

# **MANAGEMENT OF MERCURY AND MERCURY CONTAINING WASTES IN PAKISTAN**

**PRESENTATION BY**

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# OUTLINE OF PRESENTATION

- ➔ BEHAVIOUR OF MERCURY IN ENVIRONMENT
- ➔ SOURCES OF MERCURY WASTES
- ➔ PAKISTAN'S SCENARIO
- ➔ ENVIRONMENTAL MANAGEMENT OF MERCURY WASTES
- ➔ RECOMMENDATIONS

# BEHAVIOUR OF MERCURY IN ENVIRONMENT

- ⇒ IT IS A PERSISTENT, MOBILE AND BIO-ACCUMULATIVE ELEMENT.
- ⇒ IT IS RETAINED IN KIDNEY, LIVER AND OTHER ORGANS OF LIVING ORGANISMS.
- ⇒ IN ATMOSPHERE IT EXISTS IN FORMS OF GAS AND PARTICULATES.
- ⇒ IN AQUATIC ENVIRONMENT IT TAKES SHAPE OF ORGANIC COMPOUNDS LIKE METHYL MERCURY.
- ⇒ IT REMAINS IN ENVIRONMENT BUT CHANGES ITS CHEMICAL FORMS

# SOURCES OF MERCURY WASTES

## EXTRACTION AND USE OF FUELS/ENERGY SOURCES

- ⇒ Coal combustion in large power plants
- ⇒ Other coal combustion
- ⇒ Extraction, refining and use of mineral oil
- ⇒ Extraction, refining and use of natural gas
- ⇒ Extraction and use of other fossil fuels
- ⇒ Biomass fired power and heat production

# SOURCES OF MERCURY WASTES

## PRIMARY (VIRGIN) METAL PRODUCTION

- ⇒ Primary extraction and processing of mercury
- ⇒ Metal (aluminum, copper, gold, lead, primary ferrous, other non-ferrous metals) extraction and initial processing

## PRODUCTION OF OTHER MINERALS AND MATERIALS WITH MERCURY IMPURITIES

- ⇒ Cement production
- ⇒ Pulp and paper production
- ⇒ Lime production and light weight aggregate kilns

# SOURCES OF MERCURY WASTES

## USE OF MERCURY IN INDUSTRIAL PROCESS

- ⇒ Chlor-alkali production with mercury-technology
- ⇒ Viny-chloride-monomer (VCM) production with mercury-dichloride ( $\text{HgCl}_2$ ) as catalyst
- ⇒ Acetaldehyde production with mercury-sulphate ( $\text{HgSO}_4$ ) as catalyst
- ⇒ Other production of chemicals and polymers with mercury compounds as catalysts

# SOURCES OF MERCURY WASTES

## CONSUMER PRODUCTS WITH USE OF MERCURY

- ⇒ Thermometers with mercury
- ⇒ Electrical and electronic switches, contacts and relays with mercury
- ⇒ Light sources with mercury
- ⇒ Batteries containing mercury
- ⇒ Biocides and pesticides
- ⇒ Paints
- ⇒ Pharmaceuticals for human and veterinary Uses

# SOURCES OF MERCURY WASTES

## PRODUCT/PROCESS USES

Mercury-amalgam fillings

and gauges

Chemicals and equipment

Religious use in religious rituals and folklore

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_14103](https://www.yunbaogao.cn/report/index/report?reportId=5_14103)

