

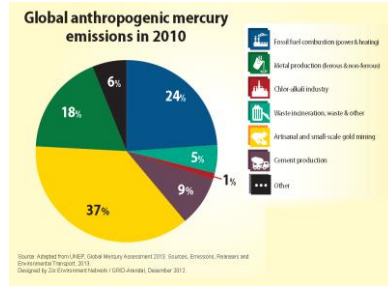


ASGM Minamata Public Health Strategy: Possible Scenarios

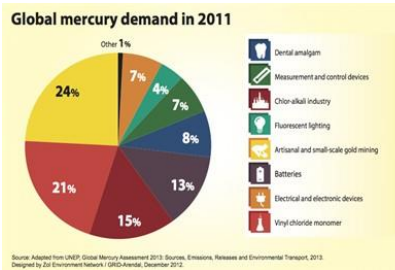


*Arnaldo Sanchez, MD
Artisanal Gold Council (AGC)
PAHO Meeting Jamaica, Oct 2016*

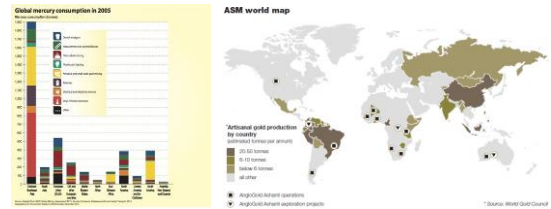
ASGM Mercury Emission and Release



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FACTS & FIGURES

ASGM

ARTISANAL AND SMALL SCALE GOLD MINING

- 10-15 million miners
- 12-15% of world gold supply
- More than 1,400 tons of mercury per year released to the environment
- over 70 countries affected

UNEP, ASGM facts and figures

Use of mercury in ASGM



Use of mercury in ASGM



Health Effects of Mercury



- Nervous system
- Respiratory system
- Cardiovascular system
- Kidneys
- Immune system
- Digestion

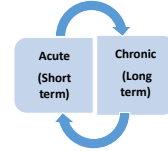


Figure adapted from GRID-Arendal, http://www.grida.no/graphicslib/detail/mercury-and-human-health_ectb

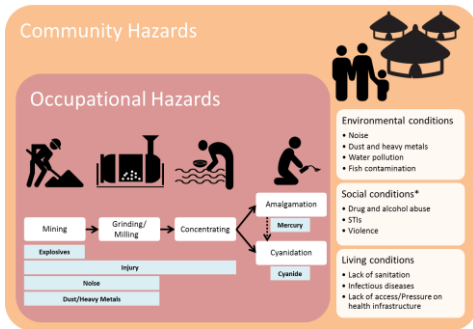
Characteristics of ASGM populations

- ASGM is a temporary livelihood activity of seasonal job
- ASGM communities live in isolated or remote areas
- Are not settled populations, rather temporary
- Don't have easy access to education and healthcare
- Don't have access to basic sanitation infrastructure

Informal vs illegal ASGM



Other Health Issues in ASGM



ASGM Health in the Minamata Convention

Article 1	Objective to protect the human health and the environment from adverse effects of mercury
Article 4	Phase out of some mercury-containing medical devices and products; phase down of dental amalgam
Article 7	Public health strategies for ASGM communities (NAP)
Article 12	Guidance on health risk assessment of contaminated sites
Article 16	Strategies and programs to identify and protect populations at risk; Promote education and prevention related to occupational exposures; Promote health care services; Strengthen prevention, diagnosis, treatment and monitoring

ASGM Health in the Minamata Convention

Article 17	Information exchange including health information
Article 18	Public information, awareness and education
Article 19	Research, development and monitoring – may include health assessments and monitoring levels of mercury in vulnerable populations
Article 22	Effectiveness evaluation

Article 7 and Annex C
ASGM Public Health Strategy

- Focus on “the exposure of ASGM miners and their communities to mercury”
- Strategy to include:
 - Gathering of health data
 - Training of health care providers
 - Awareness raising through health facilities
 - Prevent exposure of vulnerable populations: women of child-bearing age, pregnant women, children

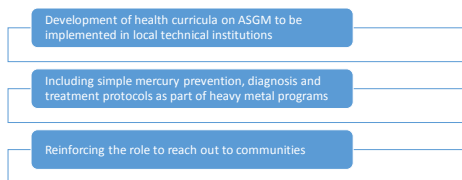
ASGM Public health Strategy

- **Diagnosis of situation in ASGM Population (Health baseline):**
 - What are main PH problems in mining communities? Identification of main health issues
 - What data should be collected to monitor health?
 - What are highest intervention populations? Where should strategy be targeted?
 - Health-seeking behavior
- **Diagnosis of situation in Health Sector (Institutional capacity):**
 - Health systems readiness to address ASGM-related health issues
 - What health resources already exist at community, regional, national levels? What enhancements do they need?
 - What are highest priority in training needs?
 - Is there adequate scientific capacity to support PH?

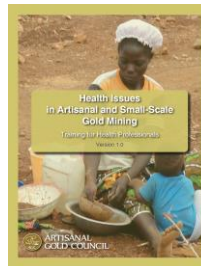
Public Health Strategy Components

Role of the Health Sector	Needs of the Health Sector
Diagnosis and treatment	Health professionals, Lab/ technical capacity, ER capacity
Prevention: Educating miners, families, communities on preventing exposure	Training for health care providers on: diagnosis and response; awareness-raising; occupational health
Monitoring and evaluation of impact and effectiveness of interventions	Surveillance systems: case counts of mercury related neurological disease, mercury poisoning, injuries/deaths

Training of Health Professionals



Training of Health Professionals



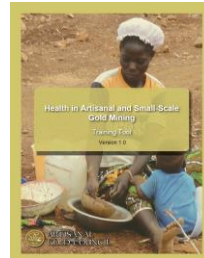
Raising awareness in mining communities

Development of practical educational material to be implemented by local health practitioners

Engagement of community organizations: women and people in secondary economy

Sensitization on the chronic long term effects of mercury with culturally appropriate message

Raising awareness in mining communities



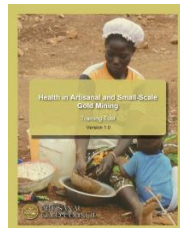
Occupational Health Training for Miners

Development of practical training material to be disseminated among miners

Provide education on prevention of mercury and other occupational exposures

Training to miners for quick dissemination of knowledge to others

Occupational Health Training for Miners



Incorporation Into Other Health Programs

In ASGM populations, infectious diseases such as Malaria and TB are common.

Incorporation into Heavy metal programmes

Can be included in programs such as conditional cash transfer

Incorporation Into Other Health Programs

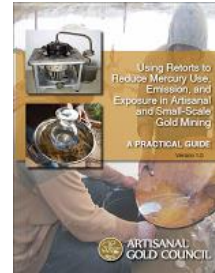


Promotion of New Technical Interventions

- Example: Retorts
 - Can decrease exposure if used correctly
 - Need education on proper use to prevent exposure



Promotion of New Technical Interventions



Promotion of New Technical Interventions (Gravimetric)



Thank you!

WHO Guidance Development

- 67th World Health Assembly Resolution in May 2014 agreed a resolution on the role of WHO and ministries of health in implementation of the Convention (WHA67.11)
 - http://www.who.int/ipcs/assessment/public_health/mercury/en/
- Initial elements of WHO toolkit on ASGM and health being developed:
 - Guidance on developing a public health strategy
 - Conducting a health situation assessment
 - Training materials for health care providers