

Mercury Pollution and Contaminated Sites: Case of ASGM and Other Hotspots in Kenya

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About CEJAD

CEJAD public interest NGO based in Nairobi, Kenya

- Plastics and Waste Management
- POPs Elimination
- Lead in Paint Elimination
- Highly Hazardous Pesticides (HHPs) Elimination
- Mercury and Minamata Convention on mercury

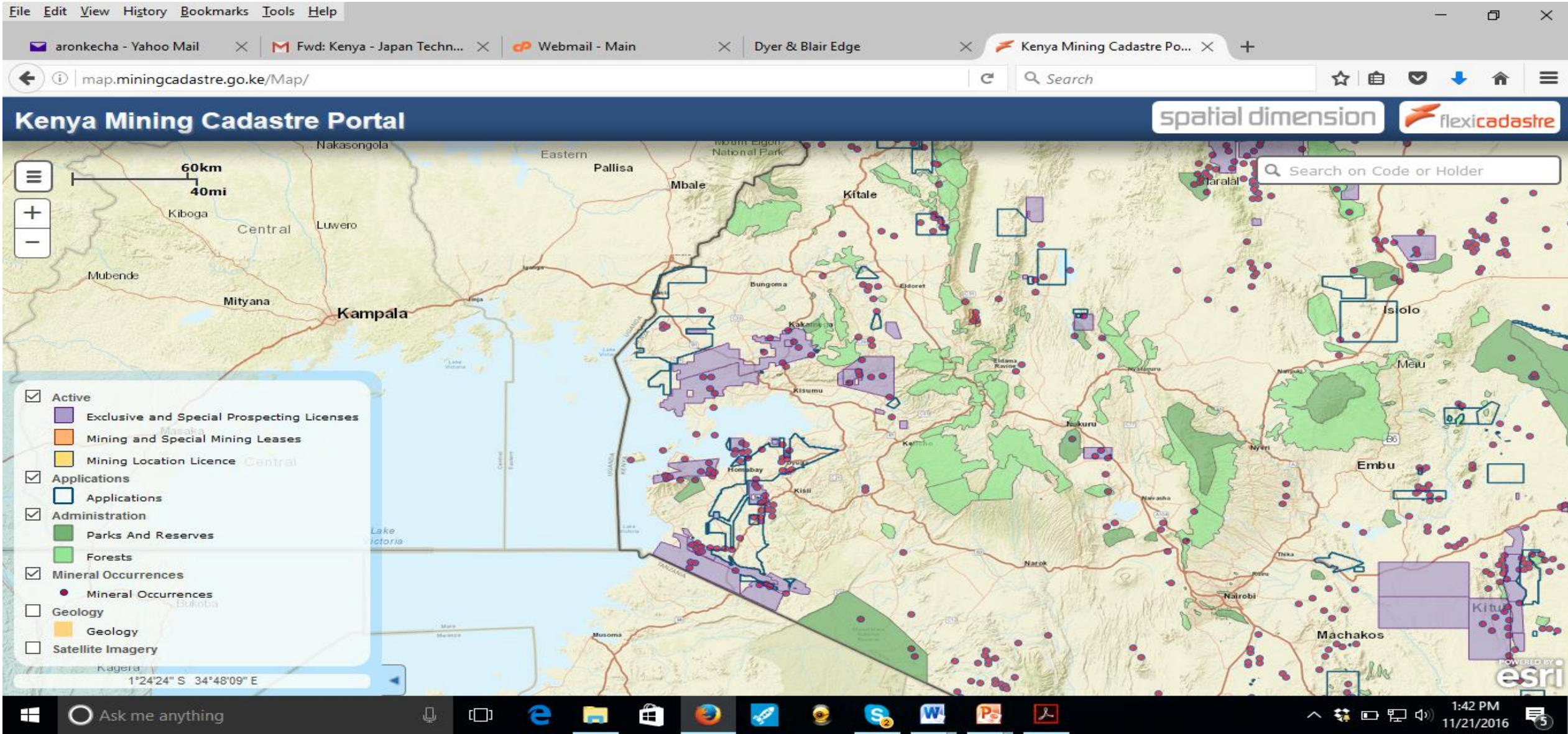


ASGM - Background

- Gold mining dates back to 1920s (largely industrial mines)
- ASGM mostly in old sites where industrial mining occurred.
- Key areas include Migori–Transmara, Kakamega, Vihiga in Western Kenya region,
- More people joining ASGM due to variety of push and pull factors- key livelihood source in the region

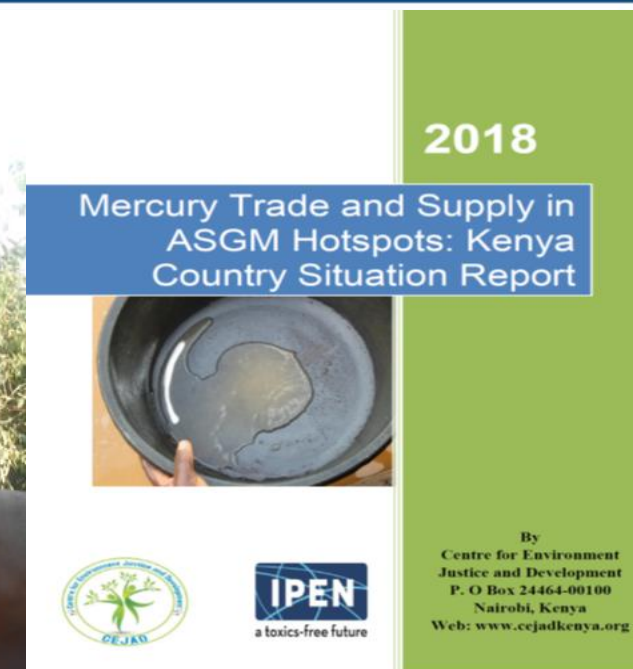
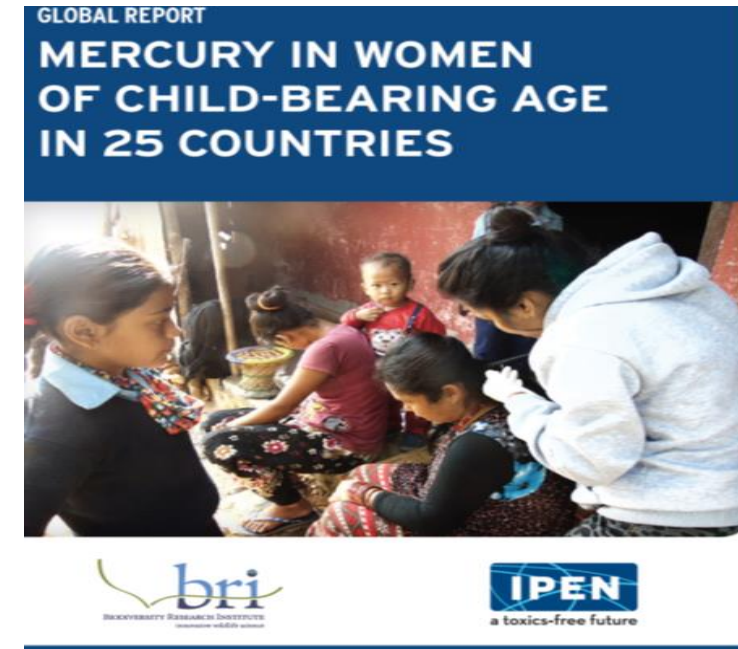


Minerals Occurrence and ASGM Hotspots



CEJAD Work on Mercury Use in ASGM

- Situational Studies of ASGM in Kenya and Developed a mercury hotspot profile of the ASGM sites in Migori
- User friendly web-based interactive map on the hotspots
- Produced a video documentary on documentary on prevailing conditions in ASGM for media outreach
- Implemented Sensitization programmes on Environmental and Health impacts of mercury use in ASGM in liaison with local miner groups
- Participated in Project for Sampling Human Hair to test for Mercury poisoning among women of Child bearing age in ASGM Areas



Lolgorian

Field Findings



POLLUTION

- Various studies in Migori–Transmara region revealed high levels of Mercury contamination in soils, water bodies, and plant matter.
- High Hg contents quantified in soil, sediment and tailings in the Migori–Transmara gold mining areas.
- A study by Odumo et al 2014, revealed a mean Hg concentration of 140 $\mu\text{g kg}^{-1}$. Concentration in soils ranged between 20 and 1,100 $\mu\text{g kg}^{-1}$.
- Hg concentrations in the sediments collected from the bottom of rivers ranged from 30 to 2,380 $\mu\text{g kg}^{-1}$, with the lowest and the highest levels recorded from the Migori River and the Lolgorien River.

REFERENCE

- Odumo OB, Mustapha AO, Patel JP, Angeyo HK (2014) Multielemental analysis of Migori (Southwestern Kenya) artisanal gold mine ores and sediments by EDX-ray fluorescence technique: implications of occupational exposure and environmental impact. Bull Environ Contam Toxicol 86:484–489

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