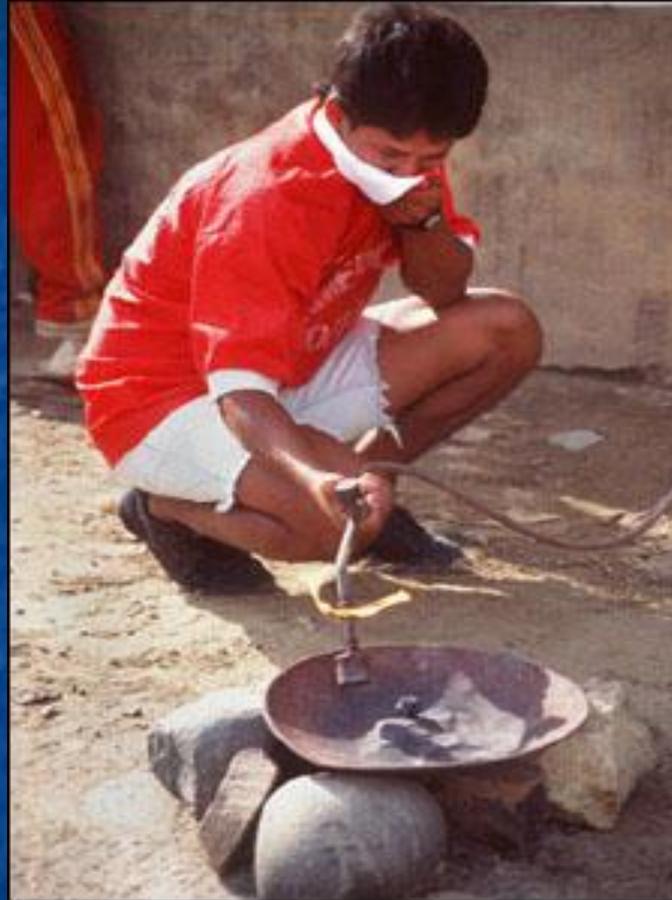


What is this man doing?

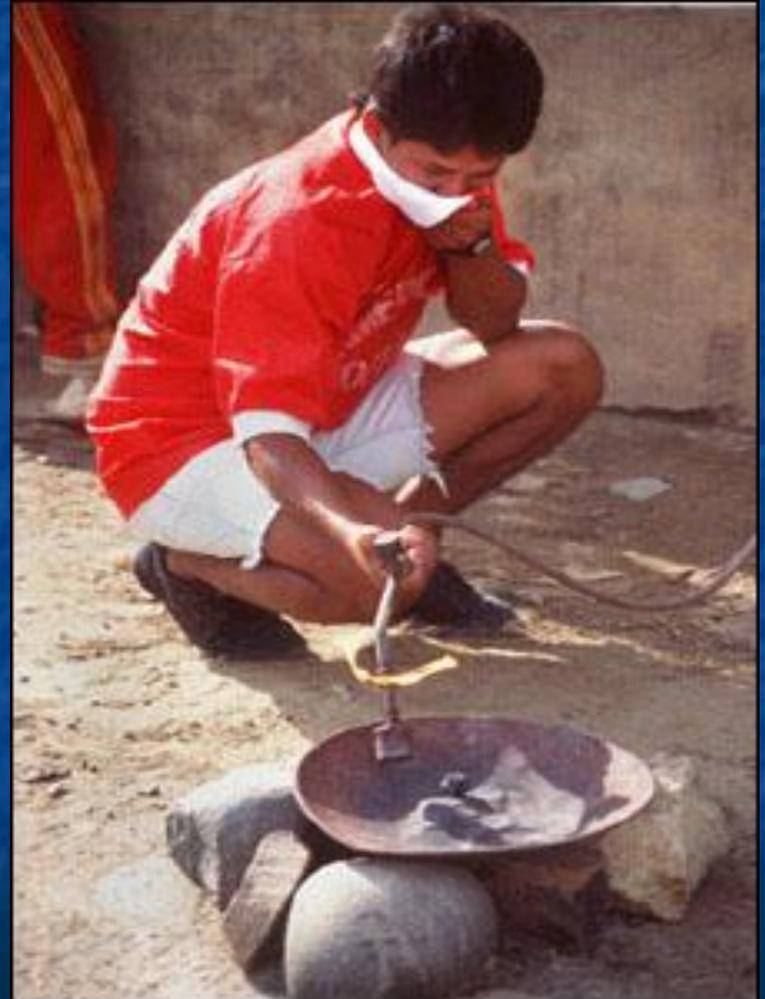


Is it dangerous?

# The Environmental Problem

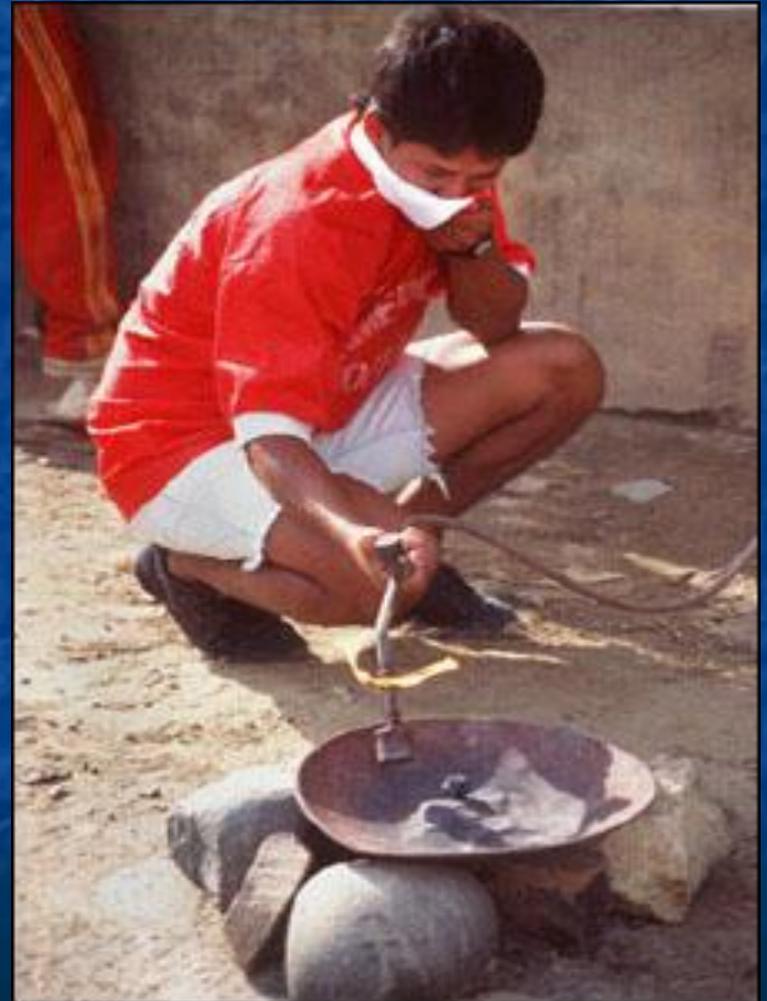
## Complexity and Multi-dimensionality

- Economy vs. Health & Safety
- Small Acts with Big Impacts
- Cumulative Effects of Many Actions
- Impacts Widely Disbursed
  - Geographic Scope
  - Number of People Impacted
- Harm to Resources Owned Collectively
- Impacts Ignore Property and Political Boundaries



# The Environmental Problem

- Transported by Multiple Media
  - Air Deposition to Surface Water/Soil
  - Surface Water-Ground Water Interaction
  - Leaching from Soil to Ground/Surface Water
  - Contaminated Soil May Become Air-borne
  - Human Transport



# Prevention

Preventing Creation of Pollutants is better than capturing or controlling pollution release.

Capturing pollution before it is released is cheaper than getting it out of:

- Rivers, lakes,
- Groundwater
- The Air
- Soil & Sediment



# Statutory Tools for Prevention

- Statutory/Regulatory Standards
    - Product Standards
    - Technology Standards
    - Health-based Standards
  - Environmental Impact Assessment
  - Permits/Licenses
  - Cradle-to-Grave Tracking
  - Enforcement Systems
  - Market-Based Trading Programs
  - Incentives for Voluntary Action
- 
- Information Disclosure to the Regulator
  - Information Disclosure to the Public



# Information Tools

- Objectives:
  - Develop information needed for informed decision-making
  - Consider alternatives
  - Public participation/ Empowering Communities
  - Assist targeting of enforcement action
- Key considerations:
  - Cost/benefit analysis
  - How to present information in useful form
  - Reasons not to disclose to the public
    - Proprietary business information
    - Preliminary or incomplete and inaccurate presentation
    - Personal privacy