Salam Emas

During the last four months, our team in Central Kalimantan has been working to provide as much useful information about mercury as possible to the entire community of Kereng Pangi. We have been working closely with schools, health clinics, and gold shops in the township, as well as groups of artisanal miners in the goldfields.

Our team has been providing direct consultation and advice to users of mercury, delivering practical training, and distributing a comprehensive set of brochures. Additionally, we have been reaching out through radio broadcasts, public film screenings and educational seminars at schools.

A group of women receive brochure about mercury and family's health

Much of the community is now aware of the aim of this project and we are glad to say, many are also getting involved in activities that lead to change. We are very grateful for their participation.

This edition includes a few words from some of the people who have been providing new momentum to our program.

Wishing you a healthy and prosperous new year.

Sumali Agrawal
Editor

Showing Concern for the Future

The students at my school have learned a lot from the recent presentations. They will remember all of the information in the films, brochures and posters, and avoid mercury from now on.

Bpk. Juliwarno, Sp.d., Junior High School Headmaster

We are having an art competition so that the students can express themselves to others. Through their art, they will inform their families, and a lot more people will get the message.

I think it is important for the younger generation not to repeat the mistakes of the past. Although it is difficult to say who might suffer ill-effects, we do know that the effects can be long-lasting.

I hope the whole community will now become more aware of the harmful effects and also learn to avoid them, because preventing them is certainly easier than curing them.

Messages from Students

Aulia Rahmawati, High School Student (SMP 2 Katingan Hilir)

The students that visited us, made several posters about how mercury gets into the human body, and about which fish are safe to eat and which are not.

I am going to contribute a poster on "The Dangers of Mercury in the Environment". It will demonstrate what a polluted environment is like, and also offer a solution. In this way, I want to tell everybody to use less mercury and to learn to use a retort.

School-to-school presentations on mercury hazards

Local Knowledge: An interview with Pak Fauzi

Do you think mercury pollution is a problem in Central Kalimantan?

Yes. When I first made contact with the Department of Industry, I found out that around 1 Tonne of mercury is used every month, in the mining areas of Central Kalimantan alone. That provincial survey was done in 1995-2003, when the gold price was increasing rapidly. So I think that mercury is the biggest pollution problem in Central Kalimantan.

Who in the community do you think is most affected by mercury?

Firstly the miners, gold sellers and buyers, because they deal with mercury directly; they handle mercury with their bare hands, and amalgamate gold without gloves. Secondly, the gold shop owners, because they burn amalgam in their shops, although sometimes miners do burn it in the field as well, without protection, and it evaporates into the air. The neighbors and the community around the gold shops and the mining areas are affected too, indirectly, because mercury vapors pollute the air in the environment.

Why did you decide to introduce retorts to Kalteng?

At first, it was for economic reasons, because I wanted to re-use mercury and I found I could capture 90 – 95% of it in my retort. Mercury is quite expensive and so it is good if it can be recycled and reused. I had used a simple bowl made of stainless steel for five years, and then, when I introduced my retort to the Department of Industry they agreed that it was a solution that we could use to reduce mercury distribution and its impact on the community. They recommended the retort to the Maspion Company.

Do the people that buy retorts usually understand that mercury is dangerous?

No. They usually buy retorts for economic reasons. I myself didn't know about the health impacts at first. From 1995-2000, I had no idea that mercury can affect people's health. Later, when I got more information about this, it strengthened my reasons for wanting to use a retort.

What prevents people from using retorts more?

Mostly because they don't know about them, or because they are just small-scale miners and they get a small amount of gold everyday. But gold shops usually use them.

What advice do you have for gold shop operators?

I would advise them to use a fumehood with a blower: it is more effective, it is safer for their health, the miners can still see the burning process, and the owner can capture the mercury too.

Pak Fauzi (right) demonstrates a filter to a gold shop

Did you discover anything new during our campaign?

Yes, especially about the health impacts of mercury exposure. I didn't have this information until I followed the campaign, and it is very useful. It is new to miners and gold shop owners in Galangan and Kereng Pangi too. They are now more aware, and tend to be more careful with how they handle mercury daily. I also discovered how to improve an ordinary fumehood with a blower, which I think is an effective solution for gold shops in Kereng Pangi, because it is affordable, and they don't need to change very much, all they have to do is adjust the current fumehood and add a blower and a filter.

How do you think we can improve our campaign?

In my opinion, the current campaign is good; the campaigners have made major efforts to promote the issue. But now people really want to see the evidence; they want to use the simple technology and prove it works. So, refitting fumehoods with blowers and filters is an opportunity for this information in the campaign to be proven, because we did visit gold shops, and almost all of them were interested in these techniques. As for the health issues, I think most of the community now understands, and the information will lead to better practices in handling mercury.

How to Re-Activate and Re-Use Mercury

- To agglomerate the mercury droplets, put them in a plastic or glass cup.
- Add water and a spoon of table salt to the mercury.
- Connect the negative pole of a 12-volt battery to the mercury directly.
- Connect the positive pole to the water, not in contact with the mercury.
- The droplets will come together in 2 or 3 minutes.
- This mercury is now re-activated and ready to be used.

A Doctor's View

Dr Robert advising students

I think the campaign has been reasonably successful so far in educating people about the dangers of mercury. I am involved because I am part of this community and I believe it is important for people to know about the health impacts. Although we have not witnessed any so far it doesn't mean we won't in the future. That is why we will continue to work to reduce it, to try and prevent the problem before it occurs.

It is true that the level of mercury in the air is at a harmful level in this town. This could affect the development of babies and children here. Mothers with babies should keep away from the gold-burning activities, and make sure their children don't play around with mercury.

It is possible that some people, such as long-time miners or gold shop operators, might already be affected. These people should follow our advice about how to store mercury safely, and how to use it more wisely.

A Gold Shop Operator's Report

Pak Jonito using a fumehood

I think the campaign is good for the future of the town, especially for the children. For example, I used to let my kids watch when I was burning amalgam, but not anymore. I used to smoke while I was burning too, but I don't do that anymore either.

I am worried about developing symptoms of exposure because I want a long life but I don't want to be an invalid when I get older. I decided to get involved for the sake of my own health as well as those around me, like the vegetable sellers in front.

With a good fumehood that doesn't leak, I hope I will be able to recover more mercury and will be able to sell it again. Maybe one day I can recover all the mercury I burn. I would like to keep using this new chimney because it has a blower, although I think it could be a bit taller and should have a smaller opening at the front.

I am glad to be getting this information about mercury and to be getting this help and to be trying to make our gold-burning processes safer.

Advice From The Clinic

Mercury that has been used can look black due to "oxidation" and can break apart to form thousands of small drops or dust particles.

However, all of this mercury can be used again if it is reactivated, following the steps above. All mercury should be recycled because it is not safe to throw it away. Always store mercury in a glass or plastic container with a little water, and keep it in a safe place far from children.

KLINIK KELILING Rumah EMAS (Edukasi Memakai Air raksa agar Selamat)

The Growing Problem of Methyl-Mercury

Fish are an important source of protein for a family's diet

Mercury enters the ecosystem through different pathways, and our bodies can ingest it in different forms. Communities living in contaminated surroundings can be exposed to mercury through skin contact and inhalation of contaminated air.

However, elemental mercury released into the environment as a result of mining processes can also be transported great distances by water.

In rivers, this natural element can change into methyl-mercury, which is extremely toxic to living organisms.

This widespread form of contamination exists as a result of mercury entering the ecosystems of rivers and oceans.

When methyl-mercury enters the bodies of aquatic organisms, it enters the food-chain and is transferred through ingestion.

Through a process known as 'bioaccumulation', the larger fish residing in the ecosystem slowly accumulate high levels of contamination.

This is because these large fish consume substantial amounts of smaller fish that are also contaminated at lower levels.

These large fish are then also consumed in great quantities by people and as a result, methyl-mercury contamination is now a public health risk to children and women of child-bearing age throughout the entire world. It is possible that people who eat large carnivorous fish more than once a month may accumulate unhealthy levels of methyl-mercury inside their body.

However, smaller river fish usually have much lower levels, and fish that are hand-fed in ponds are unlikely to be contaminated at all. These fish can be considered safe to eat on a regular basis.

Ikan Baung: a common, large carnivorous fish

Published by.
Yayasan Tambuhak Sinta
Jl. Teuku Umar No. 32 A
Palangka Raya 73112
Central Kalimantan - Indonesia
Phone. +62 (536) 32 37184
Fax. +62 (536) 32 29187
Email: tambuhaksinta@gmail.com

Rumah Emas Kita is a bi-monthly newsletter to provide information of UNIDO Global Mercury Project in Galangan-Central Kalimantan

Staf Redaksi

Bardolf Paul
Sumali Agrawal
Dzul Fikri Al Huda
Mayang Meilantina
Kartie Vitamerry

Yayasan Tambuhak Sinta

Global Mercury Project

GEF

UNDP

UNIDO