

**COLLEGE OF EARTH & ENVIRONMENTAL SCIENCES, PUNJAB UNIVERSITY, LAHORE.**

1. **Are you familiar with mercury uses and its impacts on health and environment?**

**Ans:** Yes, Mina Mata, kidney damage& nervous system damage.

2. **Can you identify and prioritize industrial sectors in Pakistan that use mercury and mercury products?**

**Ans:** Yes, electrical industry, chemical industry, medical instrument making industry.

3. **Do you know about “Environmental Sound Management (EMS)”?**

**Ans:** Yes, management for the Trans boundary movement of hazardous waste

4. **Can you identify populations that are potentially exposed to mercury and from which hair samples can be obtained for mercury analysis?**

**Ans:** People living near industries.

5. **Do you know about Basel Convention”? If yes, how can we apply “Basel Convention guidelines for mercury waste” in Pakistan?**

**Ans:** Yes, an international treaty working to reduce hazardous waste.

6. **Which do you think is the most significant source of mercury releases?**

**Ans:** Natural weathering of mercury ore.

7. **Are you using mercury and mercury products at present? If yes, how do you think that you can contribute to reduce its release into the environment?**

**Ans:** Yes, by replacing mercury based thermometer with alcohol base thermometer.

8. **In your opinion, workers of which industry or industries that use mercury and mercury products are at more risk?**

**Ans:** chemical industry.

9. **How can we raise awareness among workers from mercury effects due to occupational exposure?**

**Ans:** By workshops, seminars & training

10. **Share your knowledge /data/experience about the use of mercury in different units of Pakistan**

**Ans:** Pigment/paint industry & electrical equipment.

- 11. What can be the potential alternatives to mercury uses and the feasibility that these can be adopted by industries in Pakistan?**

**Ans:** alcohol based thermometers.

- 12. What can be the best safe storage alternative for mercury in Pakistan?**

**Ans:** Air tight containers.

- 13. What steps would you recommend for the reduction of mercury uses?**

**Ans:** Stop using mercury based compound & thermometer

- 14. Can you suggest some ideas/proposals for promoting awareness among the people about mercury releases and its effects?**

**Ans:** Educate the peoples.

- 15. Can you suggest relevant actions for the development of a national mercury waste management plan?**

**Ans:** Proper disposal & incineration of mercury based items

## **ENVIRONMENTAL PROTECTION AGENCY, MUZAFARABAD**

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**Ans:** Proper disposal & incineration of mercury based items.

**PAKISTAN COUNCIL OF RESEARCH AND WATER  
RESOURCES (PCRWR)**

**1. Are you familiar with mercury uses and its impacts on health and environment?**

**Ans:** Yes, affect gastric, intestinal organs & brain. Also effect liver & kidney.

**2. Can you identify and prioritize industrial sectors in Pakistan that use mercury and mercury products?**

**Ans:** Yes, industries using measuring equipments e.g. thermometer, gauges.caustic soda using industry.

**3. Do you know about “Environmental Sound Management (EMS)”?**

**Ans:** Yes, taking all those steps which managed hazard wastes in such a maner that protects human health.

**4. Can you identify populations that are potentially exposed to mercury and from which hair samples can be obtained for mercury analysis?**

**Ans:** workers of mercury using industries.

**5. Do you know about Basel Convention”? If yes, how can we apply “Basel Convention guidelines for mercury waste” in Pakistan?**

**Ans:** Yes, it is an environmentally sound management of hazardous wastes.

**6. Which do you think is the most significant source of mercury releases?**

**Ans:** In coal combustion, metal refineries & waste incineration.

**7. Are you using mercury and mercury products at present? If yes, how do you think that you can contribute to reduce its release into the environment?**

**Ans:** yes, it can be reduce by using mercury alternatives.

**8. In your opinion, workers of which industry or industries that use mercury and mercury products are at more risk?**

**Ans:** Workers of fluorescent bulbs, thermometers& electric switches industry

**9. How can we raise awareness among workers from mercury effects due to occupational exposure?**

**Ans:** By broachers and chart media.

**10. Share your knowledge /data/experience about the use of mercury in different units of Pakistan**

**Ans:** Nothing to share.

**11. What can be the potential alternatives to mercury uses and the feasibility that these can be adopted by industries in Pakistan?**

**Ans:** Eliminate the use of mercury thermometers and use safe & non mercury equipments in lab.

**12. What can be the best safe storage alternative for mercury in Pakistan?**

**Ans:** No answer.

**13. What steps would you recommend for the reduction of mercury uses?**

**Ans:** Use mercury alternatives in various industries.

**14. Can you suggest some ideas/proposals for promoting awareness among the people about mercury releases and its effects?**

**Ans:** Through seminars, workshops & media.

**15. Can you suggest relevant actions for the development of a national mercury waste management plan?**

**Ans:** Special instruments are used for proper management of mercury. Mercury containing products are recycled.

## INDUSTRIAL SECTOR

**1. Are you familiar with mercury uses and its impacts on health and environment?**

**Ans:** Yes

**2. Can you identify and prioritize industrial sectors in Pakistan that use mercury and mercury products?**

**Ans:** In caustic soda preparation plants.

**3. Do you know about “Environmental Sound Management (EMS)”?**

**Ans:** No.

**4. Can you identify populations that are potentially exposed to mercury and from which hair samples can be obtained for mercury analysis?**

**Ans:** No.

**5. Do you know about Basel Convention”? If yes, how can we apply “Basel Convention guidelines for mercury waste” in Pakistan?**

**Ans:** No

**6. Which do you think is the most significant source of mercury releases?**

**Ans:** Mercury cells.

**7. Are you using mercury and mercury products at present? If yes, how do you think that you can contribute to reduce its release into the environment?**

**Ans:** we are not using mercury

**8. In your opinion, workers of which industry or industries that use mercury and mercury products are at more risk?**

**Ans:** Caustic soda plant.

**9. How can we raise awareness among workers from mercury effects due to occupational exposure?**

**Ans:** No knowledge.

**10. Share your knowledge /data/experience about the use of mercury in different units of Pakistan**

**Ans:** No experience.

**11. What can be the potential alternatives to mercury uses and the feasibility that these can be adopted by industries in Pakistan?**

**Ans:** No information.

**12. What can be the best safe storage alternative for mercury in Pakistan?**

**Ans:** No information.

**13. What steps would you recommend for the reduction of mercury uses?**

**Ans:** No information.

**14. Can you suggest some ideas/proposals for promoting awareness among the people about mercury releases and its effects?**

**Ans:** No information.

**15. Can you suggest relevant actions for the development of a national mercury waste management plan?**

**Ans:** No information.



## **NATIONAL ENGINEERING SERVICES, PAKISTAN(NESPAK)**

- 1. Are you familiar with mercury uses and its impacts on health and environment?**

**Ans:** Yes

- 2. Can you identify and prioritize industrial sectors in Pakistan that use mercury and mercury products?**

**Ans:** Chlor-alkali industries, Hospitals, Research Labs, Cell for Caustic Soda & Chlorine production and Electrical instruments

- 3. Do you know about “Environmental Sound Management (EMS)”?**

**Ans:** Yes, taking all those steps which managed hazard wastes in such a manner that protects human health.

- 4. Can you identify populations that are potentially exposed to mercury and from which hair samples can be obtained for mercury analysis?**

**Ans:** Manufacturers of electrical equipment containing mercury, Chemical processing plant and medical professions

- 5. Do you know about Basel Convention”? If yes, how can we apply “Basel Convention guidelines for mercury waste” in Pakistan?**

**Ans:** Yes

- 6. Which do you think is the most significant source of mercury releases?**

**Ans:** Fossil fuel combustion particularly Coal fired power plants

- 7. Are you using mercury and mercury products at present? If yes, how do you think that you can contribute to reduce its release into the environment?**

**Ans:** Yes, we are using mercury products like thermometer and tube lights

- 8. In your opinion, workers of which industry or industries that use mercury and mercury products are at more risk?**

**Ans:** No information.

- 9. How can we raise awareness among workers from mercury effects due to occupational exposure?**

**Ans:**

- to insure the supply of only mercury free products
- Using mercury free thermometers
- Copies of educational material should be dissipated to different concerned departments
- Guidance for the proper management of mercury containing reagents

**10. Share your knowledge /data/experience about the use of mercury in different units of Pakistan**

**Ans:** No experience.

**11. What can be the potential alternatives to mercury uses and the feasibility that these can be adopted by industries in Pakistan?**

**Ans:** Alternative for sphygmomanometers can be Aneroid. Similarly for gastrointestinal tube the alternative is Bougie tubes

**12. What can be the best safe storage alternative for mercury in Pakistan?**

**Ans:** No information.

**13. What steps would you recommend for the reduction of mercury uses?**

**Ans:** No information.

**14. Can you suggest some ideas/proposals for promoting awareness among the people about mercury releases and its effects?**

**Ans:**

- By educating the public about the hazardous associated with mercury
- Brochures
- Media advertisement
- School programmes

**15. Can you suggest relevant actions for the development of a national mercury waste management plan?**

**Ans:**

- Elimination or Reduction in the use of mercury thermometers

- Replacement of mercury containing compounds with mercury free compounds
- Substitute Zinc Air or Silver Oxide Batteries for your mercuric oxide batteries
- Label Instrument containing mercury

**LAHORE COLLEGE FOR WOMEN UNIVERSITY, LAHORE**  
**(LCWU), DEPARTMENT OF CHEMISTRY**

**1. Are you familiar with mercury uses and its impacts on health and environment?**

**Ans:** Yes

**2. Can you identify and prioritize industrial sectors in Pakistan that use mercury and mercury products?**

**Ans:** Chlor-alkali industries, Glass Industry, Mercury Lamp industry, Coal combustion, cement industry, waste incineration

**3. Do you know about “Environmental Sound Management (EMS)”?**

**Ans:** Population that r working in cement industry and chlor alkali industries

**4. Can you identify populations that are potentially exposed to mercury and from which hair samples can be obtained for mercury analysis?**

**Ans:** Manufacturers of electrical equipment containg mercury, Chemical processing plant and medical professions

**5. Do you know about Basel Convention”? If yes, how can we apply “Basel Convention guidelines for mercury waste” in Pakistan?**

**Ans:** Yes. Basel convention is an international treaty working to reduce the movement of hazardous waste between nations.

We can apply Basel convention guide lines if government of Pakistan gives regulator and enforcement infrastructure that can insure compliance with applicable hazardous waste in environmentally sound management.

**6. Which do you think is the most significant source of mercury releases?**

**Ans:**

- Coal fired power plant
- Dental amalgam filling
- Cement industry
- Waste incineration

**7. Are you using mercury and mercury products at present?  
If yes, how do you think that you can contribute to reduce its release into the environment?**

**Ans:** Yes, we r using mercury products like thermometer.  
We can reduce its release into environment by making proper disposal of the product.

**8. In your opinion, workers of which industry or industries that use mercury and mercury products are at more risk?**

**Ans:** workers of shipping disposal industry, cement industry and coal industry.

**9. How can we raise awareness among workers from mercury effects due to occupational exposure?**

a. **Ans:** by education.

**10. Share your knowledge /data/experience about the use of mercury in different units of Pakistan**

**Ans:** No experience.

**11. What can be the potential alternatives to mercury uses and the feasibility that these can be adopted by industries in Pakistan?**

**Ans:** to find the ways to achieve the same results with less toxic materials.

**12. What can be the best safe storage alternative for mercury in Pakistan?**

**Ans:** No information.

**13. What steps would you recommend for the reduction of mercury uses?**

**Ans:**

- Reduce demand of mercury.
- Stop the mercury mining.
- Reduce mercury emission.
- Push for action at global level.
- Export ban and storage obligation for mercury.

**14. Can you suggest some ideas/proposals for promoting awareness among the people about mercury releases and its effects?**

**Ans:**

- Trainings
- Workshop
- Seminars
- Consulting
- brochure

**15. Can you suggest relevant actions for the development of a national mercury waste management plan?**

**Ans:**

Government has to develop innovative mercury use and release reduction laws and regulations that supplement, and in some cases provide a model for national efforts.