

Academic and Research Institutions in support of the Minamata Convention

a new way of working at the Research Triangle Area in North Carolina

Chris LARA
MIDP Fellow - Sanford
Senior Policy Advisor — Global Health
Rethinking Diplomacy Fellow — DUGCIS











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1. Problem Identification & Methodology

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2. Duke GOLD - Capacity - Action

1"

3. Moving Forward – Support Art 7 Impl.

The beginning - Project Summary

Client

- Government of Peru Ministry of Environment (Key Stakeholder)
- Commissioning Duke University National Aeronautics and Space Administration NASA Amazonas SERVIR HUB –18-SERVIR18-0025, project – Hydrology and health in the Western Amazon: monitoring risks of contamination and infectious disease.



What **policies** could NASA-SERVIR project team put forth to the Government of Peru in order to

integrate Mercury Science with

Policy & Decision-Making for better informed operationalization of responses to human and environmental risks, derived from the use of Mercury (Hg) in small, artisanal or illegal gold mining

in the Peruvian Region of Madre de Dios?

Project Summary

Problem Definition

Insufficient
environmental
management and
monitoring of
activities related to
ASGM

Fragmented public health, social policy or environmental interventions

C Scattered Mercury research and policy activities: lack of shared knowledge and need for multilayered, cross-sectoral arrangements and interdisciplinary actions.

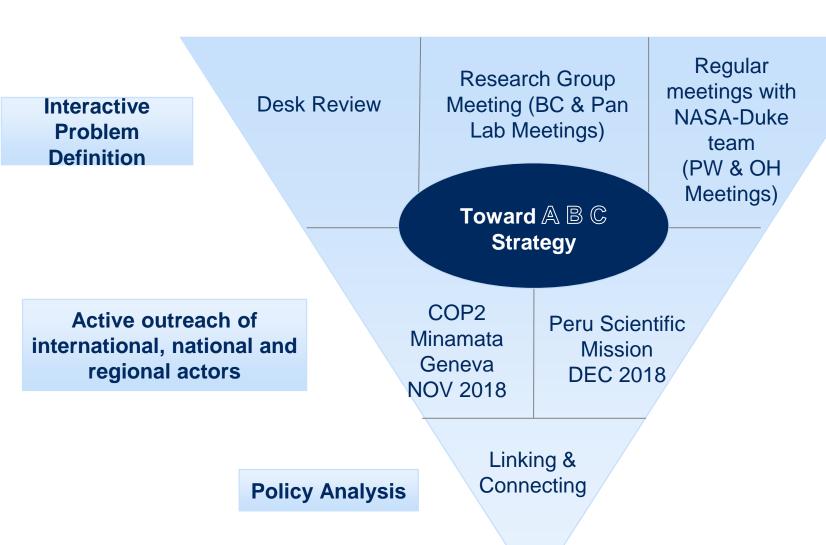
Strategy

A Identifying relevant policy issues upon which policy alternatives

B Framing relevant fieldwork and case studies on the intersections of global health and environmental science for solution-focused policy analysis

C Exploring multi-level and multi-disciplinary strategic models to help integrate Mercury Science with national and international policy efforts







Identifying relevant policy issues upon which policy alternatives to be proposed for response options



Framing relevant fieldwork and case studies on the intersections of global health and environmental science for solution-focused policy analysis identifying potential causes, options and feasible alternatives.



Exploring multi-level and multi-disciplinary strategic models to help integrate Mercury Science with national and international policy efforts

Recommendations

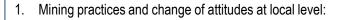
Desk Review - Recommendations

- •Improving the government capacity for environmental management and monitoring toward full compliance with the Minamata obligations (Chen et al., 2018).
- •Increasing the whole-of-government as well as whole-of-sector capacities for inter-sectoral coordination (ILO, 1999; MMSD, 2002; Barreto L., 2011).
- •Identifying and creating instances of integration between mercury science & research and policy & decision-making (Chen et al., 2018, Driscoll C., 2013, and Gustin M. et al., 2016)

Consultations - Recommendations

- **1. Impact monitoring of exposure/presence** both in health (vulnerable communities) and the environment
- **2. Capacity development** -human resources for health with Hg focus (global health interventions)
- **3. Research on options** -health/nutrition
- **4. Research on Hg cycle dynamics** -environmental policy

Analysis - Recommendations









- Training and sensitization campaigns
- Increasing in tandem with formalization process
- Communication strategy at grassroot level
- Improvement of labor good practices (safety)





light 4. Implementation of Development - Long Term projects:





Bottom-Up





- Livelihood and development projects (tourism, agrobusiness, incentives system)
- Sustainable & Dignified labor

Mid

Intensive liaison with cooperation and technical agencies and their implementer partners

NG RG

NG RG



Full

Bottom-Up

Long-Term

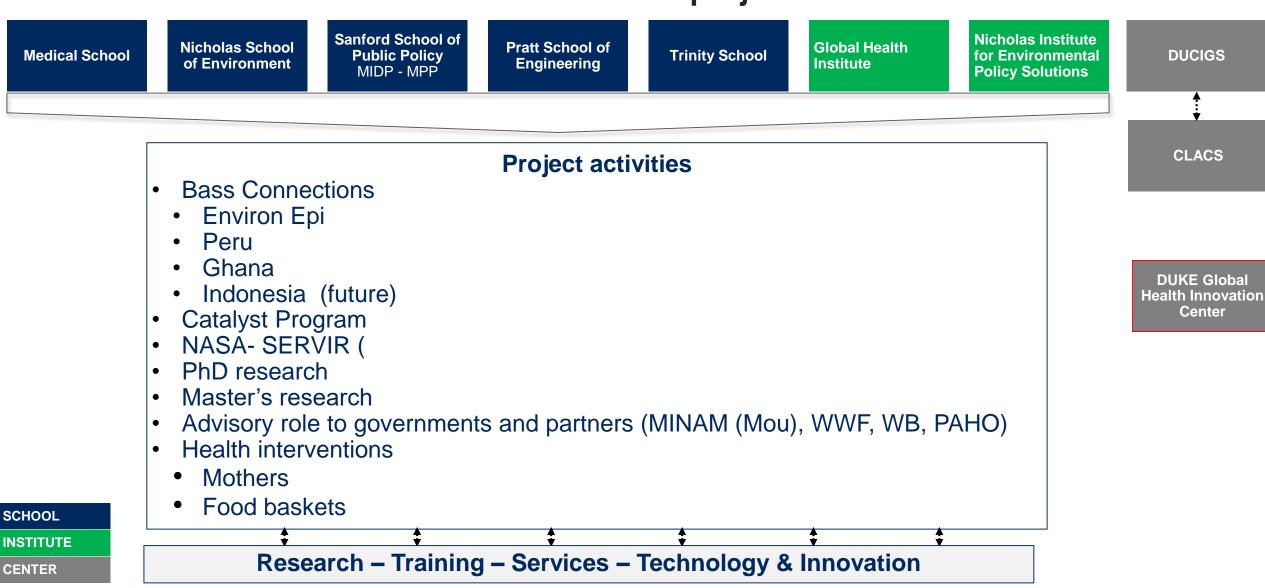


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Working together - ASGM Interdisciplinary Work Duke teams and projects



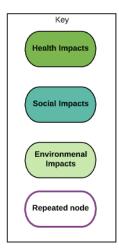
One-Duke approach on ASGM

How we can contribute to a sector in a more coherent manner towards Minamata Implementation?



Duke Areas of Work Environmental Health Strategic Aquatic and **Terrestrial Systems** Ocean and Coastal **Systems Plannin** Earth and **Environmental** Duke **Sciences Environmental** Q **Duke ASGM** Governance, **Health Pillars Economy and Policy** Key Interventions **Technology** and Data Energy and Resources Climate and

Impacts



Intervention types

1. Formalization

Giving land rights

Concessions enforcement, oversight, and clarity

Consolidating refinement

Liscense and regulate ASGM

Miners organizations

Formalize access to markets

2. Technology

Reduce use of Hg

Reduce release of Hg

3. Supply chains (for Hg and Au)

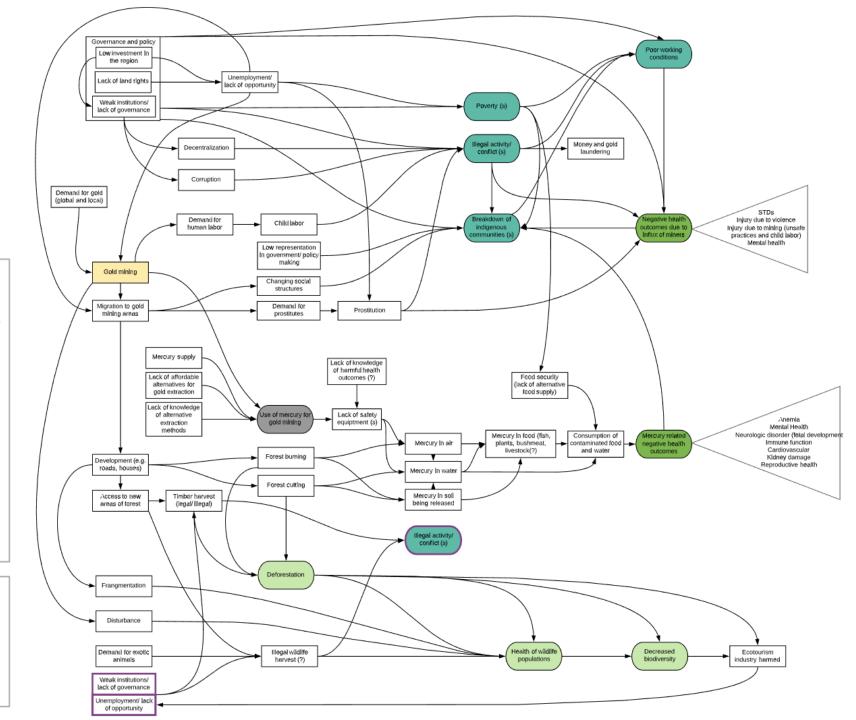
Change demand for Hg

Change demand for Au

- 4. Alternative diets
- 5. Improving working conditions
- 6. Governance
- 7. Poverty alleviation
- Financing/ access to loans (is this a part of formalization?)

Questions/ things to add?

- -Supply of mining materials (gas/ machines)
- -Trash/ waste from mining and additional people
- -Illegal bushmeat harvest
- -Disagreemment with how to deal with gold mining issues
- -Lack of mediation capacity
- -Dams
- -Landslides/ erosion



Materializing the One-Duke Approach and

Positioning Duke as a Leader of a Holistic Approach to Environmental Solutions

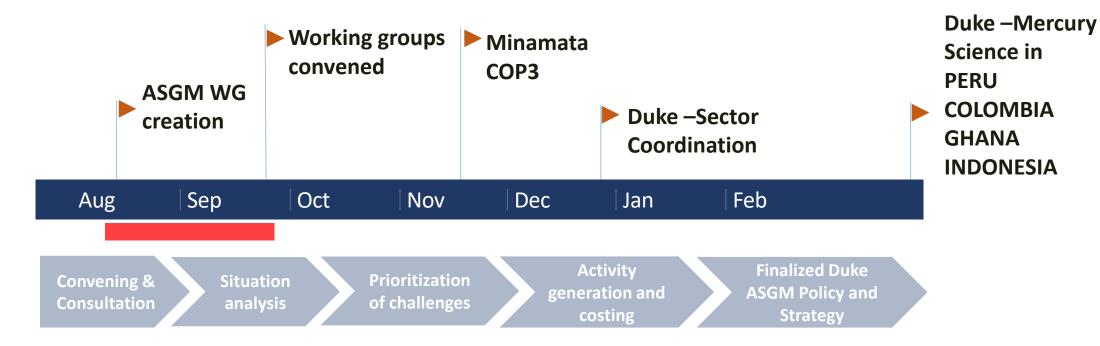




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The One-Duke ASGM strategic planning process will complement ongoing activities, including:

- Situational Analysis consultations
- Advise to MINAM on National Plans
- Schools and Institutes Strategy and Policy development (NSOE DGHI other schools)



























Gaia Amazonas





