

**Inventories of Mercury, Mercury Compounds
And Mercury-containing Product Uses and
Releases and Development of Associated
Mercury Action Plan**

DENR-EMB/UNEP

OUTLINE

I. Introduction

II. Mercury Inventory Toolkit (UNEP)

II. Assessment of Sources of Mercury

III. Project Framework

Mercury, Hg

- the only metal that is liquid at room temperature
- has the highest solubility of any metal in water
- vaporizes readily into the atmosphere

Forms of Mercury

- Elemental Mercury – mercury in its purest form; exposure to this form of mercury usually comes through breathing mercury vapor, Hg^0
- Methylmercury – the primary form of mercury to which people are exposed. It is an organic compound (contains carbon) which can be bioaccumulated in the food chain, CH_3Hg
- Other mercury compounds (organic and inorganic) – exposure through ingestion of these compounds

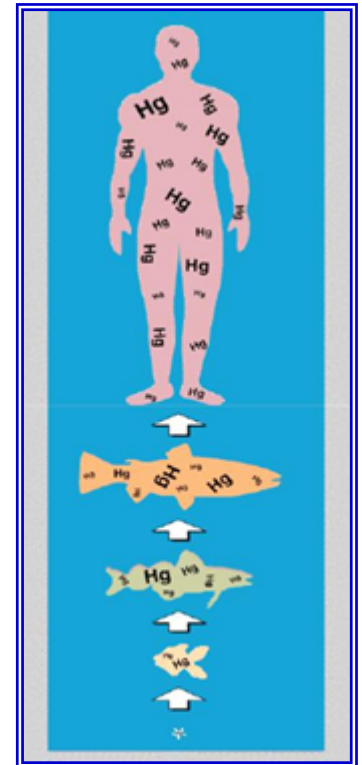
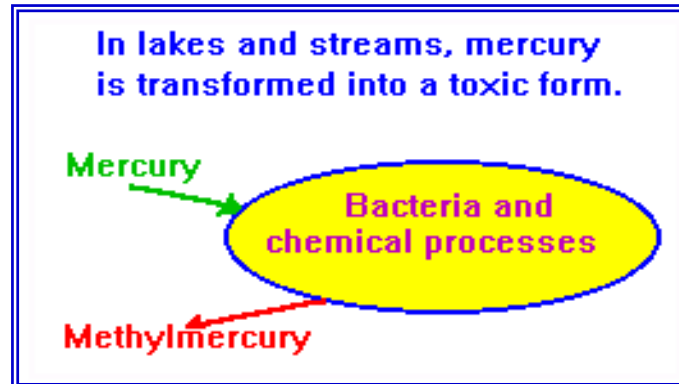
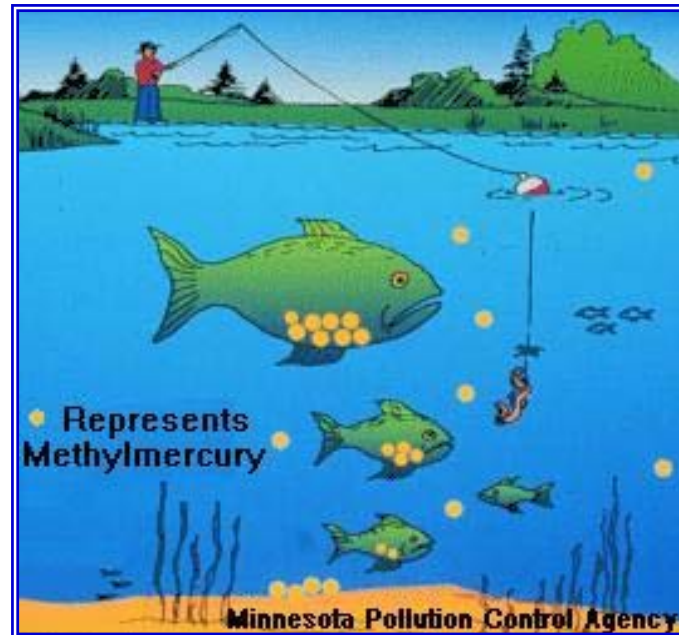
Unfortunate Characteristics of Mercury

- Bioaccumulation
- Local deposition
- High toxicity
- Teratogenic effects, i.e., affects fetus
- Persistent organic pollutants

Mercury uptake thru Fish Consumption

Metabolic conversion and bio-accumulation through “food-chain”

- Hg in sediments converts into methylmercury (MeHg)
- MeHg enters the aquatic food chain: fish, marine and freshwater
- MeHg uptake by humans through fish consumption



General Source or Emission Pathway of Mercury

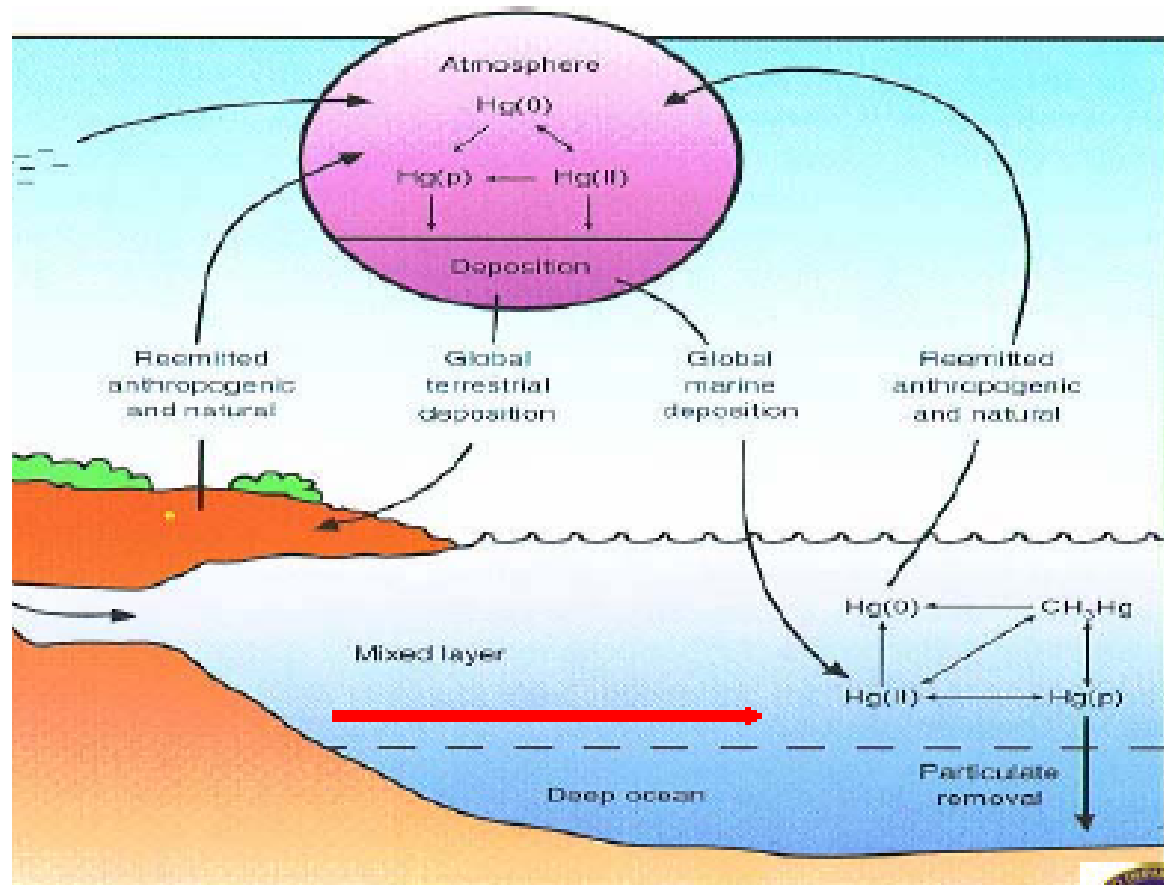
- Natural occurrence
- Anthropogenic (associated with human activities)

5,500 metric tons of mercury is released into Earth's atmosphere each year ^[1]

- 30% is result of natural emissions from sources like volcanoes
- 70% is manmade

[1] Trasande L, Landrigan PJ, Schecter C. Public health and economic consequences of methyl mercury toxicity to the developing brain. *Environmental Health Perspectives*. 2005;113:590-596.

Where Does Anthropogenic Mercury Come From? The Geochemical Cycle of Mercury



Dept. of Interior's Report on Hg in the Florida Everglades



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_14159

