added products are quite available,
- Former manufacturing factories that were using mercury in their technological processes,
- Current potential point sources all over the country including the coal-fired industrial boilers, smelting and roasting processes used in the production of non-ferrous metals, waste incineration facilities and cement clinker production facilities.

IPH and NEA could be again the leading monitoring entities considering their role and experience with the network of institutions involved in issues of public health and taking in account both the technical and human capacities as well as the existing capacities in terms of infrastructure and logistics.

Conclusions

Monitoring mercury is an important need for Albania. It is needed to help meet and evaluate changes made according to the obligations of the Minamata Convention. Once guidance documents on mercury monitoring are approved by the Conference of Parties, Albania should customize their monitoring efforts to follow these guidelines in a way that also contributes and extends on-going networks in the EU.

ANNEX 2: COUNTRY DATA AND THE AMOUNT OF IMPORTED SKIN CREAMS AND SOAPS ACCORDING TO THE COUNTRY OF ORIGIN

Country data

MERCURY INVENTORY FOR	ALBANIA
General population data	
Population (select country below to find population)	2,876,101
Year and reference for population data	2015
GDP (Gross Domestic product)	11,541,047,833 USD
Year and reference for GDP data	2015
Main sectors in the economy of country (list)	Service, agriculture, mining, construction, energy

The amount of imported skin creams and soaps according to the country of origin

European countries						Non-European countries		
Country	The imported amount of creams and soaps (kg/year)		Country	The imported amount of creams and soaps (kg/year)		Country	The imported amount of creams and soaps (kg/year)	
	2015	2016		2015	2016		2015	2016
Austria	2,095.56	1,382.71	Poland	12,184.12	13,354.97	Canada	1,338.28	13.58
Belgium	713.59	9,173.83	Portugal	184.00	2.88	USA	9,144.89	5,595.16
Bulgaria	112,519.48	106,122.09	Romania	584,611.60	542,435.89	Bahamas	0.00	24.85
Croatia	33,113.92	51,034.38	Slovakia	0.00	1,814.40	Brazil	0.00	7.70
Republic of Cyprus	0.00	2,736.00	Slovenia	9,125.87	4,940.72	Chile	8.70	20.82
Czech Republic	328.85	478.98	Spain	33,993.30	30,965.81	Colombia	0.00	70.00
Denmark	306.89	500.34	Sweden	1.50	0.00	Venezuela	1.50	0.00
Estonia	0.00	326.68	UK	5,511.24	7,321.01	Tokelau	0.00	40.00
France	33,958.35	30,530.21	Switzerland	718.42	1,180.04	Morocco	17,626.53	0.00
Germany	291,622.68	3,125,48.25	Bosnia and Herzegovina	1,028.06	1341.83	China	39,349.89	53,086.23
Greece	123,326.37	173,258.02	Kosovo	152,806.64	190,956.75	Hong Kong	30.00	505.00
Hungary	75,548.26	87,093.49	Macedonia	63,738.21	113,520.01	India	21,095.80	728.84
Ireland	36.88	255.90	Malaysia	60,000.00	60,000.00	Israel	0.00	302.51
Italy	1,256,049.31	1,415,750.65	Montenegro	103.00	0.00	Russia	0.00	230.54
Latvia	24.00	388.06	Serbia	3,778.66	6,933.03	United Arab Emirates	19,796.19	30,309.37
Malta	19,746.9	16,404.00	San Marino	424.00	321.50	South Korea	0.00	119.30
Netherlands	20,606.91	8,812.80	Turkey	2,258,779.56	2,473,975.24	Syrian Arab Republic	1,677.89	152.50

ANNEX 3: COMMUNICATION, EDUCATION AND PUBLIC AWARENESS (CEPAF) PLAN FRAMEWORK FOR MINAMATA CONVENTION ACTIONS IN ALBANIA

1. Background

The articles of the Minamata Convention that are of relevance for awareness raising include mercury supply sources and trade, mercury waste, mercury releases, contamination, health aspects and legal provisions. Of particular interest in Albania are mercury containing products and mercury free alternatives as well as actions necessary to minimize and reduce mercury emissions and releases to human health and environment. Another important aspect of awareness and communication relates to actions needed to trigger ratification of the Convention including awareness of obligations, responsibilities and short- to -long term benefits.

2. Introduction – Why are we communicating?

Four aspects of mercury pollution prioritized for awareness-raising in Albania include 1) mercury use and health effects, 2) mercury supply and trade, 3) storage and disposal and 4) the existing national, regional and international legal provisions for the sound management of mercury.

Raising awareness about these four aspects was deemed very important in reducing the threat of mercury pollution to human health and the environment. The assessed level of awareness is very low among the public, communities, consumers, regulators, media, industry and government.

The main goal is to inform the public on the Minamata Convention, related EU requirements and SDGs, the results of the national inventory, next steps in terms of the country's industrial development and market exchange. To achieve this goal, the communication plan outlines the following core activities that need to be implemented throughout the year:

- Disseminate information on inventory to public domain and other stakeholders.
- Strengthening the existing ties with civil society, media organizations and news outlets and keeping the public informed of the work on Minamata in the country. An active civil society and investigative journalism is what shapes the public perception and triggers action. Previous lessons suggest that any shortcoming in this end lead to undesirable results such as inaccurate media reports, lack of opponent position in government decision making.
- Communicate through results, message through media interviews, press releases, open-editorial articles, website stories, informative videos amongst others. External communications and information dissemination, presented in the form of news stories, press releases, op-ed articles, Facebook posts, tweets and if possible, videos and visual presentations. Utilize social media channels to further expand the outreach and to disseminate messages, results and activities.

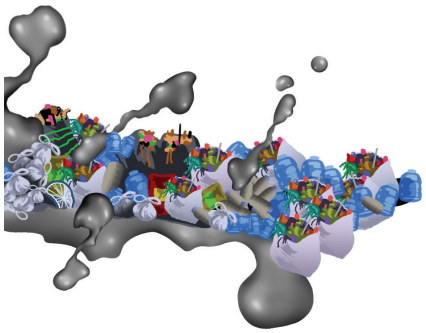
Albania, compared to its population and size, has a considerably large internet access, with a significantly large community regularly or on a frequent basis access popular social media channels such as Facebook, Instagram, Twitter, etc. Utilizing social media networks to relay the information allows to tap into this audience and by using existing marketing tools offered by such social media services would further allow an increased outreach with a relatively minimal expense.

3. Expected Outcomes

The expected outcomes include greater public awareness on Minamata Convention and mercury through strong civil society engagement, increased media coverage; enhanced media outreach, including community and social media; high quality communications products developed; and active social media pages, blogs and forums maintained.

4. Objectives and Target Groups

4.1 What are the key objectives we are communicating?



Protect Albanian people's health and environment, by **benefiting from the global efforts to protect human health and the environment** from anthropogenic emissions and releases of mercury and mercury compounds.

The following key messages will form the core objectives of the awareness raising strategy:

- Impacts of exposure to mercury and mercury use on human health, mercury supply and trade, storage and disposal, as well as the measures to prevent exposure.
- Benefits and obligations of ratification of the Minamata Convention and relevant EU requirements. E.g.- Protect Albanian people's health and environment, by benefiting from the global efforts to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds.

4.2. Audience – Who are we targeting?

Key targets include: Line Ministries, independent institutions and parliamentarians.

It is very important to create a solid awareness of the Minamata Convention starting with the Ministry of Tourism and Environment, as well as with other line ministries, customs and parliamentary group on productive activities. It is necessary to increase awareness given that parties to the Minamata Convention are obliged to adhere to its obligations, which include in Article 13(a) requirement for each Party to provide, within its capabilities, resources in respect of those national activities that are intended to implement the Convention, in accordance with its national policies, priorities, plans and programs. In addition, Article 13 also defines a financial mechanism to support developing country Parties (Albania falls in this category) and Parties with economies in transition in implementing their obligations.

Donors and Development Partners

Key focus for communication with this audience segment is for resource mobilization, support on policy dialogue and for partnering in implementing programs.

Civil Society (NGOs, CBOs)

NGOs and Community Based Organizations have a strong footing on the ground having closer ties to the communities and grassroots stakeholders. They influence community debates and helps in shaping opinions of the communities they are based in. By establishing proper communications, CBOs and NGOs can act as key partners in transmitting information and advocating messages on Minamata through their networks.

General Public

The general public includes beneficiaries of the work carried out by UNDP that includes both the public at large as well as specific groups such as women and youth.

Media/Journalists

Media in itself is a channel that can be utilized to enhance and popularize environmental issues among different stakeholders.

Private sector

The private sector is relatively unaware of mercury containing products and alternatives to mercury containing products as well as actions needed to be done to minimize and reduce the threats by mercury emissions and releases to human health and environment. A good working relationship with the private sector is important to maximize the environmental protection even due to complicated legislation.

Schools (formal and informal education levels)

Bring more schools aboard. Continue the efforts and take adequate measures to promote environmental education (mercury included), training and sensitization in school's curricula at all levels.

One of the measures to increase awareness in schools is to promote and to introduce educational programs which focus trained senior secondary teachers in the field of chemistry, biology and geography on issues of environmental policy, and how to introduce or activate the environmental clubs, which can be established in schools countrywide.

The purpose of environmental clubs is to make a difference in schools and to create ambassadors of environmental issues. In this regard students can be involved in different activities in their school, city etc.

5. Methods

5.1. Channels and Tools – How do we communicate?

Social Media

Social Media channels such as Facebook, Twitter, YouTube, Flickr and Google Plus are extremely useful and cost-effective platforms that could be utilized to communicate to masses. Albania has an extremely active social media community and hence social media remains one of the most formidable options to disseminate information, key messages and results both in the form of text and visuals including photo, video and info-graphics.

Print and Online Media

Albania boasts of a variety of vibrant online news media outlets compared to its population.
Banners can be made available in the main access routes to the targeted sites.
Leaflets, brochures and flyers presenting the various aspects of profiling can also be produced and distributed to local authorities and to the public during awareness raising meetings, political or organizational meetings.

Broadcast media

Apart from the state broadcasters TVSH, several private broadcasters with considerable viewers are also broadcasting. Hence, it is imperative to approach these along with the state broadcasters.

A press pack can be developed and made available to intermediary and local administrative authorities, and to the media. This press pack will serve as a basic document for press conferences and press briefings which will be organized by the authorities.

Administrative letters

Administrative letters from higher administrative authorities (Ministers, governors, prefects, regional administrators, mayors, community leaders, etc.), to the lower administrative authorities (governors, regional prefects or administrators, mayors, community leaders, village leaders, site leaders, etc.) presenting the operation and requesting the involvement of authorities, can be produced and distributed. These letters can be distributed in a top-down approach: the central level will send them to the regional levels, which will send them on to the sub-regional levels, which will in turn send the messages to the peripheral levels.

Grass-roots awareness-raising

Grass-roots awareness-raising will target the populations living in the areas where mercury supply sources and mercury wastes might be more present. The aim will be to provide the information about the profiling in order to address any worries and reluctance, which people may have. The awareness-raising should be able to explain and focus on each person's power to make good choices (buy mercury-free products, choose healthier rather than riskier fish options, etc.) and general info about mercury. E.g. - General information about mercury and its impacts on human health and environment.

Tools of Information and Promotional Activities

Tool	Form	Target group	Impact
Internet	Independent website Wikipedia pages Social Media portals as FB, Flickr, Instagram, etc.	All target groups	Easy accessibility of information for all target groups (applications, instructions, guidelines, publications, novelties, media information,etc.)
Printed and film materials	Brochures, information leaflets and posters, instructions for applicants, UNDP bulletin, video, DVD, CD-ROM	All target groups	Easy accessibility of information for all target groups
Annual and final reports	For the programme and separate projects	Minamata Committee, UNDP, GOV, CSOs	Information on the fulfilment of the programme and projects, supporting information for the next programming period
Seminars and training	Local, National, regional	Implementation structure entities, all target groups	Support of communication flows, feedback

Information Local meetings and regional meetings	Meetings of all target groups with entities of implementation structures; media involvement	All target groups, media	Easy accessibility of information for all target groups, feedback
Conferences, trade fairs	Presentations of programme and projects in thematically focused conferences and trade fairs (nation-wide, regional)	All target groups, implementation structure entities	Promotion of communication flows, feedback
Communication with Media: - Press - Television - Radio	Nation-wide, regional (press conferences, media coverage, interviews, adverts, etc.)	All target groups	Creating an awareness of the Mercury and Minamata Convention
Advertising articles	Notepads, covers, pens, bags, stickers etc.	All target groups	Creating and supporting awareness of the programme

Key promotional activities and messages for grass-roots awareness-raising;
Printed resources and educational/promotional materials;
Easy to understand leaflet with findings from inventory on Albania situation for mercury associated with info-graphics;
A leaflet on Minamata Convention and SDGs, specifically SDG 1, 2, 3, 7, 8, 12, 14.

New short promotional film.
The film could also be broadcasted using various channels as: YouTube, Flickr, Instagram, etc.
Note: Other Parties/Players/Partners/NGOs/IGOs websites (this could just be a link from UNDP site or YouTube page.

Environment Film Festival- Engaging through Events and with existing Films Platforms and festivals; Cooperate with American corner, EU info centres and British Council Library to display info on Mercury and Minamata Convention. This might turn to be a powerful, emotive and effective way of engaging large and varied audiences. This plan recommends that where there is public awareness programs in place, such programmes should be supported in order to integrate them into the wider effort to promote awareness in the area.

Mercury Know How for Parliamentarians Campaign – PRO MP (Pro Minamata Parliamentarians)

Facilitate exchange of the Parliamentary Members (MPs) with EU initiatives based on the latest developments. In February 2016, the Commission put forward a proposal repealing the Mercury Export Ban Regulation and fully aligning EU legislation with the Minamata Convention. In particular, the proposal would ban the export and import of mercury and products containing mercury (with some exemptions), restrict the use of mercury in certain manufacturing processes, ban new mercury uses in products and manufacturing processes, restrict the use of mercury in dental amalgam, and set requirements for the permanent storage of mercury waste. MPs might be engaged through a field visit promoting recycling of batteries and or stronger monitoring mechanisms for cement industries in cooperation with the National Environmental Agency.

Minamata Care Award

This is an award given to people working/advocating to substitute mercury-based medical devices with accurate, affordable alternatives. The award could be given an honorary name, for example, named after someone and/or its sponsor.

Country/Regional Champions

Establish a network/coalition of NGOs/CBOs on Mercury and facilitate exchange with other NGOs in Western Balkan where UNDP is supporting MIA projects. Make use of a small grants mechanism for related mercury awareness delivered by the network to incentivize it.

Wikipedia Pages

Wikipedia is an important public tool in order to maximize its potential for outreach. The Wikipedia pages should be updated regularly with links to current documents, latest news and important events such around Mercury.

Creation of APPs

Due to the new technology area, creation of a simple and attractive APP can raise a soft power awareness toward young generation whom are very difficult to get engaged with these themes

Budget and timeline

It is very important to determine the budget for the CEPAF and the timeline that the communication and educational activities will take place, i.e., if the communication plan needs to be implemented over 6 months, or 12 months or more.

ANNEX 4: POLICY AND REGULATORY MEASURES IN PLACE AND REMAINING GAPS RELATED TO MINAMATA CONVENTION IMPLEMENTATION

A table is prepared for each article of the Convention, putting together and comparing the requirements of the Convention with the relevant legislation in place in Albania. At the final row of each table, a comment/ conclusion is made on the relevant legislation, how far it fulfils the requirements of the Convention (and EU draft Regulation on mercury) and remaining gaps.

Table 27. Article 3 - Mercury Supply sources and Trade

ARTICLE 3 - MERCURY SUPPLY SOURCES AND TRADE	
Succinct summary of provisions relevant to Albania	- Not allow new primary mercury mining - Phase out existing primary mercury mining within 15 years - Obtain information on stocks of mercury or mercury compounds exceeding 50 metric tons (MT), and mercury supply generating stocks exceeding 10 MT/yr - In accordance with Article 3.5(b), ensures that excess mercury from decommissioning chlor-alkali plants is disposed of in accordance to environmentally sound management guidelines (see paragraph 3a of Article 11) - Not allow the export of mercury unless the importing country provides written consent, the mercury is for an allowed use or environmentally sound storage, and all other conditions of Article 3.6 are met - Not allow the import of mercury without government consent, ensuring both the mercury source and proposed use are allowed under the Convention (and applicable domestic law).
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Title and reference/ number of relevant regulatory measure	Aspects addressed by policy/Regulatory measure:
Law No. 27/2016 "On chemicals management", 17.03.2016	This is a frame law that transposes partly REACH and CLP EU Regulations. At point 3 of Article 23 "Prevention and reduction of environmental pollution from chemicals" of this law it is stipulated that, for the reduction of pollution and gradual elimination until the complete ban of mercury measures shall be induced to ban exports, to reduce mercury in products, processes, and in industries which use, discharge or emit mercury to the atmosphere or release in uncontrolled way technologic waste containing mercury, the responsibility for storage and safe disposal of mercury. At point 4 of the same Article, it is stipulated that rules for banning the export of metallic mercury, compounds and certain mercury mixtures, safe storage of metallic mercury and specific criteria for the storage of metallic mercury considered as waste will be approved by the Council of Ministers with the proposal of the Minister responsible for the Environment.

Law No. 10 277, dated 13/05/2010 on the accession of the Republic of Albania to the Rotterdam Convention	Mercury compounds are included at Annex III: Chemicals that are subject to PIC procedure. One of the items of this Annex are Mercury compounds, including inorganic mercury compounds, alkylic mercury compounds, alkyloxyalkylic compounds and arylic mercury compounds.
Decision of the Council of Ministers No. 665, dated 21/09/2016 "On the export and import of hazardous chemicals"	The objective of this Decision is consistent with the objective of the Rotterdam Convention, adopted by Law No. 10277, dated 13/05/2010, "On accession of the Republic of Albania in the Rotterdam Convention "On the procedure of Prior Informed Consent for certain hazardous chemicals and products for plant protection in international trade.""

This decision transposes the Regulation (EC) No. 649/2012 of the European Parliament and the Council, dated July 4, 2012, concerning the export and import of dangerous chemicals

At Part 1 "List of chemicals subject to export notification procedure" of Annex I "List of hazardous chemicals and articles" of this DCM, mercury compounds are included at item 112: "Mercury compounds including inorganic mercury compounds, and arylic, alkyloxyalkyl, alkylic compounds of mercury, with the exception of mercury compounds that are listed in Annex V".

At Part 3 "List of chemicals subject to the PIC procedure in the frame of the Rotterdam Convention" of Annex I, in item 21 there have been included "Mercury compounds, including inorganic mercury compounds, alkylic mercury compounds, alkyloxyalkylic compounds and arylic mercury compounds"

At Table. 2 "Other chemicals prohibited to be exported, besides those listed in Appendices A and B to the Stockholm Convention on POPs" of Annex IV "Chemicals and hazardous items prohibited to be exported", there are included items as follows:

No.	The description of the chemicals / items that are prohibited to export	Additional data, where possible (e.g. the chemical name, EC, CAS No.)
2.	Mercury compounds, excluding compounds exported for research and development purposes, for medical purposes or analysis.	Cinnabar Mineral, Mercury Chloride (I)Hg_2Cl_2,No. CAS 10112-91-1, CN Code 2852 10 00 Mercury oxide (II) HgO, No. CAS 21908-53-2; CN Code 2852 1000
3.	Metallic mercury and mixtures of metallic mercury with other substances, including alloys of mercury, with a mercury concentration of at least 95% of the total weight.	No. CAS 7439-97-6 CN Code 2805 40

Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):

There are no known existing or new primary mercury mining or stocks of mercury or mercury compounds exceeding 50 metric tons (MT), and mercury supply generating stocks exceeding 10 MT/yr in Albania.

Some provisions related to import and export of mercury and some mercury compounds are already covered by the Law No. 10 277, dated 13/05/2010 on the accession of the Republic of Albania to the Rotterdam Convention "On the procedure of prior informed consent for some hazardous chemicals and plant protection products in international trade" and DCM No. 665, dated 21/09/2016 "On import and export of hazardous chemicals".

Rules for banning the export of metallic mercury, compounds and certain mercury mixtures, safe storage of metallic mercury and specific criteria for the storage of metallic mercury considered as waste are planned to be prepared under the Law No. 27/2016 "On chemicals management", dated 17/03/2016. An advanced draft of the DCM "On rules on the banning of exports of metallic mercury and certain mercury compounds and mixtures and the safe storage of metallic mercury and specific criteria for the storage of metallic mercury considered as waste" has been developed, transposing Regulation (EC) No. 1102/2008 and as per the requirements of Minamata Convention.

Table 28. Article 4 Mercury-added products

ARTICLE 4 - MERCURY-ADDED PRODUCTS	
Succinct summary of provisions relevant to Albania	- Not allow the manufacture, import, and export of products listed in Part I of Annex A not otherwise excluded following the phase out date listed in the Annex - Phase down the use of dental amalgam through two or more measures listed in Part II of Annex A - Take measures to prevent the incorporation of products listed in Part I of Annex A (i.e., switches and relays, batteries) into larger, assembled products - Discourage the manufacture and distribution of new mercury product types
	Annex A Part I: Products subject to Article 4, paragraph 1
	Annex A Part II: Products subject to Article 4, paragraph 3 Measures to be taken by a Party to phase down the use of dental amalgam shall take into account the Party's domestic circumstances and relevant international guidance and shall include two or more of the measures from the following list: (i) Setting national objectives aiming at dental caries prevention and health promotion, thereby minimizing the need for dental restoration; (ii) Setting national objectives aiming at minimizing its use; (iii) Promoting the use of cost-effective and clinically effective mercury-free alternatives for dental restoration; (iv) Promoting research and development of quality mercury-free materials for dental restoration; (v) Encouraging representative professional organizations and dental schools to educate and train dental professionals and students on the use of mercury-free dental restoration alternatives and on promoting best management practices; (vi) Discouraging insurance policies and programmes that favour dental amalgam use over mercury-free dental restoration; (vii) Encouraging insurance policies and programmes that favour the use of quality alternatives to dental amalgam for dental restoration; (viii) Restricting the use of dental amalgam to its encapsulated form; (ix) Promoting the use of best environmental practices in dental facilities to reduce releases of mercury and mercury compounds to water and land.
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory Measure	Aspects addressed by policy/Regulatory measure:
DCM No. 866, dated 04/12/2012 "On batteries, accumulators and their waste"	The decision aims to a) establish rules for the placing on the market of batteries and accumulators; b) prohibit the placing on the market of batteries and accumulators containing hazardous substances; c) maximize the separate collection of waste batteries and accumulators; d) promote a high level of recycling; d) reduce the quantities of waste batteries and accumulators that are destroyed together with mixed municipal waste; f) improve the environmental performance of all economic operators involved in the life cycle of batteries and accumulators. At Chapter VI "Ban on the placing on the market", point 1, it is stipulated that it is forbidden to put on the market batteries or accumulators, whether or not installed in equipment containing mercury more than 0.0005% of their weight. This limit shall not apply to button batteries, containing mercury not more than 2% of their weight. Manufacturers of batteries, and button accumulators and batteries containing more than 0,0005 % Hg have to label them with chemical symbol of metals.

Mercury-added products	
Batteries, except for button zinc silver oxide batteries with a mercury content < 2% and button zinc air batteries with a mercury content < 2%	
Switches and relays, except very high accuracy capacitance and loss measurement bridges and high frequency radio frequency switches and relays in monitoring and control instruments with a maximum mercury content of 20 mg per bridge, switch or relay	
Compact fluorescent lamps (CFLs) for general lighting purposes that are ≤ 30 watts with a mercury content exceeding 5 mg per lamp burner	
Linear fluorescent lamps (LFLs) for general lighting purposes: (a) Triband phosphor < 60 watts with a mercury content exceeding 5 mg per lamp; (b) Halophosphate phosphor ≤ 40 watts with a mercury content exceeding 10 mg per lamp	
High pressure mercury vapour lamps (HPMV) for general lighting purposes	
Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for electronic displays: (a) short length (≤ 500 mm) with mercury content exceeding 3.5 mg per lamp (b) medium length (> 500 mm and ≤ 1 500 mm) with mercury content exceeding 5 mg per lamp (c) long length (> 1 500 mm) with mercury content exceeding 13 mg per lamp	
Cosmetics (with mercury content above 1ppm), including skin lightening soaps and creams, and not including eye area cosmetics where mercury is used as a preservative and no effective and safe substitute preservatives are available	
Pesticides, biocides and topical antiseptics	
The following non-electronic measuring devices except non-electronic measuring devices installed in large-scale equipment or those used for high precision measurement, where no suitable mercury-free alternative is available: (a) barometers; (b) hygrometers; (c) manometers; (d) thermometers; (e)sphygmomanometers	
DCM No. 957, dated 19/12/2012 on the waste of electrical and electronic equipment	The DCM "On waste electrical and electronic equipment" fully transposing Directive 2002/96/EC, determines that the Ministry of Tourism and Environment and the ministry responsible for economy encourage, the design and production of electrical and electronic equipment, which take into account and facilitate dismantling and recovery, in particular the reuse and recycling of waste electrical and electronic equipment, components and their materials. Regarding to the treatment of waste of electrical and electronic equipment, Annex II defines that mercury-containing components as keys light, changing lamps or lighting must be removed. Producers that place in the market electrical and electronic equipment, shall minimize dumping of WEEE in the same place with mixed household waste, to facilitate their separated collection, label them with the symbol defined in Annex IV of the DCM on WEEE In particular for the protection of children's health, bioavailability (soluble extract that has toxicological significance) that derives from the use of toys, as a target should not exceed the levels of 0.5 µg mercury. Regarding the Mercury-containing electrical components and Mercury-containing fluorescent lamps, Annex 2.2 of DCM on WEEE specifies the substitution of products containing one or more intentionally added heavy metals or if a suitable alternative exists, the minimization or substitution in products of one or more intentionally added heavy metals; Regarding the Mercury-containing electrical components and Mercury-containing fluorescent lamps, paragraph VI of DCM on WEEE specifies the provision of product information including labelling to ensure that users are informed of the content of one or more intentionally added heavy metals and of the need for safe use and waste handling; Regarding the Mercury-containing electrical components and Mercury-containing fluorescent lamps, paragraph V of DCM on WEEE specifies the use of economic incentives or voluntary agreements to reduce or eliminate the content in products of the heavy metals.

Law No. 27/2016 "On chemicals management", 17/03/2016	This new Law is a frame Law that transposes partly REACH and CLP EU Regulations. At point 3 of Article 23 "Prevention and reduction of environmental pollution from chemicals" of this law it is stipulated that "In the reduction of pollution and gradual elimination till the complete ban of mercury are included measures to ban exports, to reduce mercury in products, processes, and in industries that use, discharge or emit mercury to the atmosphere or release in uncontrolled way technologic waste containing mercury, the responsibility for storage and safe disposal of mercury".
Draft DCM on the restrictions on the manufacture, placing on the market and use of certain hazardous chemicals and articles.	The draft DCM stipulates restrictions on manufacturing, placing on the market and use of certain chemicals and articles, hazardous to human health and the environment. This draft Decision transposes Annexes XVII and VI of Regulation (EC) No. 1907/2006 of the Parliament and the European Council dated 18 December 2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). Annex I of this draft consists of 2 chapters. Chapter I of this Annex lists 64 substances or groups of substances. Mercury and mercury compounds belong to Annex I, Chapter 1 "List of banned and restricted substances": 18: Mercury Compounds will not be placed on the market, or used, as substance or in mixtures, where the substance or mixture is intended for use: a) in preventing adverse actions by microorganisms, plants or animals on shipping body, - cages, floats, nets and any other equipment used for fishing or aquaculture of oysters; - any device or apparatus partially or totally merged / submerged, b) wood preservation; c) strong saturation of industrial textiles and yarns provided for fabrication; d) wastewater treatment, regardless of their use. 18.a: Mercury 1. Mercury will not be placed on the market: a) in thermometers that measure body temperature; b) in other measuring devices provided for sale to the general public (such as manometers and thermometers not intended to measure the temperature of the body). 2. The restriction referred to in point 1 shall not apply to measuring devices that were in use before 1 July 2019. 3. The restriction referred to in points 1, b, shall not apply to: a) measuring devices since 1 December 2014 have an age of more than 50 years; b) barometers (except barometers that meet the criteria under paragraph (a) above, until 1 July 2019; 4. measuring devices containing mercury below, intended for industrial and professional use will not be placed on the market after 1 July 2019: barometers; hygrometers; manometers; sphygmomanometers; measuring instruments used in pletismograph; tensiometers; thermometers and other uses in non-electrical thermometry; Restrictions will also apply to measuring devices which are already placed on the market if they intended to be filled with mercury. 5. The limitation in paragraph 4 shall not apply to: a) sphygmomanometers to be used: (I) in epidemiological studies which are under way on the date corresponding to 15 days after publication of this decision in the Official Gazette, (II) as reference standards in clinical validation studies of sphygmomanometers not containing mercury; b) thermometers aimed only to perform tests in accordance with the standards require the use of mercury thermometers until July 1, 2019; c) mercury cells with triple points, which are used for the calibration of platinum resistance thermometers. 6. measuring devices that use mercury below, aimed at professional and industrial use will not be placed on the market after 1 July 2019: a) pycnometers containing mercury; b) mercury metering devices for the determination of softening point. Restrictions referred to in point 4 and 6 shall not apply to: a) measuring devices more than 50 years old in December 2014. b) measuring devices which are to be displayed in public exhibitions for cultural and historical purposes.

Decision of Ministerial Council No. 665, dated 21/09/2016 "On the export and import of hazardous chemicals"	The objective of this Decision is consistent with the objective of the Rotterdam Convention, adopted by Law No. 10277, dated 13/05/2010, "On accession of the Republic of Albania in the Rotterdam Convention "On the procedure of Prior Informed Consent for certain hazardous chemicals and products for plant protection in international trade." This decision transposes the Regulation (EC) No. 649/2012 of the European Parliament and the Council, dated July 4, 2012, concerning the export and import of dangerous chemicals At Annex IV "Chemicals and hazardous items prohibited to be exported", Table 2 "Other chemicals prohibited to be exported, besides those listed in Appendices A and B to the Stockholm Convention on POPs" of this DCM, Cosmetic soaps containing mercury are included.

Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):

With respect to part I of Annex A "Mercury added products" of Minamata Convention regarding the phase-out of the manufacture, import or export of mercury containing products, some provisions on mercury content in batteries and accumulators are in place in Albania through DCM No. 866 of 04/12/2012 "On batteries, accumulators and their waste".

Some provisions related to the mercury contained in electrical components and fluorescent lamps are in place by DCM No. 957, dated 19/12/2012 "On the waste of electrical and electronic equipment". These provisions are mostly related to the waste management of these components, including the proper labelling, and promote the replacement of heavy metals with suitable alternatives.

Pesticides (plant protection products) undergo a registration process in Albania before being imported or put on the market. Only pesticides containing active ingredients allowed in EU are allowed to be registered in Albania. A similar situation is for biocidal products, which legislation is under revision. Yet, an explicit ban of mercury containing pesticides and biocides, similarly with the one required by the Minamata Convention and the Proposal for a Regulation of the European Parliament and of the Council on mercury and repealing Regulation (EC) No. 1102/2008 could be part of the legal measures for the implementation of Minamata Convention.

With respect to part II of Annex A "Mercury added products" on measures to be taken to phase down the use of dental amalgam, it was not found any legislation in place in Albania on dental amalgams. Based on the mercury inventory, the preparation of provisions to phase down the dental amalgam is required. The measures provided by the proposed Regulation of the European Parliament and of the Council on Mercury and repealing Regulation (EC) No. 1102/2008 should be taken in consideration, that are the use of dental amalgam only in encapsulated form and that dental facilities be equipped with amalgam separators to retain and collect mercury containing amalgam residues.

Rules for reducing mercury in products are planned to be prepared under the Law No. 27/2016 "On chemicals management", dated 17/03/2016, in compliance with the proposed Regulation of the European Parliament and of the Council on Mercury and repealing Regulation (EC) No. 1102/2008, and according to the requirements of Minamata Convention.

Table 29. Article 5 Manufacturing processes in which mercury or mercury compounds are used

ARTICLE 5 - MANUFACTURING PROCESSES IN WHICH MERCURY OR MERCURY COMPOUNDS ARE USED	
Description of Article:	
Succinct summary of provisions relevant to Albania	- Not allow the use of mercury or mercury compounds in the manufacturing processes listed in Part I of Annex B - Restrict (as specified in the Annex) the use of mercury in the processes listed in Part II of Annex B - Not allow new facilities from using mercury in the processes listed in Annex B, except facilities using mercury catalysts to produce polyurethane - For facilities with processes listed in Annex B, identify and obtain information on mercury or mercury compound use; and control mercury emissions to air, and releases to land and water - Discourage new uses of mercury in industrial processes
	Annex B: Manufacturing processes in which mercury or mercury compounds are used Part I: Processes subject to Article 5, paragraph 2 Chlor-alkali production, phase out date 2025 Acetaldehyde production in which mercury or mercury compounds are used as a catalyst, phase out date 2018 Part II: Processes subject to Article 5, paragraph 3: Vinyl chloride monomer production Sodium or Potassium Methylate or Ethylate Production of polyurethane using mercury containing catalysts
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory Measure	Aspects addressed by policy/Regulatory measure:
Law No. 10448, dated 14/07/2011 "On environmental permits" revised;	There are no industrial activities as described in Annex B currently carried out in Albania. Nevertheless, the industrial activities described in Annex B of the Convention are regulated. Law No. 10448, dated 14/07/2011 "On environmental permits" has transposed the Directive 2008/1/EC "On the integrated pollution prevention and control" (IPPC) as amended by Directive 2009/31/EC, and Directive 2001/80/EC "On the limitation of emissions of certain pollutants into the air from large combustion plants" as amended by Directive 2009/31/EC and many other permitting principles for a vast number of EC/Directives, creating the basis for the new permits system in Albania. This law establishes measures for permitting the operation of certain groups of polluting activities, measures designed to prevent or, where that is not practicable, to reduce emissions to the air, water and land from such activities, including measures concerning waste as well. According to the national legislation requirements, the industrial operators have the obligation to monitor and report the environmental emissions of their activities based on the conditions set in the respective environmental permit.
Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
Law No. 10448, dated 14/07/2011 "On environmental permits" establishes measures for permitting the operation of certain groups of polluting activities, measures designed to prevent or, where that is not practicable, to reduce emissions to the air, water and land from such activities, including measures concerning waste as well.	

Table 30. Article 7 Artisanal and small-scale gold mining

ARTICLE 7 – ARTISANAL AND SMALL-SCALE GOLD MINING	
Succinct summary of provisions relevant to Albania	- Take measures to reduce, and where feasible, eliminate mercury and mercury compound use, emissions (to air), and releases (to land and water) associated with ASGM Annex C: Artisanal and small-scale gold mining
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory Measure	Aspects addressed by policy/Regulatory measure:
	It was found no ASGM related legislation in Albania
Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
No ASGM related legislation in Albania was found.	

Table 31. Article 8 Emissions

ARTICLE 8 – EMISSIONS	
Succinct summary of provisions relevant to Albania	-Take measures to control emissions, optionally prepare a national plan setting out measures to be taken to control emissions and its expected targets, goals and outcomes; - Require the use of best available techniques/best environmental practices (BAT/BEP) for new (as defined in Article 8.2(c)) sources listed in Annex D - Require one or more measures as below to mercury emissions control/reduction from existing sources listed in Annex D, which shall be operational at the source within 10 years - Require monitoring/reporting and otherwise establish a mercury emissions inventory for sources listed in Annex D: (a) A quantified goal for controlling and, where feasible, reducing emissions from relevant sources; (b) Emission limit values for controlling and, where feasible, reducing emissions from relevant sources; (c) The use of best available techniques and best environmental practices to control emissions from relevant sources; (d) A multi-pollutant control strategy that would deliver co-benefits for control of mercury emissions; (e) Alternative measures to reduce emissions from relevant sources.
	Annex D: List of point sources of emissions of mercury and mercury compounds to the atmosphere Point source category: - Coal-fired power plants; - Coal-fired industrial boilers; - Smelting and roasting processes used in the production of non-ferrous metals (lead, zinc, copper and industrial gold); - Waste incineration facilities; - Cement clinker production facilities.

Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory Measure	Aspects addressed by policy/Regulatory measure:
Law No. 10448, dated 14/07/2011 "On environmental permits", revised;	This law establishes measures for permitting the operation of certain groups of polluting activities, measures designed to prevent or, where that is not practicable, to reduce emissions to the air, water and land from such activities, including measures concerning waste as well. According to the national legislation requirements, the industrial operators have the obligation to monitor and report the environmental emissions of their activities based on the conditions set in the respective environmental permit. Article 5 of the Law 10448, dated 14/07/2011 foresees the preparation of BATs in Albanian language according to the EU BREF-s (BAT Reference Documents) or other reference documents for the specific activities in the country.
DCM No. 742, dated 09/09/2015 "On the functioning and management of the PRTR, approval of the list of activities and pollutants that are subject to this register, and the form of the data declaration on pollutant release and transfer from operators"	This DCM establishes the integrated pollutant release and transfer register (PRTR) in Albania in the form of a publicly accessible electronic database. This decision partially transposes the Regulation of the Council and the European Parliament EC/166/2006 on the European Pollutant Release and Transfer Register amended by Regulation 596/2009. Also, this decision addresses the requirements of the Protocol on PRTR, ratified by Albania through the Law No. 9548, dated 01/06/2006 "On accession of the Republic of Albania to the Protocol on Pollutants Release and Transfer Register"
Law No. 9425, dated 06/10/2005 "On the adhering of the Republic of Albania to the 1979 Convention on Long-range Transboundary Air Pollution".	One of the obligations under the CLRTAP is the development of the air emission inventory. Albania has developed the emission inventory according to the Guidelines for Reporting Emission Data under the Convention on Long-Range Transboundary Air Pollution, the EMEP/EEA Air Pollutant Emission Inventory Guidebook 2009 and the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Among other pollutants, the inventory includes Mercury.
Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
Albania has in place the legislation addressing the emissions to the air. Law No. 10448, dated 14/07/2011 "On environmental permits", revised, which establishes measures for permitting the operation of certain groups of polluting activities, measures designed to prevent or, reduce emissions to the air, water and land from such activities, including measures concerning waste. According to the law on environmental permits, the industrial operators have the obligation to monitor and report the environmental emissions of their activities based on the conditions set in the respective environmental permit. Article 5 of this law foresees the preparation of Best Available Technologies (BAT) in Albanian language according to the EU BAT Reference Documents (BREF-s) or other reference documents for the specific activities in the country. Albania has ratified the Convention on Long-Range Transboundary Air Pollution and has partially transposed the Regulation of the Council and the European Parliament EC/166/2006 on the European Pollutant Release and Transfer Register amended by Regulation 596/2009. Best available techniques/best environmental practices (BAT/BEP) taking into account any difference between new and existing sources listed in Annex D of the Minamata Convention (coal-fired power plants, coal-fired industrial boilers, non-ferrous metal smelting and roasting processes, waste incineration, and cement production) were adopted by the Conference of the Parties at its first meeting, according to point 8 of Article 8 of the Convention.	

Table 32. Article 9- Releases

ARTICLE 9 – RELEASES	
Succinct summary of provisions relevant to Albania	- Identification of the relevant point source categories no later than three years after entry into force of the Convention for Albania - Take measures to control releases, possibly prepare a national plan for it. The plan must be submitted to CoP within four years after entry into force of the Convention for Albania. - Require reporting or otherwise obtain information as needed to identify significant sources of mercury/mercury compound releases to land or water, and to maintain an inventory of releases from the sources identified - Take as appropriate one or more measures as below to control/reduce mercury and mercury compound releases to land and water from significant sources: (a) Release limit values to control and, where feasible, reduce releases from relevant sources; (b) The use of best available techniques and best environmental practices to control releases from relevant sources; (c) A multi-pollutant control strategy that would deliver co-benefits for control of mercury releases; (d) Alternative measures to reduce releases from relevant sources. A national plan may be prepared.
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory Measure	Aspects addressed by policy/Regulatory measure:
Law No. 10448, dated 14/07/2011"On environmental permits"	Under the Law No. 10448, dated 14/07/2011 "On environmental permits", private companies/operators, which have been subject to an environmental permit ('A' and/ or 'B') are obliged to perform the self-monitoring procedures through certified monitoring structures/ laboratories, according to the specifications and conditions foreseen in the environmental permit, as well as the environmental permitting legislation in force, and to submit the report to the National Environmental Agency. This law establishes measures for permitting the operation of certain groups of polluting activities, measures designed to prevent or, where that is not practicable, to reduce emissions to the air, water and land from such activities, including measures concerning waste as well.
DCM No.742, dated 09/09/2015 "On the functioning and management of the PRTR, approval of the list of activities and pollutants that are subject to this register..."	This DCM establishes the integrated pollutant release and transfer register (PRTR) in Albania in the form of a publicly accessible electronic database. This decision partially transposes the Regulation of the Council and the European Parliament EC/166/2006 on the European Pollutant Release and Transfer Register amended by Regulation 596/2009. Also, this decision addresses the requirements of the Protocol on PRTR, ratified by Albania through the Law No. 9548, dated 01/06/2006 "On accession of the Republic of Albania to the Protocol on Pollutants Release and Transfer Register"
DCM No. 46, dated 29/01/2014 "On the set up and functioning of the State Inspectorate of Environment, Forestry and Water (SIEFW); and DCM No. 138, dated 19/11/2012 "On the new structure of the National Environmental Agency (NEA)"	The State Inspectorate of Environment, Forestry and Water (SIEFW) is the main inspection structure of the Ministry of Tourism and Environment (MoTE) involved in monitoring and enforcement of environmental legal requirements. The main duties of SIEFW related to the above mentioned PRTR Decision No. 742, dated 09/09/2015, are: to control the compliance of the activities with environmental legislation in general; to inspect and monitor the compliance of the operators with the environmental permit; to take measures against the operators that do not comply with the environmental legislation including reporting obligations (administrative, penalty, permit revoke, etc.). The NEA exercises its jurisdiction in the whole territory of the Republic of Albania through the Regional Environmental Agencies. Some of the main functions of the NEA are: implementation of procedures related to environmental permitting and environmental impact assessment, as well as the implementing of the environmental liability principle; monitoring the state of environment on the main environmental indicators (according to DCM No. 1138, dated 18/11/2009 "On the rules and procedures on the National Monitoring Programme"), setting up and management of the Environmental Information System and PRTR.

Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):
Albania has in place the legislation addressing the releases of the pollutants. Law No. 10448, dated 14/70/2011 "On environmental permits", revised, establishes measures for permitting the operation of certain groups of polluting activities, measures designed to prevent or, where that is not practicable, to reduce emissions to the air, water and land from such activities, including measures concerning waste as well. Article 5 of the Law 10448, dated 14/07/2011 foresees the preparation of Best Available Technologies (BAT) in Albanian language according to the EU BAT Reference Documents (BREF-s) or other reference documents for the specific activities in the country. The legislation on the integrated pollutant release and transfer register is in place in Albania. DCM No. 742, dated 09/09/2015 "On the functioning and management of the PRTR, and approval of the list of activities and pollutants that are subject to this register" establishes the integrated pollutant release and transfer register (PRTR) in Albania in the form of a publicly accessible electronic database. CoP will adopt guidance on (a) BAT/BEP, taking into account any difference between new and existing sources and the need to minimize cross-media effects, and on (b) the methodology for preparing inventories of releases. These guidance documents need to be taken into consideration and adopted in the national legislation / discharge norms.

Table 33. Article 10- Environmentally sound interim storage of mercury, other than waste mercury

ARTICLE 10 – ENVIRONMENTALLY SOUND INTERIM STORAGE OF MERCURY, OTHER THAN WASTE MERCURY	
Succinct summary of provisions relevant to Albania	Take measures to ensure interim storage of mercury and its compounds intended for a use allowed to a Party is conducted in an environmentally sound manner, taking into account relevant guidelines developed under the Basel Convention and additional requirements for interim storage that may be adopted by the Conference of the Parties (COP)
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory Measure	Aspects addressed by policy/Regulatory measure:
Law No. 27/2016 of 17/03/2016 "On chemicals management",	This is a frame Law that transposes partly REACH and CLP EU Regulations. At point 4 of Article 23 of this Law it is stipulated that rules for banning the export of metallic mercury, compounds and certain mercury mixtures, safe storage of metallic mercury and specific criteria for the storage of metallic mercury considered as waste will be approved by the Council of Ministers with the proposal of the minister responsible for the environment.
Law No.8216, dated 13/05/1997 "On the accession of the Republic of Albania to the Basel Convention"	Basel Convention is ratified by Albania
Law No. 10 463, dated 22/09/2011 "On integrated waste management"	This Law establishes the definition for "Temporary storage", which is keeping in one place in order to maintain the waste for a period not more than a year without performing operations that lead to changing the nature or composition of the waste. Also, Article 25 of this Law stipulates that hazardous waste is collected, transported and stored temporarily only when is packaged and labelled in accordance with this law. Rules for packing and labelling of hazardous waste in the process of collection, transport and temporary storage are to be approved by a DCM.
Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
According to the Law No. 27/2016, dated 17/03/2016 "On chemicals management", it is stipulated that rules for the safe storage of metallic mercury will be approved by the Council of Ministers. The above-mentioned rules can be based on the guidelines on environmentally sound interim storage of mercury and mercury compounds intended for an allowed use (for a Party), which will be adopted by CoP taking into account relevant guidelines under Basel Convention (point 3 of Article 10 of the Convention).	

Table 34. Article 11- Mercury wastes

ARTICLE 11 – MERCURY WASTES	
Succinct summary of provisions relevant to Albania	Use the definition of mercury waste consistent with Article 11.2: mercury wastes mean substances or objects: (a) Consisting of mercury or mercury compounds; (b) Containing mercury or mercury compounds; or, (c) Contaminated with mercury or mercury compounds, in a quantity above the relevant thresholds defined by the Conference of the Parties Take measures to manage mercury wastes in an environmentally sound manner, taking into account guidelines developed under the Basel Convention and in accordance with CoP requirements to be developed. Take measures to restrict mercury derived from the treatment or re-use of mercury waste to allowed uses under the Convention or environmentally sound disposal Require transport across international boundaries only for the purpose of environmentally sound disposal in accordance with the Basel Convention, or if the Basel Convention does not apply, consistent with international rules, standards, and guidelines.
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory Measure	Aspects addressed by policy/Regulatory measure:
Law No. 27/2016 "On chemicals management", dated 17/03/2016	This is a frame Law that transposes partly REACH and CLP EU Regulations. At point 4 of Article 23 of this Law it is stipulated that rules for banning the export of metallic mercury, compounds and certain mercury mixtures, safe storage of metallic mercury and specific criteria for the storage of metallic mercury considered as waste will be approved by the Council of Ministers with the proposal of the minister responsible for the environment.
Law No. 10 463, dated 22/09/2011 "On integrated waste management"	This Law establishes the definition for "Temporary storage", which is keeping in one place in order to maintain the waste for a period not more than a year without performing operations that lead to changing the nature or composition of the waste. Also, Article 25 of this Law stipulates that hazardous waste is collected, transported and stored temporarily only when is packaged and labelled in accordance with this law. Rules for packing and labelling of hazardous waste in the process of collection, transport and temporary storage are to be approved by a DCM.
Law No. 8216, dated 13/05/1997 "On the accession of the Republic of Albania to the Basel Convention "On the control of transboundary movements of hazardous wastes and their disposal" Basel Convention is ratified by Albania.	
Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
The Albanian Law No. 10 463, dated 22/09/2011 "On integrated waste management" gives the definition of temporary storage and gives the bases for the proper temporary storage of hazardous waste. Technical rules for packing and labelling of hazardous waste in the process of collection, transport and temporary storage are to be approved by a DCM. According to the Law No. 27/2016 "On chemicals management", specific criteria for the storage of metallic mercury considered as waste will be approved by the Council of Ministers. The rules for mercury waste management can be based on the guidelines on environmentally sound management of mercury waste which will be reviewed and updated from the CoP in close cooperation with the relevant bodies of Basel Convention (point 4 of Article 11 of the Convention).	

Table 35. Article 12- Contaminated sites

ARTICLE 12 – CONTAMINATED SITES	
Succinct summary of provisions relevant to Albania	Develop strategies for identifying and assessing mercury/mercury compound contaminated sites. If risk reduction activities are taken at contaminated sites, they are taken in an environmentally sound manner, incorporating risk assessment where appropriate. CoP shall adopt guidance on site identification and characterization, engaging the public, human health and environment risk assessment, options for managing the risks, evaluation of benefits and costs and validation of outcomes.
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory Measure	Aspects addressed by policy/regulatory measure:
Law No. 10 431, dated 09/06/2011 "On environmental protection"	Chapter VIII of this law "Environmental responsibility", according to the principle "the polluter pays" defines the obligations and responsibilities of the new waste producers, in order to avoid the creation of new hotspots of the process industries. The objectives of this chapter are: a) prevention and redress for all damage caused to the environment; b) the rehabilitation of the environment; c) introduction of measures and practices to minimize the risk of environmental damage. The Council of Ministers approves the list of activities dangerous for the environment and the criteria for risk assessment. The operator is responsible in case of not undertaking preventive measures or rehabilitation in cases of deterioration of environment and in cases National Environmental Agency is not informed for the real or potential environmental damage.
DCM No. 175, dated 19/01/2011 "On the adoption of the national waste management strategy and national waste management plan"	This DCM in paragraph 2.3.3.2 addresses strategic element II: "Rehabilitation of contaminated sites and prevention of pollution", where for industrial hotspots it is stipulated as follows: All industrial hot spots will be cleaned up till the risks to human health and the ecosystem are acceptable. The clean-up will be prioritized based on risk assessment. Standards of rehabilitation depend on the planned land use for former industrial sites. The clean-up will be financed by international funds in the worst cases, from the polluter if economically feasible or from investors, where the increase in value of the assets will offset the costs of remediation.
Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
In Albania there is already in place the legal basis for the prevention of new environmental hotspots, as well as for addressing the responsibility on the pollution, for the rehabilitation of polluted sites and for costs. Law No. 10 431, dated 09/06/2011 "On environmental protection" according to the principle "the polluter pays" defines the obligations and responsibilities of the new waste producers, in order to avoid the creation of new hotspots of the process industries. CoP shall adopt guidance on site identification and characterization, engaging the public, human health and environment risk assessment, options for managing the risks, evaluation of benefits and costs and validation of outcomes. This guidance needs to be taken into account when developing the national action plan on identifying and assessing contaminated sites from mercury and its compounds and on related risk management.	

Table 36. Article 13- Financial resources and mechanisms

ARTICLE 13 – FINANCIAL RESOURCES AND MECHANISMS	
Succinct summary of provisions relevant to Albania	National resources to implement the Convention. Mechanisms to support developing countries and countries with economies in transition to fulfil the obligations under the Convention. Access to financial resources available under the Convention financial mechanism and other resources available from multilateral, regional, and bilateral funding sources.
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory measure	Aspects addressed by policy/Regulatory measure:
Law No. 10 431, dated 09/06/2011 "On the environmental protection"	At point 1 of Article 67 "Environmental Fund" it is stipulated the establishment of an Environmental Fund to support and promote environmental protection activities. The Council of Ministers approves the rules for the funding source, mode of operation and use of the Environment Fund.
Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
As for the access to financial resources available under the Convention Financial Mechanism since July 2016, with the financial support of the Global Environment Fund (GEF), UNDP- Albania has implemented the project "Minamata Initial Assessment for Albania".	

Table 37. Article 14- Capacity building, technical assistance and technology transfer

ARTICLE 14 – CAPACITY BUILDING, TECHNICAL ASSISTANCE AND TECHNOLOGY TRANSFER	
Succinct summary of provisions relevant to Albania	Capacity building and technical assistance to developing country Parties to assist them in implementing their obligations under Minamata Convention through regional, sub-regional and national arrangements, including existing regional and sub-regional centres, partnerships, etc.
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory measure	Aspects addressed by policy/Regulatory measure:
There is no specific legislation in place on specific capacity building on implementation of Minamata Convention.	
Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
There are provisions for capacity building in areas related to the Convention Implementation, like environment, health care, but there is no specific legislation in place in Albania on capacity building and technical assistance on implementation of Minamata Convention. Based on the capacity assessment, capacity building is planned as part of Minamata Action Plan.	

Table 38. Article 16- Health aspects

ARTICLE 16 – HEALTH ASPECTS	
Succinct summary of provisions relevant to Albania	Promote the development and implementation of strategies to identify and protect populations at risk, particularly vulnerable populations, such as developing health guidelines on exposure, setting targets for Hg exposure reduction, where appropriate and public education with the participation of public health and other involved sectors. Promote educational and prevention programs on occupational exposure to mercury and mercury compounds. Promote appropriate health care services for prevention, treatment, and care for populations affected by mercury exposure. Establish and strengthen the institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring of health risks related to the exposure to mercury and its compounds.
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory Measure	Aspects addressed by policy/Regulatory measure:
Law No. 10 138, dated 11/05/2009 "On public health"	At point 3 of Article 42 "Measures in environmental health" of this Law, it is stipulated that the Directorate of Public Health at the Ministry of Health and Social Welfare prepares hygienic-sanitary norms, which are approved by DCM. At point 5 of the same article, Institute of Public Health, in cooperation with the regional structures of public health, identifies scientifically the harmful factors for the health of the population and their impacts. At Article 14 "The responsibilities of Institute of Public Health, IPH" is defined that IPH is responsible for the information, counselling, and support of the Ministry of Health and Social Welfare in the preparation of the policies and strategies in public health.
Law No. 10 107, dated 30/03/2009 "On the healthcare in the Republic of Albania"	This law defines the main principles and legal framework for the regulation, organization and functioning of the health care system in the Republic of Albania. At point 5 of Article 4 it is defined that the Minister of Health shall develop policies for continuing professional education of human resources in health care.
Law No. 10 237, dated 18/02/2010 "On the safety and health at work"	In this Law there are mentioned the obligations of the employer for the education and information of employees on the occupational hazards at workplace and on the preventive measures.
DCM No. 522, dated 06/08/2014 "On the approval of regulation "On the safety and health protection of workers from the risks related to chemical agents at work"	Exposure Limit Values have been given at Annex I of this DCM for mercury and divalent inorganic compounds of mercury including mercuric oxide and mercuric chloride (measured as mercury) at the workplace.
Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
Legislation in place includes the obligations of the employer for the education and information of employees on the occupational hazards at workplace and on the preventive measures that are required by the Law No. 10 237, dated 18/02/2010 "On the safety and health at work" and the deriving Decisions of Council of Ministers. Exposure Limit Values for mercury and divalent inorganic compounds of mercury including mercuric oxide and mercuric chloride (measured as mercury) at the workplace are given at Annex 1 of this DCM. Although a system for the continuing professional education of human resources in health care system has been established, it is needed to strengthen the institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring of health risks related to the exposure to mercury and its compounds.	

Table 39. Article 17- Information exchange

ARTICLE 17 – INFORMATION EXCHANGE	
Succinct summary of provisions relevant to Albania	- Facilitate the exchange of scientific, technical and legal information concerning mercury and mercury compounds, including toxicological, eco-toxicological and safety information, information on reduction or elimination of production, use, trade, emissions and releases of mercury and its compounds, on viable alternatives to products, processes and activities that involve mercury or its compounds, - Share information on the health and safety of humans and the environment as non-confidential, in accordance with Article 17.5 - Report to the CoP on progress in implementing Convention obligations under Article 21 4. Each Party shall designate a national focal point for the exchange of information under the Convention, including with regard to the consent of the importing Parties under Article 3
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory Measure	Aspects addressed by policy/Regulatory measure:
Law No. 27/2016 "On chemicals management", dated 17/03/2016	At point 1 of Article 32 "Information system for chemicals" of this Law, it is defined that exchange of information with international institutions on chemicals is based on the provisions of the documents ratified by the competent authority of the Republic of Albania.
Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
There is a general provision at point 1 of Article 32 "Information system for chemicals" of the Law No. 27/2016 "On chemicals management", dated 17/03/2016 on the exchange of information with international institutions on chemicals, which is based on the provisions of the agreements ratified by the competent authority of the Republic of Albania. There are also provisions on information exchange in frame of other Chemical Conventions ratified by Albania; yet, a specific information exchange for the Minamata Convention is needed. The Convention requires the designation of a national Focal Point. The Minamata Convention National Focal Point is represented by the Deputy Minister of Tourism and Environment.	

Table 40. Article 18- Public information, awareness and education

ARTICLE 18 – PUBLIC INFORMATION, AWARENESS AND EDUCATION	
Succinct summary of provisions relevant to Albania	- Each Party shall promote and facilitate provision to the public of available information on health and environmental effects of mercury and its compounds, alternatives to mercury and its compounds, information concerning mercury and mercury compounds, including toxicological, eco-toxicological and safety information, information on reduction or elimination of production, use, trade, emissions and releases of mercury and its compounds, on viable alternatives to products, processes and activities that involve mercury or its compounds, results of research, development and monitoring activities. - Promote and facilitate education, training and public awareness related to effects of exposure to mercury and its compounds on human health and environment in collaboration with relevant IGOs and NGOs and vulnerable populations. - Shall use the existing mechanisms or consider the development of mechanisms, such as pollutant release and transfer registers for the collection and dissemination of information on estimates of annual quantities of mercury or its compounds that are emitted, released or disposed of through human activities.
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory Measure	Aspects addressed by policy/Regulatory measure:

Law No. 27/2016 "On chemicals management", dated 17/03/2016	At point 3 of Article 32 "Information system for chemicals" it is stipulated that Ministry of Tourism and Environment shall inform the public and relevant authorities via the official website of the ministry of the risks that may arise from the use of hazardous substances and mixtures and recommends taking the necessary measures to reduce the risk.
Law No. 10 431, dated 09/06/2011 "On environmental protection"	At point 2 of Article 14 it is stipulated that public authorities, which scope includes functions related to environmental protection, within their competence, promote information, awareness and educate the public about environmental protection and sustainable development.
Law No. 119/2014, dated 18/09/2014 "On the Right of Information".	This law regulates the right to know the information produced or held by public authorities, provides the public with information in the context of the exercise of individual rights and freedoms in practice, as well as the formation of views on the state of the state and society and aims to promote integrity transparency and accountability of public authorities.
Law No. 146/2014, dated 30/10/2014 "On notification and public consultation"	The Law No. 146/2014 "On notification and public consultation" regulates the process of notification and public consultation of the drafts of national and local strategic and policy documents of high public interest, establishes rules of procedure to be followed to ensure transparency and public participation in policy and decision-making processes by public bodies and aims to promote transparency, accountability and integrity of public authorities.
Law No. 8672, dated 26/10/2000 "On adhering of Albania in Aarhus Convention"	The Aarhus Convention establishes a number of rights of the public (individuals and their associations) with regard to the environment. The Parties to the Convention are required to make the necessary provisions so that public authorities (at national, regional or local level) will contribute to these rights to become effective. The Convention provides for: the right of everyone to receive environmental information that is held by public authorities ("access to environmental information"). This can include information on the state of the environment, but also on policies or measures taken, or on the state of human health and safety where this can be affected by the state of the environment. Applicants are entitled to obtain this information within one month of the request and without having to say why they require it. In addition, public authorities are obliged, under the Convention, to actively disseminate environmental information in their possession; the right to participate in environmental decision-making. Arrangements are to be made by public authorities to enable the public affected and environmental non-governmental organisations to comment on, for example, proposals for projects affecting the environment, or plans and programmes relating to the environment, these comments to be taken into due account in decision-making, and information to be provided on the final decisions and the reasons for it ("public participation in environmental decision-making"); the right to review procedures to challenge public decisions that have been made without respecting the two aforementioned rights or environmental law in general ("access to justice").

Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):

Law No. 27/2016 "On chemicals management", dated 17/03/2016, Law No. 10 431, dated 09/06/2011 "On environmental protection", Law No. 119/2014, dated 18/09/2014 "On the Right of Information", Law No. 146/2014, dated 30/10/2014 "On notification and public consultation", Law No. 8672, dated 26/10/2000 "On adhering of Albania in Aarhus Convention" offer an adequate bases regarding the right to know, transparency, and require public authorities to promote information, awareness and educate the public about environmental protection and sustainable development, potential risks from the use of hazardous chemicals, etc.

Law No. 10 431, dated 09/06/2011 "On environmental protection" asks for support and organization of education and training for environmental protection and sustainable development, through the educational system, scientific research, forms of learning of the education and training throughout life.

Table 41. Article 19- Research, development and monitoring

ARTICLE 19 – RESEARCH, DEVELOPMENT AND MONITORING	
Succinct summary of provisions relevant to Albania	1. Parties shall endeavour to cooperate to develop and improve, taking into account their respective circumstances and capabilities: (a) Inventories of use, consumption, and anthropogenic emissions to air and releases to water and land of mercury and mercury compounds; (b) Modelling and geographically representative monitoring of levels of mercury and mercury compounds in vulnerable populations and in environmental media, collaboration in the collection and exchange of relevant and appropriate samples; (c) Assessments of the impact of mercury and mercury compounds on human health and the environment, particularly in respect of vulnerable populations; (d) Harmonized methodologies for the activities undertaken under subparagraphs (a), (b) and (c); (e) Information on the environmental cycle, transport (including long-range transport and deposition), transformation and fate of mercury and mercury compounds in a range of ecosystems, (f) Information on commerce and trade in mercury and mercury compounds and mercury-added products; and (g) Information and research on the technical and economic availability of mercury-free products and processes and on BAT/BEP to reduce and monitor emissions and releases of mercury and mercury compounds. 2. Parties should, where appropriate, build on existing monitoring networks and research programmes in undertaking the activities identified in paragraph 1.
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory measure	Aspects addressed by policy/Regulatory measure:
Law No 10 431, dated 09/06/2011 "On environmental protection"	Chapter VI "Environmental monitoring" of this Law stipulates that the monitoring of the state of the environment includes monitoring the impact of environmental pollution on human health. Point 1 of Article 58 "Education and training for environmental protection" stipulates that the Ministry responsible for education and the ministry responsible for matters of employment and vocational training, in cooperation with the Ministry of Tourism and Environment, encourage, support and organize education and training for environmental protection and sustainable development, through the educational system, scientific research, forms of learning of the education and training throughout life.
Outstanding regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
Chapter VI "Environmental monitoring" of the Law No. 10 431, dated 09/06/2011 "On Environmental Protection" stipulates that the monitoring of the state of the environment includes monitoring the impact of environmental pollution on human health. National Environment Agency develops the annual program for environmental monitoring, which includes heavy metals. The same law considers the support and organization of education and training for environmental protection and sustainable development, through the educational system, scientific research, forms of learning of the education and training throughout life. The research and monitoring as per Article 19 of the Convention need to develop further.	

Table 42. Article 21- Reporting

ARTICLE 21 – REPORTING	
Description of Article:	
Succinct summary of provisions relevant to Albania	1. Each Party shall report to the Conference of the Parties, through the Secretariat, on the measures it has taken to implement the provisions of this Convention and on the effectiveness of such measures and the possible challenges in meeting the objectives of the Convention. 2. Each Party shall include in its reporting the information as called for in Articles 3, 5, 7, 8 and 9 of this Convention. 3. The Conference of the Parties shall, at its first meeting, decide upon the timing and format of the reporting to be followed by the Parties, taking into account the desirability of coordinating reporting with other relevant chemicals and wastes conventions.
Policy and regulatory measures in place that enable the country to comply with the above listed provisions:	
Regulatory measure	Aspects addressed by policy/Regulatory measure:
Outstanding Regulatory or policy aspects that would need to be addressed/developed to ensure compliance with the Convention's provisions (only in relation to binding provisions):	
COP1 decided on both the timeframe and the forms for reporting. The time frame is every two years for reporting on trade, and every four years for everything else. The decision about timing and the reporting forms can be found as Decision MC-1/8, in Annex 1 of the COP1 meeting report.	

National capacities and related gaps

Table 44. Mercury supply sources and trade

ARTICLE 3 - MERCURY SUPPLY SOURCES AND TRADE	
Succinct summary of provisions relevant to Albania (source: NDRC checklist [1])	- Not allow new primary mercury mining - Phase out existing primary mercury mining within 15 years - Obtain information on stocks of mercury or mercury compounds exceeding 50 metric tons (MT), and mercury supply generating stocks exceeding 10 MT/yr - In accordance with Article 3.5(b), ensures that excess mercury from decommissioning chlor-alkali plants is disposed of in accordance to environmentally sound management guidelines (see paragraph 3a of article 11) - Not allow the export of mercury unless the importing country provides written consent that the mercury is for an allowed use or environmentally sound storage, and all other conditions of Article 3.6 are met - Not allow the import of mercury without government consent, ensuring both the mercury source and proposed use are allowed under the Convention (and applicable domestic law).

INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: - Drafting of legislation, policies and action plans for all points of Article 3 of the Convention; - Monitoring and inspecting mercury information
	Relevant institutional capacity in place: - The Chemicals Office in MoTE once established will need capacity building, specifically including those relating to the preparation of national legislation to implement the Convention obligations.
Name of institution / organization: NATIONAL ENVIRONMENTAL AGENCY	Role with respect to the above listed provisions: - As appropriate, it requires from customs information related to mercury trade - Issues environmental permits for operators that have air emissions or water or land discharges
	Relevant institutional capacity in place: Show technical capacities to address this issue when setting environmental permit conditions
Name of institution / organization: National Inspectorate of Environment and Forestry	Role with respect to the above listed provisions: Control the implementation of legislation on chemicals, including international chemicals conventions ratified by the Republic of Albania
	Relevant institutional capacity in place: Technical capacities on addressing mercury are almost completely missing
Name of institution / organization: Directorate of Customs	Role with respect to the above listed provisions: -Reports annually to the Chemicals Office the previous year's data on the import and export of hazardous chemicals - Cooperates with NEA for environmental status reports
	Relevant institutional capacity in place: - Training on import and export of mercury and mercury compounds is required for customs control
Name of institution / organization: MINISTRY OF INFRASTRUCTURE AND ENERGY	Role with respect to the above listed provisions: Administers natural resources in the country and determines the policies related to them. MoIE is the competent authority for licensing activities related to chemicals classified as hazardous.
	Relevant institutional capacity in place: Capacity building for pre-licensing assessment and licensing of activities related to chemicals classified as hazardous.
Capacity gaps that need to be addressed before provisions can be met:	
- The legal basis for chemicals that addresses the Mercury Convention's requirements must be completed. - Training activities are needed for inspectorates as well as for customs authorities on customs control for the import and export of mercury and mercury compounds	

Table 45. Mercury-added products

ARTICLE 4 - MERCURY-ADDED PRODUCTS	
Succinct summary of provisions relevant to Albania	- Not allow the manufacture, import, and export of products listed in Part I of Annex A not otherwise excluded following the phase out date listed in the Annex - Phase down the use of dental amalgam through two or more measures listed in Part II of Annex A - Take measures to prevent the incorporation of products listed in Part I of Annex A (i.e., switches and relays, batteries) into larger, assembled products - Discourage the manufacture and distribution of new mercury product types
INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: - Drafts legislation, policies and action plans for all points of Article 4 of the Convention; - Monitors and inspects mercury information - Focal point of the International Conventions on chemicals ratified by the Republic of Albania and the Minamata Convention
	Relevant institutional capacity in place: -The Chemicals Office in MoTE once established will need capacity building, specifically including those relating to the preparation of national legislation to implement the Convention obligations.
Name of institution / organization: GENERAL DIRECTORATE OF CUSTOMS	Role with respect to the above listed provisions: - Control of the import and export of products
	Relevant institutional capacity in place: Limited capacities in the control of the import and export of products.
Name of institution / organization: NATIONAL AGENCY FOR MEDICINES AND MEDICAL DEVICES	Role with respect to the above listed provisions: - Control and analysis of the quality of medicines - Lab. for vaccine control and the medical equipment sector - Recording and control of medical devices such as: thermometers, barometers, manometers and sphygmomanometers
	Relevant institutional capacity in place: The laboratory does not perform analysis of mercury in the vaccines for lack of appropriate facilities
Name of institution / organization: MINISTRY OF HEALTH AND SOCIAL WELFARE	Role with respect to the above listed provisions: - The Ministry of Health and Social Welfare is the competent authority for drafting the legal and sub-legal acts in the field of health care, among which for the dental service, cosmetic products. Also, the Ministry of Health and Social Welfare issues: - Trade authorization for medical devices. - Import authorization for biocidal products
	Relevant institutional capacity in place: MoHSW capacities regarding the evaluation and authorization of biocidal products are limited. We think that more staff and staff capacity are needed.

Name of institution / organization: INSTITUTE OF PUBLIC HEALTH	Role with respect to the above listed provisions: Evaluation of biocidal products
	Relevant institutional capacity in place: There is no experience with the evaluation of biocidal products such as antifouling paints, which are not directly used in public health (insecticides, rodenticides and disinfectants)
Name of institution / organization: GENERAL DIRECTORATE OF METROLOGY	Role with respect to the above listed provisions: Performs calibration / verification of instruments / measuring devices, including mercury thermometers.
	Relevant institutional capacity in place: The role GDM can play in this process is simply of an informative nature, allowing its customers to remove thermometers or other mercury devices (barometers, etc.) and replace them with alternatives without mercury.
Name of institution / organization: ASSOCIATION OF ALBANIAN DENTAL DISTRIBUTORS	Role with respect to the above listed provisions: - The gradual replacement of the amalgam - Taking measures to separate mercury waste
	Relevant institutional capacity in place: There has been no communication with MoTE on the issue of amalgam discharge of dental clinics.
Name of institution / organization: MARKET SURVEILLANCE INSPECTORATE	Role with respect to the above listed provisions: Law enforcement control
	Relevant institutional capacity in place: Contains a sector for the safety of non-food products
Capacity gaps that need to be addressed before provisions can be met:	
- Generally, lacks knowledge and awareness about the health and environmental issues of mercury in products.	
- Lack of laboratory capacity for determination of mercury in products, including its analysis in vaccines.	
- Waste of dental clinics are not collected and treated in a differentiated way. The use of amalgam separators in dental clinics should be introduced.	
- Setting national targets aimed at preventing dental caries and promoting health, minimizing the need for tooth restoration; Promoting the use of best environmental practices in dental facilities to reduce mercury and mercury emissions in water and land.	
- Capacities for evaluating antifouling paints as biocidal products are very limited. Secondary legislation on the assessment and authorization of biocidal products has not yet been approved.	

Table 46. Manufacturing processes in which mercury or mercury compounds are used

ARTICLE 5 - MANUFACTURING PROCESSES IN WHICH MERCURY OR MERCURY COMPOUNDS ARE USED	
Succinct summary of provisions relevant to Albania	- Not allow the use of mercury or mercury compounds in the manufacturing processes listed in Part I of Annex B - Restrict (as specified in the Annex) the use of mercury in the processes listed in Part II of Annex B - Not allow new facilities from using mercury in the processes listed in Annex B, except facilities using mercury catalysts to produce polyurethane - For facilities with processes listed in Annex B, identify and obtain information on mercury or mercury compound use; and control mercury emissions to air, and releases to land and water - Discourage new uses of mercury in industrial processes
	Annex B: Manufacturing processes in which mercury or mercury compounds are used Part I: Processes subject to Article 5, paragraph 2 Chlor-alkali production, phase out date 2025 Acetaldehyde production in which mercury or mercury compounds are used as a catalyst, phase out date 2018 Part II: Processes subject to Article 5, paragraph 3: Vinyl chloride monomer production Sodium or Potassium Methylate or Ethylate Production of polyurethane using mercury containing catalysts
INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF INFRASTRUCTURE AND ENERGY	Role with respect to the above listed provisions: Competent authority for the licensing of activities related to chemicals classified as hazardous.
	Relevant institutional capacity in place:
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: Drafting legislation, policies.
	Relevant institutional capacity in place:

Name of institution / organization: NATIONAL ENVIRONMENTAL AGENCY	Role with respect to the above listed provisions: - the authority which issues environmental permits, - information on industrial activities in the country
	Relevant institutional capacity in place: - NEA which issues environmental permits for operators that has discharges of mercury into water or land has low technical capacity to address this issue while setting environmental permit conditions. - There is no register of mercury related activities.
Name of institution / organization: STATE INSPECTORATE FOR ENVIRONMENT AND FORESTS	Role with respect to the above listed provisions: Control of the implementation of legislation on chemicals and international conventions on chemicals ratified by the Republic of Albania
	Relevant institutional capacity in place: The technical capacities on addressing mercury are almost completely missing
Capacity gaps that need to be addressed before provisions can be met: n/a	

Table 47. Artisanal and small-scale gold mining

ARTICLE 7 – ARTISANAL AND SMALL-SCALE GOLD MINING (ASGM)	
Succinct summary of provisions relevant to Albania	- Take measures to reduce, and where feasible, eliminate mercury and mercury compound use, emissions (to air), and releases (to land and water) associated with ASGM Annex C: Artisanal and small-scale gold mining
INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: - Drafts legislation, policies and action plans for all points; - Monitors and inspects mercury information
	Relevant institutional capacity in place: There is no ASGM activity in Albania. It is not necessary to develop capacities for this purpose
Capacity gaps that need to be addressed before provisions can be met:	
There is no ASGM activity in Albania. It is not necessary to develop capacities for this purpose	

Table 48. Emissions

ARTICLE 8 – EMISSIONS	
Succinct summary of provisions relevant to Albania	-Take measures to control emissions, optionally prepare a national plan setting out measures to be taken to control emissions and its expected targets, goals and outcomes; - Require the use of best available techniques/best environmental practices (BAT/BEP) for new (as defined in Article 8.2(c)) sources listed in Annex D - Require one or more measures as below to mercury emissions control/reduction from existing sources listed in Annex D, which shall be operational at the source within 10 years - Require monitoring/reporting and otherwise establish a mercury emissions inventory for sources listed in Annex D of the Convention: (a) A quantified goal for controlling and, where feasible, reducing emissions from relevant sources; (b) Emission limit values for controlling and, where feasible, reducing emissions from relevant sources; (c) The use of best available techniques and best environmental practices to control emissions from relevant sources; (d) A multi-pollutant control strategy that would deliver co-benefits for control of mercury emissions; (e) Alternative measures to reduce emissions from relevant sources.
INSTITUTION OR ORGANIZATION	
Name of institution / organization:	Role with respect to the above listed provisions:
MINISTRY OF TOURISM AND ENVIRONMENT	- Drafting of legislation and policies; - Establishes a national system for air emissions and coordinates the work with NEA for reporting to CLRTAP; - The implementation of BAT / BEP is a requirement of the applicable law on environmental permits. - Focal Point of CLRTAP
	Relevant institutional capacity in place: - MoTE has sufficient capacity for discharge registers for the implementation of BAT / BEP. - Specific training on mercury emissions and discharges may be needed.
Name of institution / organization:	Role with respect to the above listed provisions:
NATIONAL ENVIRONMENTAL AGENCY	- The PRTR Convention - Based on the PRTR Convention there are specified the types of activities that need to report on the emissions of mercury and its compounds (as Hg) in land and water. This register is managed by NEA.
	Relevant institutional capacity in place: - NEA which issues environmental permits for operators that have discharges of mercury into water or land has low technical capacity to address this issue while setting environmental permit conditions.

Name of institution / organization:	Role with respect to the above listed provisions:
STATE INSPECTORATE FOR ENVIRONMENT AND FORESTS	The Environmental Inspectorate is the competent authority for controlling the environmental permit conditions, including the obligation to report pollutant emissions
	Relevant institutional capacity in place:
	The technical capacities of the Environmental Inspectorate as regards addressing mercury are almost completely missing
Name of institution / organization:	Role with respect to the above listed provisions:
MINISTRY OF HEALTH AND SOCIAL WELFARE	The role of the Ministry of Health and Social Welfare in relation to this article is for the incineration of hospital waste.
	Relevant institutional capacity in place:
Capacity gaps that need to be addressed before provisions can be met:	
- NEA which issues environmental permits for operators that have discharges of mercury into water or land has low technical capacity to address this issue while setting environmental permit conditions. - Reporting on the discharge and transfer of pollutants from economic operators is very limited, despite the legal obligation. - The technical capacities of the Environmental Inspectorate regarding addressing mercury are almost completely missing. There is a need to strengthen the capacities associated with the specificity of mercury	

Table 49. Releases to land and water

ARTICLE 9 – RELEASES TO LAND AND WATER	
Succinct summary of provisions relevant to Albania	- Identification of the relevant point source categories no later than three years after entry into force of the Convention for Albania - Take measures to control releases, possibly prepare a national plan for it. The plan must be submitted to CoP within four years after entry into force of the Convention for Albania. - Require reporting or otherwise obtain information as needed to identify significant sources of mercury/mercury compound releases to land or water, and to maintain an inventory of releases from the sources identified - Take as appropriate one or more measures as below to control/reduce mercury and mercury compound releases to land and water from significant sources: (a) Release limit values to control and, where feasible, reduce releases from relevant sources; (b) The use of best available techniques and best environmental practices to control releases from relevant sources; (c) A multi-pollutant control strategy that would deliver co-benefits for control of mercury releases; (d) Alternative measures to reduce releases from relevant sources. A national plan may be prepared.

INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: - Drafting of legislation and policies; - Monitor the environment and issue environmental permits for industrial activities. - The implementation of BAT / BEP is a requirement of the applicable law on environmental permits.
	Relevant institutional capacity in place: - MoTE has sufficient capacity for discharge registers for the implementation of BAT / BEP. - Specific training on mercury emissions and discharges may be needed.
Name of institution / organization: NATIONAL ENVIRONMENTAL AGENCY	Role with respect to the above listed provisions: - The PRTR Convention - Based on the PRTR Convention there are specified the types of activities that need to report on the emissions of mercury and its compounds (as Hg) in land and water. This register is managed by NEA.
	Relevant institutional capacity in place: - NEA which issues environmental permits for operators that have discharges of mercury into water or land has low technical capacity to address this issue while setting environmental permit conditions.
Name of institution / organization: STATE INSPECTORATE FOR ENVIRONMENT AND FORESTS	Role with respect to the above listed provisions: The Environmental Inspectorate is the competent authority for controlling the environmental permit conditions, including the obligation to report pollutant emissions.
	Relevant institutional capacity in place: The technical capacities of the Environmental Inspectorate as regards addressing mercury are almost completely missing.
Capacity gaps that need to be addressed before provisions can be met:	
- NEA which issues environmental permits for operators that have discharges of mercury into water or land has low technical capacity to address this issue while setting environmental permit conditions. - Reporting on the discharge and transfer of pollutants from economic operators is very limited, despite the legal obligation. - The technical capacities of the Environmental Inspectorate regarding addressing mercury are almost completely missing. There is a need to strengthen the capacities associated with the specificity of mercury.	

ARTICLE 10 – ENVIRONMENTALLY SOUND INTERIM STORAGE OF MERCURY, OTHER THAN WASTE MERCURY	
Succinct summary of provisions relevant to Albania	Take measures to ensure interim storage of mercury and its compounds intended for a use allowed to a Party is conducted in an environmentally sound manner, taking into account relevant guidelines developed under the Basel Convention and additional requirements for interim storage that may be adopted by the Conference of the Parties (COP)
INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: - Drafting of legislation and policies; - Monitors the environment and issues environmental permits for industrial activities.
	Relevant institutional capacity in place: Specific training on temporary storage of mercury may be necessary.
Name of institution / organization: NATIONAL ENVIRONMENTAL AGENCY	Role with respect to the above listed provisions: NEA issues environmental permits
	Relevant institutional capacity in place: NEA which issues environmental permits for operators that have discharges of mercury into water or land has low technical capacity to address this issue while setting environmental permit conditions.
Name of institution / organization: STATE INSPECTORATE FOR ENVIRONMENT AND FORESTS	Role with respect to the above listed provisions: The Environmental Inspectorate is the competent authority for controlling the environmental permit conditions
	Relevant institutional capacity in place: The technical capacities of the Environmental Inspectorate as regards addressing mercury are almost completely missing.
Capacity gaps that need to be addressed before provisions can be met:	
NEA which issues environmental permits for operators that have discharges of mercury into water or land has low technical capacity to address this issue while setting environmental permit conditions. The technical capacities of the Environmental Inspectorate as regards addressing mercury are almost completely missing. There is a need to strengthen the capacities related to the specificity of mercury.	

Table 50. Mercury wastes

ARTICLE 11 – MERCURY WASTES	
Succinct summary of provisions relevant to Albania	- Use the definition of mercury waste consistent with Article 11.2: mercury wastes mean substances or objects: (a) Consisting of mercury or mercury compounds; (b) Containing mercury or mercury compounds; or (c) Contaminated with mercury or mercury compounds, in a quantity above the relevant thresholds defined by the Conference of the Parties - Take measures to manage mercury wastes in an environmentally sound manner, taking into account guidelines developed under the Basel Convention and in accordance with CoP requirements to be developed. - Take measures to restrict mercury derived from the treatment or re-use of mercury waste to allowed uses under the Convention or environmentally sound disposal - Prevent the import and use of mercury from primary mercury mining for artisanal and small-scale gold mining (ASGM) - Require transport across international boundaries only for the purpose of environmentally sound disposal in accordance with the Basel Convention, or if the Basel Convention does not apply, consistent with international rules, standards, and guidelines.
INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: MoTE drafts legislation and national policies related to hazardous waste management. Relevant institutional capacity in place:
Name of institution / organization: NATIONAL ENVIRONMENTAL AGENCY	Role with respect to the above listed provisions: NEA is the institution responsible for the transfer of waste, including hazardous ones. Since 2015, waste transfer registers have been established. Relevant institutional capacity in place: NEA which issues environmental permits has low technical capacity to address this issue while setting environmental permit conditions.
Name of institution / organization: STATE INSPECTORATE FOR ENVIRONMENT AND FORESTS	Role with respect to the above listed provisions: The Environmental Inspectorate is the competent authority for controlling the environmental permit conditions Relevant institutional capacity in place: The technical capacities of the Environmental Inspectorate as regards addressing mercury are almost completely missing.
Capacity gaps that need to be addressed before provisions can be met: n/a	

Table 51. Contaminated sites

ARTICLE 12 – CONTAMINATED SITES	
Succinct summary of provisions relevant to Albania	- Develop strategies for identifying and assessing mercury/mercury compound contaminated sites - If risk reduction activities are taken at contaminated sites, they are taken in an environmentally sound manner, incorporating risk assessment where appropriate. CoP shall adopt guidance on site identification and characterization, engaging the public, human health and environment risk assessment, options for managing the risks, evaluation of benefits and costs and validation of outcomes.
INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: - Drafting legislation and national environmental policies - Coordinators with donors to facilitate the financing of projects that reduce the risk in contaminated sites
	Relevant institutional capacity in place:
Name of institution / organization: NATIONAL ENVIRONMENTAL AGENCY	Role with respect to the above listed provisions: Monitoring after rehabilitation
	Relevant institutional capacity in place: The area of Ex-Soda PVC Vlore is considered as rehabilitated, but there is no monitoring from NEA of the situation after rehabilitation. Capacities of NEA with this respect are low from the technical, as well as financial viewpoint.
Name of institution / organization: STATE INSPECTORATE FOR ENVIRONMENT AND FORESTS	Role with respect to the above listed provisions: The Environmental Inspectorate is the competent authority for controlling the environmental permit conditions
	Relevant institutional capacity in place: The technical capacities of the Environmental Inspectorate as regards addressing mercury are almost completely missing.
Name of institution / organization: REGIONAL DIRECTORATE OF HEALTH – VLORE	Role with respect to the above listed provisions:
	Relevant institutional capacity in place: Does not have the appropriate technical and human capacity to monitor mercury or its health effects
Name of institution / organization: EDEN Centre	Role with respect to the above listed provisions: Studies on contaminated sites
	Relevant institutional capacity in place:
Capacity gaps that need to be addressed before provisions can be met:	
The area of Ex-Soda PVC Vlore is considered as rehabilitated, but there is no monitoring from NEA of the situation after rehabilitation. Capacities of NEA are low technically and financially.	

Table 52. Financial resources and mechanisms

ARTICLE 13 – FINANCIAL RESOURCES AND MECHANISMS	
Succinct summary of provisions relevant to Albania	- National resources to implement the Convention - Mechanisms to support developing countries and countries with economies in transition to fulfil the obligations under the Convention. Access to financial resources available under the Convention financial mechanism and other resources available from multilateral, regional, and bilateral funding sources
INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: Initiates and coordinates projects that are covered by the state budget in accordance with medium-term budget programs Initiates and coordinates projects with foreign funding
	Relevant institutional capacity in place: There is no feasibility study for the implementation of the Convention obligations
Name of institution / organization: MINISTRY OF FINANCE Directorate of Budget	Role with respect to the above listed provisions: Relevant institutional capacity in place:
Name of institution / organization: MINISTRY OF INFRASTRUCTURE AND ENERGY	Role with respect to the above listed provisions: Funding for the maintenance and storage of Mercury Waste Landfill in Ex Soda PVC plant is made by the State Budget through MoIE's budget planning.
	Relevant institutional capacity in place:
Capacity gaps that need to be addressed before provisions can be met:	
A feasibility study on the implementation of the obligations of the Convention is required on which basis will be identified potential projects to be financed in this regard.	

Table 53. Capacity building, technical assistance and technology transfer

ARTICLE 14 – CAPACITY BUILDING, TECHNICAL ASSISTANCE AND TECHNOLOGY TRANSFER	
Succinct summary of provisions relevant to Albania	Capacity building and technical assistance to developing country Parties to assist them in implementing their obligations under Minamata Convention through regional, sub-regional and national arrangements, including existing regional and sub-regional centres, partnerships, etc.
INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: Regional and international co-operation
	Relevant institutional capacity in place:
Capacity gaps that need to be addressed before provisions can be met:	
There is no national training program dedicated to mercury. The design of such a program to involve all concerned parties according to the Convention articles would be necessary.	

Table 56. Health aspects

ARTICLE 16 – HEALTH ASPECTS	
Succinct summary of provisions relevant to Albania	- Promote the development and implementation of strategies to identify and protect populations at risk, particularly vulnerable populations, such as developing health guidelines on exposure, setting targets for Hg exposure reduction, where appropriate, and public education with the participation of public health and other involved sectors - Promote educational and prevention programs on occupational exposure to mercury and mercury compounds - Promote appropriate health care services for prevention, treatment, and care for populations affected by mercury exposure - Building and strengthening institutional and professional health capacities for prevention, treatment and monitoring of health risks related to exposure to mercury or its compounds
INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF HEALTH AND SOCIAL WELFARE	Role with respect to the above listed provisions: The Ministry of Health and Social Welfare has a mission to draft and implement policies and develop strategies in the healthcare sector. Relevant institutional capacity in place: There is no program or strategy for identifying and protecting populations at-risk from mercury, nor any education program for preventing occupational mercury exposure. Also, there is lack of sufficient institutional and health professional capacities for the prevention, diagnosis, treatment and monitoring of health risks related to exposure to mercury and mercury compounds.
Name of institution / organization: INSTITUTE OF PUBLIC HEALTH	Role with respect to the above listed provisions: Risk assessment of pollutants in health, studies Occupational Health Relevant institutional capacity in place: There are no mercury related activities on-going
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: Collaborative role with responsible Institutions Relevant institutional capacity in place:
Capacity gaps that need to be addressed before provisions can be met:	
- There is no program or strategy for identifying and protecting populations at risk from mercury. - There are insufficient institutional and professional capacities for prevention, diagnosis, treatment and monitoring of health risks related to exposure to mercury and mercury compounds There is no educational program to prevent mercury exposure at work No activity has been undertaken since 2010 to promote the prevention and treatment of potentially affected population exposure	

Table 57. Stakeholders information exchange, public information, awareness and education

ARTICLE 17 /18– INFORMATION EXCHANGE, PUBLIC INFORMATION, AWARENESS AND EDUCATION	
Succinct summary of provisions relevant to Albania	- Facilitate the exchange of scientific, technical and legal information concerning mercury and mercury compounds, including toxicological, eco-toxicological and safety information, information on reduction or elimination of production, use, trade, emissions and releases of mercury and its compounds, on viable alternatives to products, processes and activities that involve mercury or its compounds, - Share information on the health and safety of humans and the environment as non-confidential, in accordance with Article 17.5 - Report to the CoP on progress in implementing Convention obligations under Article 21 Each Party shall designate a national focal point for the exchange of information under the Convention, including with regard to the consent of the importing Parties under Article 3
	- Each Party shall promote and facilitate provision to the public of available information on health and environmental effects of mercury and its compounds, alternatives to mercury and its compounds, information concerning mercury and mercury compounds, including toxicological, eco-toxicological and safety information, information on reduction or elimination of production, use, trade, emissions and releases of mercury and its compounds, on viable alternatives to products, processes and activities that involve mercury or its compounds, results of research, development and monitoring activities. - Promote and facilitate education, training and public awareness related to effects of exposure to mercury and its compounds on human health and environment in collaboration with relevant IGOs and NGOs and vulnerable populations. - shall use the existing mechanisms or consider the development of mechanisms, such as pollutant release and transfer registers for the collection and dissemination of information on estimates of annual quantities of mercury or its compounds that are emitted, released or disposed of through human activities
INSTITUTION OR ORGANIZATION	
Name of institution / organization: MINISTRY OF TOURISM AND ENVIRONMENT	Role with respect to the above listed provisions: According to the legislation in force, MoTE is the competent authority for exchanging information and public awareness on environmental issues. The Ministry of Tourism and Environment has its website, the environmental bulletin and at the same time organizes awareness raising campaigns on various issues. Awareness-raising regarding the presence of mercury in used products and the effects of mercury on health and environment. The care to be taken for disposal or in case of accident and release of mercury from products to the environment (for products up to the date of the prohibition on the importation of the products listed in Part I of Annex A). The information sector cooperates with the technical sector covering the Convention and can organize awareness campaigns.
	Relevant institutional capacity in place:

Name of institution / organization: MINISTRY OF HEALTH AND SOCIAL WELFARE	Role with respect to the above listed provisions: As a policy-making institution, the MoH regulates by legal and sub-legal acts the promotion and facilitation of the provision of public information on relevant public health issues, the factors affecting it.
	Relevant institutional capacity in place:
Name of institution / organization: INSTITUTE OF PUBLIC HEALTH	Role with respect to the above listed provisions: Department of Health Promotion
	Relevant institutional capacity in place:
Name of institution / organization: REC	Role with respect to the above listed provisions: - Promotion of awareness campaigns with the involvement of civil society, - Involvement in the development of modules for institutional and professional capacity building
	Relevant institutional capacity in place:
Name of institution / organization: EDEN Centre	Role with respect to the above listed provisions: Awareness on the effects of mercury, especially in polluted areas
	Institutional capacity regarding the requirements of the Convention Adequate for monitoring health condition
Capacity gaps that need to be addressed before provisions can be met:	
Enhancing the technical capacity and information related to the Mercury would help to organize awareness-raising campaigns It is necessary to regulate the obligation of the responsible institutions for the exchange of information regarding the health impacts of exposure to mercury and its compounds, in close cooperation with WHO and other relevant organizations, as well as increasing awareness on the exposure to mercury.	

Table 58. Research, development and monitoring

ARTICLE 19 – RESEARCH, DEVELOPMENT AND MONITORING	
Succinct summary of provisions relevant to Albania	1. Parties shall endeavour to cooperate to develop and improve, taking into account their respective circumstances and capabilities: (a) Inventories of use, consumption, and anthropogenic emissions to air and releases to water and land of mercury and mercury compounds; (b) Modelling and geographically representative monitoring of levels of mercury and mercury compounds in vulnerable populations and in environmental media, collaboration in the collection and exchange of relevant and appropriate samples; (c) Assessments of the impact of mercury and mercury compounds on human health and the environment, particularly in respect of vulnerable populations; (d) Harmonized methodologies for the activities undertaken under subparagraphs (a), (b) and (c); (e) Information on the environmental cycle, transport (including long-range transport and deposition), transformation and fate of mercury and mercury compounds in a range of ecosystems, (f) Information on commerce and trade in mercury and mercury compounds and mercury-added products; and (g) Information and research on the technical and economic availability of mercury-free products and processes and on BAT/BEP to reduce and monitor emissions and releases of mercury and mercury compounds. 2. Parties should, where appropriate, build on existing monitoring networks and research programmes in undertaking the activities identified in paragraph 1.
INSTITUTION OR ORGANIZATION	
Name of institution / organization: UNIVERSITY OF TIRANA, FACULTY OF NATURAL SCIENCES	Role with respect to the above listed provisions: FNS/UT has conducted studies on monitoring mercury levels in the air through biomonitoring Relevant institutional capacity in place: The Laboratory analysing mercury has analytical and human capacities of a high level but is not accredited
Name of institution / organization: NATIONAL ENVIRONMENTAL AGENCY	Role with respect to the above listed provisions: Monitoring of the state of the environment, chemical analysis of pollutants, including heavy metals Relevant institutional capacity in place: Laboratory is not accredited for mercury analysis

Name of institution / organization:	Role with respect to the above listed provisions:
MINISTRY OF TOURISM AND ENVIRONMENT	Competent authority for international cooperation The focal point of the Convention
	Relevant institutional capacity in place:
Capacity gaps that need to be addressed before provisions can be met:	
Scientific research institutions may have studies in this field, but there is a lack of coordination and cooperation with competent authorities to make their data public. Accreditation of laboratories carrying out mercury chemical analysis is needed Strengthening coordination and incorporating scientific institutions into mercury monitoring projects in the environment is indispensable.	

Table 59. Reporting

ARTICLE 21 – REPORTING	
Succinct summary of provisions relevant to Albania	1. Each Party shall report to the Conference of the Parties, through the Secretariat, on the measures it has taken to implement the provisions of this Convention and on the effectiveness of such measures and the possible challenges in meeting the objectives of the Convention. 2. Each Party shall include in its reporting the information as called for in Articles 3, 5, 7, 8 and 9 of this Convention. 3. The Conference of the Parties shall, at its first meeting, decide upon the timing and format of the reporting to be followed by the Parties, taking into account the desirability of coordinating reporting with other relevant chemicals and wastes conventions.
INSTITUTION OR ORGANIZATION	
Name of institution / organization:	Role with respect to the above listed provisions:
MINISTRY OF TOURISM AND ENVIRONMENT	Focal point for the Convention
	Relevant institutional capacity in place:
Capacity gaps that need to be addressed before provisions can be met: n/a	

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