



GOVERNMENT EFFORTS AND COMMUNITY PARTICIPATION IN THE ELIMINATION OF MERCURY IN ARTISANAL AND SMALL SCALE GOLD MINING (ASGM)

Ministry of Environment and Forestry
The Republic of Indonesia
2018



She asked me to visit Paningkaban Village
In Central Java

Siti Nurbaya Bakar. Siti Nurbaya Bakar
the Minister of Environment and
Forestry, The Republic of Indonesia



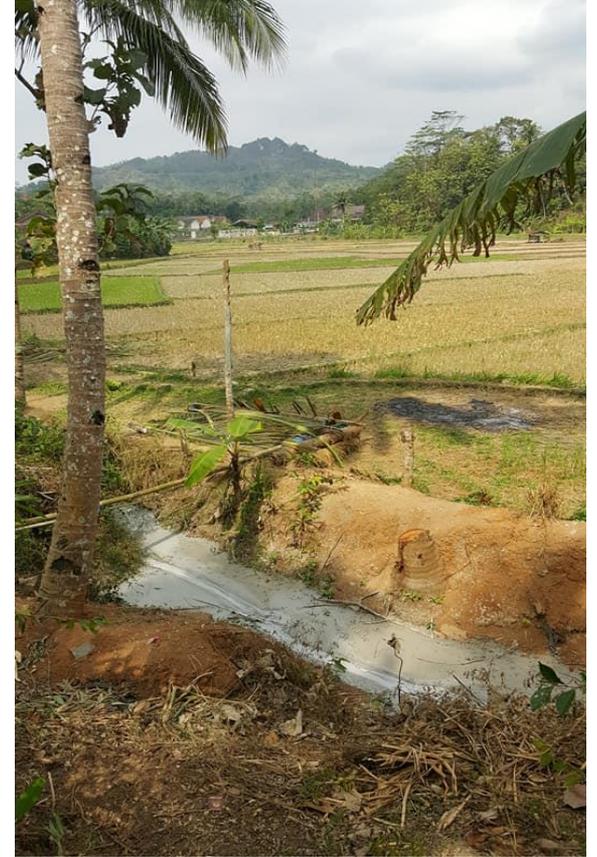
Imam B. Prasodjo, Sociologist

Initial Engagement With Mercury Transformation In Paningkaban Village: A Pilot Project Started in 2018

Paningkaban Village, Banyumas Regency, Central Java



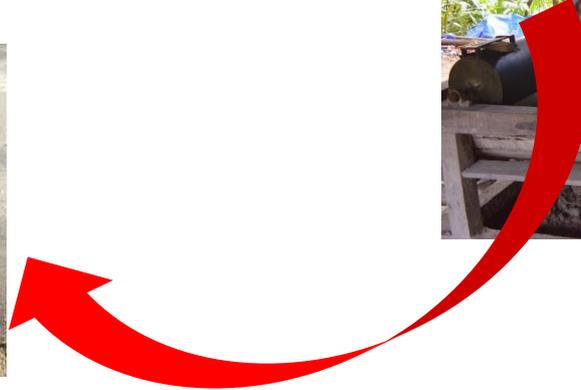
Widespread Mercury Contamination Across Paningkaban Village



The use of mercury in the traditional gold mining process in Paningkaban Village as an amalgam for separating gold from ore.



Tailings (solid waste) from mines are re-mined by villagers



Paninkaban Village Problem: An Example of Micro-level Problems

Timeline and Process

Poverty in Paninkaban village and wider employment opportunities abroad have driven **many villagers to seek work abroad**. The highest figure for the number of migrant workers abroad reached 5% of the entire population of the village. Migrants who return have influenced changes in the behavior of the villagers.

1980 - 2000



The **discovery of gold reserves** in 2000 has raised the hopes of the community that it could earn more income. Villagers flocked to work as illegal miners in the mine pits and the river. At its peak, no less than 1000 people were involved in extractive activities. The social life of the community changed. As many villages earned a higher income, they became increasingly consumeristic. Many of them began to leave their social traditions.

2010 - 2015



PRESENT



In the processing stage, **mercury has been used in large quantities** and is carried out continuously. As a result, within 15 years, no less than one third of the village area is polluted, including its water, land, rice fields, plantations and settlements. The impact of contamination for humans has also been identified.



IN THE NEXT 10 YEARS

In the next 10 years, it is predicted that **one third of the village area will no longer be safe for human activities**, especially for residential and farming purposes. Now, there are at least two areas of settlement in the village that are no longer safe due to mercury contamination.



Miners
± 250 people



Investor ± 30
people



Population
5,603
people



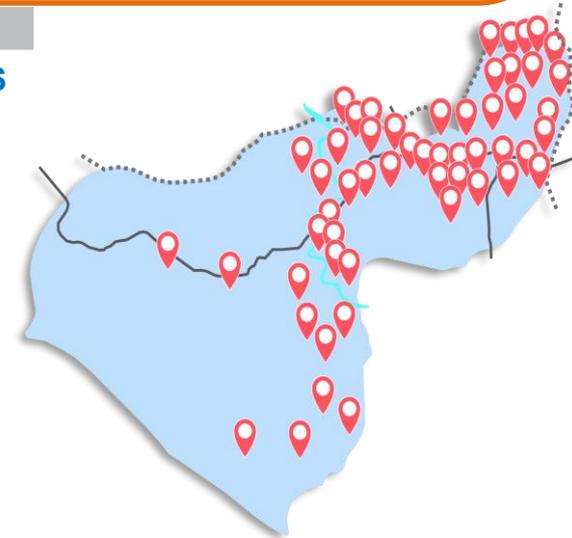
Labor Force
4,272 people



Male
2,889
people

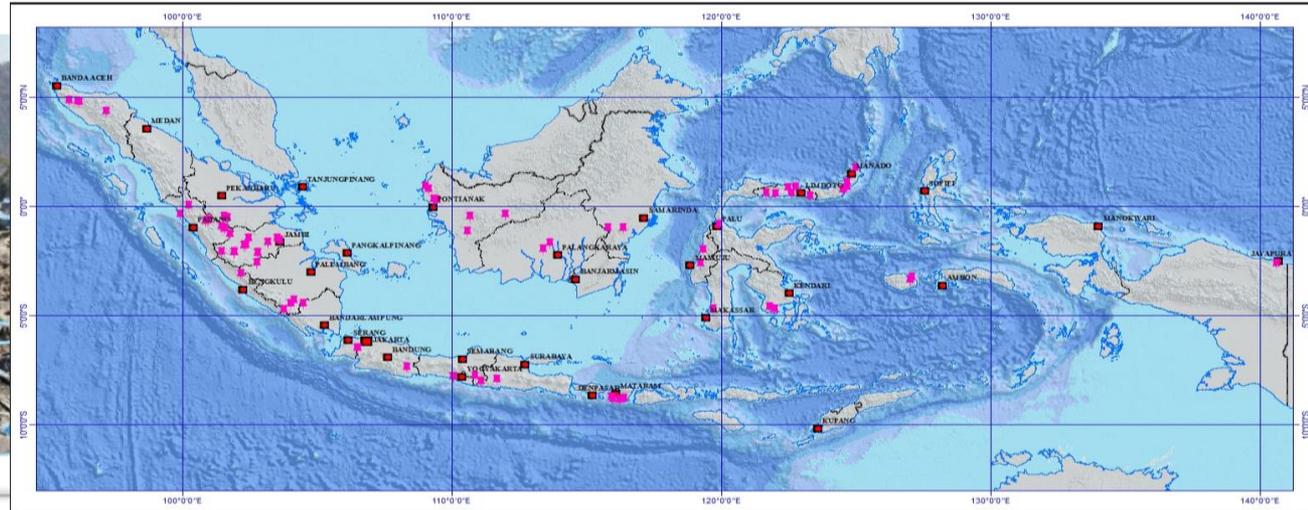


Female
2,714
people



ASGM LOCATIONS IN INDONESIA

*ASGM: Artisanal and Small Scale Gold Mining



ASGM locations: 72

- 22 Provinces
- 50 Regencies/Cities

(Source: MOEF, 2018)

In 2011, Indonesia had around **850 ASGM hotspots** across the archipelago (Ismawati 2011).

1. Across Indonesia, artisanal and small-scale gold mining activities provide livelihoods to **more than one million people**, spanning 27 provinces (Balifokus, 2015).
2. Yet, national news media coverage in Indonesia has stressed that ASGM “**costs the nation millions**” (Nainggolan, 2015), **highlighting ecological and health consequences of toxic contamination** (Adopted from Samuel J. Spiegel, et.al, 2018).
3. In 2010, about **280 tons of illegal mercury were imported to Indonesia for ASGM**. This **figure was doubled in 2011** (Ismawati 2011 quoted in BaliFokus et.al, 3 January 2013).
4. Nonetheless, UNEP (2017) reported that **in 2015, Indonesia documented mercury exports of 284 tonnes** (mostly to Hong Kong, Switzerland, Singapore and Viet Nam).” (UNEP, 2017, p. 8).

Global mercury supply, trade and demand



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DISTURBING REPORT

“After exporting less than 20 tonnes of mercury in previous years, in 2015 Indonesia documented mercury exports of 284 tonnes (mostly to Hong Kong, Switzerland, Singapore and Viet Nam).” (UNEP, 2017, p. 8)

Table 2. Mercury exports to all countries, 2010-2015, as reported by Indonesia

	Value (US\$)	Quantity (kg)	Price per kg (average, US\$)	Price per flask (average, US\$)
2010	\$42 687	14 370	\$2.97	\$102
2011	\$9 610	19 467	\$0.49	\$17
2012	\$8 530	16 250	\$0.52	\$18
2013	\$1 929	6 978	\$0.28	\$10
2014	\$255	810	\$0.31	\$11
2015	\$2 615 999	283 767	\$9.22	\$318

Source: Comtrade database, available at <<https://comtrade.un.org/data>>, accessed 28 August 2017.

Law Enforcement Efforts

Indonesia police and local governments closed down Small Gold Mining in Botak Mountain, Buru Island in 2017 and re-enforced it again recently in October 2018.

Last year, in December 2017, police and military joined forces to ensure that illegal mining activities in Hitu Mountain, West Seram, Maluku, was curbed. This area has been suspected as a major source of cinnabar illegal production. See photos below.





WHAT TO DO?



illegal miners' tents on Baru Island in 2012. Photo: Anonymous (adopted from John McBeth 2018)



Artisanal miners prospecting for gold at a small-scale mining site in Indonesia. Photo: Reuters

President Joko Widodo:

The use of mercury in artisanal mining should be banned

Instructions from President Joko Widodo, 9 March 2017, regarding the use of mercury in the mining sector:

Presiden minta penggunaan merkuri di tambang rakyat dihentikan

Kamis, 9 Maret 2017 16:46 WIB

Pewarta: Hanni Sofia Soepardi



Presiden Joko Widodo. (REUTERS/Jason Reed)

Jakarta (ANTARA News) - Presiden

1. **Review the governance** of artisanal mining and small-scale gold inside and outside the forest area.
2. **The use of mercury in artisanal mining should be banned.**
3. **Enact Minemata Convention agreements** regarding the use of mercury in artisanal gold mining but also in medium and large-scale mining practices.
4. **Regulate the trade and distribution** of mercury including the tightening of mercury importation supervision.
5. **Educate miners** about the dangers of mercury to humans and the environment.
6. **Find solutions; not only curb illegal mining practices but also look for alternative livelihood for miners.**
7. **Communities contaminated by mercury must be given immediate medical attention.**

Government and Community Efforts

Existing conditions



Reduction and Elimination of Mercury in 2025

Strengthening of National Regulations, Policies, and Institutions

Transfer of Gold Processing Technology

Transfer of Livelihood

Presidential Regulation of RAN PPM

Committee of Mercury Research and Monitoring

Formalization

Technology for non-mercury gold processing

Institution Building

Exploring the Potential of Alternative Natural Resources and Local Wisdom

Community Empowerment

Creative Economy Enterprises (Entrepreneurship)

Social and Economic Transformation

National Achievement to Eliminate Mercury in ASGM

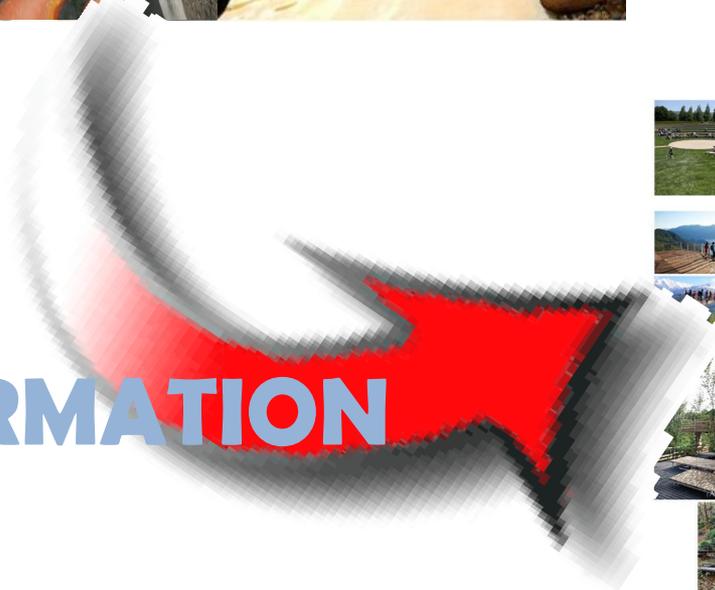
No	Activities	
1	Strengthening of National Regulations, Policies, and Institutions	Drafting Presidential Regulation on National Action Plan for Reducing and Eliminating Mercury
		Revision of Government regulation concerning Hazardous and Toxic Management (GR No. 74 year 2001)
		Committee on Mercury Research and Monitoring
2	Mapping the source of supply and use of mercury	Mapping the source of supply and use of mercury at 8 regencies (Kotawaringin Barat, Dharmasraya, Merangin, Wonogiri, North Minahasa, Bolaang Mangondow, West Lombok, Palu)
3	Transfer of Gold Processing Technology	Institutional Strengthening
		Technology for non-mercury gold processing <ul style="list-style-type: none"> • Gravitational process (in North Sulawesi Province) • Leaching process in Banten Province
4	Transfer of Livelihood (Social and Economic Transformation in Paningkaban Village, Banyumas Regency, Central Java)	Exploring the Potential of Natural Resources and Local Wisdom
		Community Empowerment
		Creative Economy Enterprises (Entrepreneurship)
5	Public Awareness Raising	“STOP MERCURY” Campaign
6	Recovery of Contaminated Sites	Pilot project on Phytoremediation
7	Law Enforcement	Seizure of illegal mercury distribution and illegal cinnabar mining by local police

Lessons Learned from Paningkaban Village

Taking Action is much more difficult
than **Talking Action....**



TRANSFORMATION



4 AREAS OF PARTICIPATORY TRANSFORMATION

ECONOMIC TRANSFORMATION

- Facilitate the creation of alternative jobs for miners
- Improve skills and create new market



SOCIAL TRANSFORMATION

- Strengthen social capital by encouraging the growth of village social organizations



LAW ENFORCEMENT

- Law enforcement with a prime target of mercury suppliers, investors, and other main offenders.
- Formalization of ASGM under strict compliance (not applicable for mining in settlement areas)



ENVIRONMENTAL TRANSFORMATION

- Build awareness of the dangers of mercury contamination
- Rehabilitate contaminated areas (need help for effective technology)
- Build free zones of mercury contamination



PARTICIPATORY SOCIO-ECONOMIC AND ENVIRONMENTAL MAPPING

Participatory socio-economic and environmental mapping is the most important stage to begin the transformation program. It identifies economic, social, cultural and environmental conditions of the area.



Guiding Principles:

1. Start with existing business activities
2. Promote environmentally friendly businesses
3. Select new potential businesses



ECONOMIC TRANSFORMATION

- Empower potential existing businesses within the community.
- Develop ecotourism programs as an alternative job for miners and other citizens.
- Establish a community learning center for developing new economic skills
- Involve socio-business entrepreneurs



Guiding Principles :

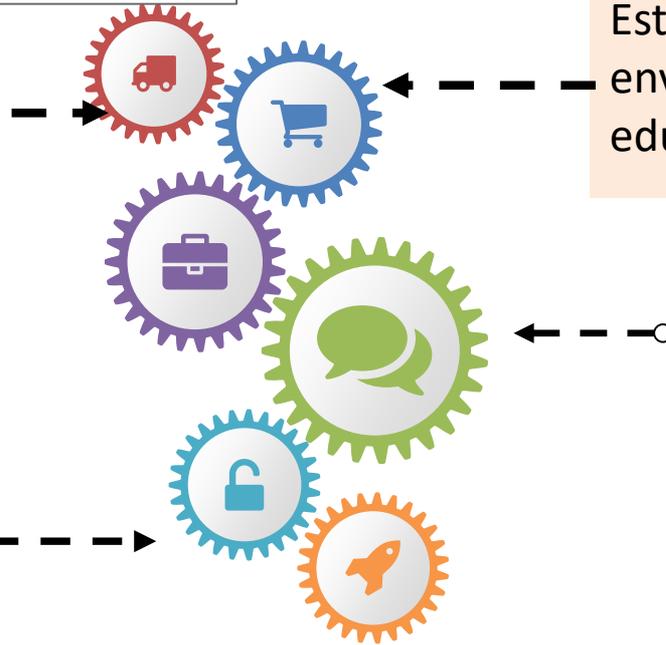
- Select agents of change and strengthen
- Grow a good climate for change
- Strengthen social capital

SOCIAL TRANSFORMATION

Create Drivers of Change

Drivers of village change is a group of active villagers that currently consists of 115 people representing men, women, youth, and also miners.

Establish Integrated Database

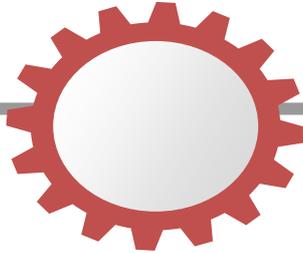


Strengthen social capital and village institutions

Establish a strong network of environmental activists, educators, and health workers.

Empower local government institutions to create a healthy political climate

ENVIRONMENTAL TRANSFORMATION



Create Contamination-Free Zones

The establishment of contamination-free zones is done by strengthening existing traditions and social agreements.

The community reached a consensus not to perform the gold mining and processing activities in the western area of the village.

This informal community agreement will be strengthened through local village laws and regulations.

Protection of Springs and Settlement Zones

Protection of springs and settlement zones was introduced by encouraging gold miners using mercury to move out from the area around the springs and settlement.

This process requires a strong social force.

Guiding Principles :

- Building a deterrent effect for the perpetrators of the offence
- Mainly targeting mercury suppliers, investors, and other main offenders
- Formalization of ASGM under strict compliance (not applicable for mining in settlement areas)



LAW ENFORCEMENT

LAW ENFORCEMENT

- Build an understanding of environmental LAW violations
- Start to coordinate with the Indonesian police and law enforcement officers from the Ministry of Environment and Forestry



DOCUMENTATION

CULTURAL APPROACH



SOCIAL CONSOLIDATION



UTILIZATION OF SOCIAL MEDIA



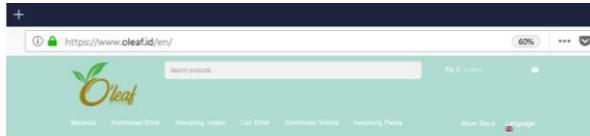
EMPOWERING SOCIAL GROUPS



EMPOWERING ECONOMIC GROUPS



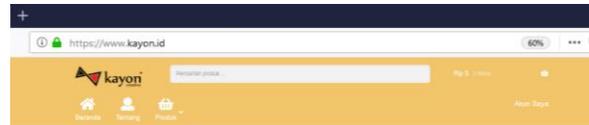
Strengthening economic skills and searching for an alternative livelihood



Welcome | O'Leaf Hijab

O'leaf Hijab adalah produk kerudung eksklusif yang didesain oleh para perempuan hebat Desa Paningkaban. Produk kami hadir bagi Perempuan Indonesia yang ingin tampil elegan, simpel dan berkelas. Kami hadir dengan perubahan bergaya motif dikalau Indonesia. Bahan yang kami gunakan merupakan kombinasi dari material berkualitas yang bukan hanya memberikan keindahan tetapi juga lekukan dan kenyamanan. Kami adalah semangat perubahan bagi Sahabat O'leaf hadir cemerlang dan kinerwis.

New In



Unlimited Creativity

Kayon Creative adalah industri kreatif yang dibangunkan oleh pemuda Desa Paningkaban. Setiap produk Kayon adalah hasil pemanfaatan limbah kayu Pinus dan kayu lainnya. Kayon Creative selalu hadir dengan desain yang berkualitas dan unik. Kayon juga dapat hadir sesuai dengan kebutuhan dan inspirasi Sobat Kayon.

Setiap pembelian produk Kayon Creative, sobat Kayon telah memberikan dukungan untuk melestarikan lingkungan.

Percayakan pilihan anda hanya kepada Kayon Creative yang pasti terjangkau harga dan kualitasnya.

Produk Terbaru



Selamat Datang di Pasar Paningkaban

Pasar Paningkaban atau Gungahat Papan merupakan wadah untuk memasarkan hasil-hasil produksi dan kreatifitas warga Desa Paningkaban. Dengan Papan diharapkan masyarakat menjadi mandiri dan berdaya. Setiap produk yang kami tawarkan merupakan produk dengan kualitas yang tinggi. Selain hanya itu kami juga merangkul layanan setiap transaksi dengan cepat dan tepat. Mengenal koleksi produk pangan yang tersedia silakan kunjungi dan temukan produk pangan yang sesuai dengan kebutuhan anda.

Produk Terbaru



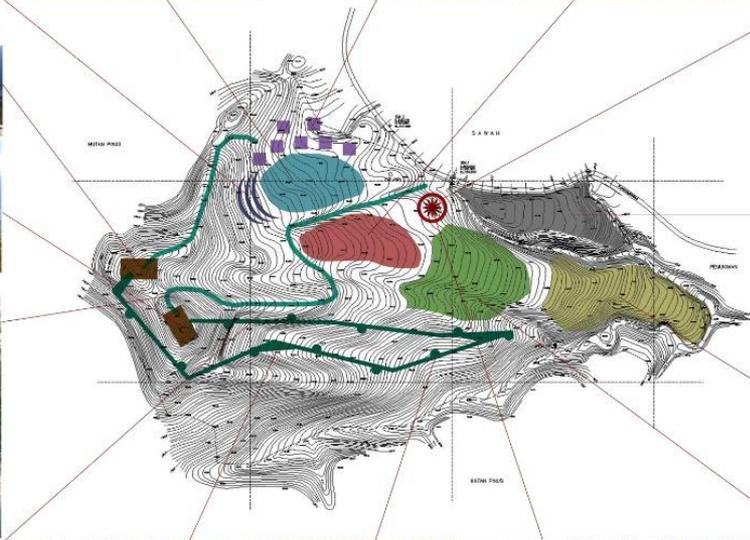
Introducing Integrated Socio- Economic Activities



Initiate Center of Learning



DESA ILMU PANINGKABAN, PURWOKERTO JAWA TENGAH



THANK YOU