



a toxics-free future

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## *International Mercury Treaty Enabling Activities Program (IMEAP)*

Following the signing of the Minamata Convention on Mercury (the ‘mercury treaty’) in 2013 and the release of the IPEN Minamata Declaration on Toxic Metals, IPEN expanded its Mercury-Free Campaign and developed a broad program of treaty-enabling activities to be implemented in conjunction with IPEN Participating Organizations (POs). The International Mercury Treaty Enabling Activities Program (IMEAP) is geared toward raising awareness about the mercury treaty while generating data on key thematic elements of mercury pollution to help enable countries to implement the Minamata Convention.

IPEN launched IMEAP in early 2014 and continues to mobilise resources for IPEN POs to conduct activities that support implementation of the mercury treaty<sup>1</sup>.

The key objectives of the IPEN IMEAP are:

1. *Preparing for Treaty Ratification & Implementation:* Creating synergies between NGOs in developing countries with ongoing UN agency or government-led mercury activities and NGO priority-setting.
2. *Enabling Activities to Prepare Countries for Treaty Ratification & Implementation:* Support to NGOs to carry out national and thematic mercury treaty activities.
3. *Communication of Issues Related to Mercury and Treaty Ratification & Implementation:* Global dissemination of project results & south-south collaboration.

The following project forms part of the overall IMEAP activities and contributes to the greater global understanding of mercury pollution issues while providing information that may contribute to Minamata Initial Assessments (MIA) and raise public awareness in preparation for early ratification of the Minamata Convention on Mercury.

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<sup>1</sup> IPEN would like to acknowledge the financial contributions from the governments of Germany, Sweden and Switzerland, and the Swedish public development co-operation aid through the Swedish Society for Nature Conservation (SSNC) and other donors. The views herein shall not necessarily be taken to reflect the official opinion of any of these donors, including SSNC or its donors.

## **IPEN Mercury Treaty Enabling project: Kenya**

**Name of the NGO:** Centre for Environment Justice and Development (CEJAD)

**Date:** 31<sup>st</sup> March 2015 (IMEAP: 2014 Phase)

**Title of project:** Inventory and mapping of mercury use in Artisanal Small Scale Gold Mining (ASGM) sites in Migori, South Western, Kenya.

### Summary

The Centre for Environment Justice and Development (CEJAD) conducted a detailed investigation of the extent of mercury use in ASGM sites in Mikei, Masara and Osiri in Kenya. As part of the investigation CEJAD conducted a range of interviews and awareness raising activities with gold miners, their associations and local authorities, related to the hazards of mercury use and alternative, mercury-free, gold processing techniques. Critical information was gained as to the largely illegal mercury supply and trade practises of the ASGM activities, and the extent of whole ore amalgamation and other damaging practises. Of great concern was the finding that women are the primary mercury users in the ASGM community, (who use no protective equipment) and that exposure to mercury was highest among women and children. In one instance it was revealed that some women use their teeth to squeeze mercury out the mercury/gold amalgam. Other key information obtained included the willingness of miners to use mercury-free techniques and also the barriers to uptake of alternatives that had already been trialled. CEJAD have also developed an on-line map of the ASGM sites using mercury, a DVD documentary of the project activities as well as posters and information brochures for distribution. The objective of the project was achieved which was to demonstrate that ASGM in Kenya was 'more than insignificant' in relation to Article 7 of the Mercury Treaty and to establish grounds for a National Action Plan to reduce mercury use in ASGM.

### Describe the scale of ASGM in your project area (large scale and widespread or isolated to certain areas):

The project was carried out in Migori County, which lies on the South Western part of Kenya. The project was implemented in three gold mining areas of the County, namely; Mikei, Masara and Osiri.

The area lies within the Nyanzian greenstone belt. The belt is rich in minerals such as copper, gold, zinc and silver. The Belt is a continuation of the Archean greenstones located in neighbouring Tanzania (as well as in Uganda and Congo) that host several gold mines. This translates to widespread adoption of ASGM in the area, as more people shift towards gold mining as a main livelihood source, due to decline in agricultural productivity within the region.

During the field visits to the area, the magnitude of ASGM activities was well evidenced, as almost all the villages were operating gold mines, to a scale where almost all homesteads have some form of ASGM activity within their compound.

The gold miners are driven by the need to secure a source of livelihood whereby some are self employed and others work as employees. Mining activities in the area are labour intensive and is characterized by low capital investments. Gold mining in Migori are thus artisanal and small scale. The gold mining activities are also spread into the neighbouring counties that lie within the belt.

**Explain the recent history of ASGM in your project area. (Trends over time, increasing or decreasing, factors affecting these trends):**

Gold mining in the area traces back to early 1930s when Macalder mines were opened. A Special Mining Lease was issued to Macalder Mines Limited in 1936 to work the more promising gold discoveries which were located between Rivers Kuja and Migori. The company developed the gold bearing gossans at a place referred to as Masara using open cast and sub-surface slopes up to 100 feet. Underground workings continued to depths of 400 feet under the gossan and cupriferous primary sulphide. Production history indicates that 33,563 ounces of gold and 39,329 ounces of silver were recorded from a total of 20,790 tons of ore in 1941-1949 before closing.

Since then, the area has attracted various other mining companies, although currently mining in the area is predominantly artisanal and informal. Mining activities consist of both leaching of tailings, and mining and crushing of new ore.

According to Key Informants interviewed during the field visits, there has been renewed interest in gold mining in the area, over the past 10 years. More households have embraced ASGM as the main livelihood owing to the declining agricultural productivity in the area, as well as limited opportunities for formal employment. A new wave of gold rush is picking up within the region.

**Report on the methods have you have used to estimate the scale of ASGM activity (industry or government databases, mercury import data, anecdotal information, media reports etc):**

This project study was a participatory assessment involving methodological triangulation of primary and secondary data sources. A field study was conducted to collect raw data using open ended interviews with ASGM miners and key informants. The data collected was triangulated with anecdotal reports and existing literature. The number of people involved in mining activities fluctuates during peak periods and low periods for example, from 30,000 in peak to 10,000 (Mitula et al, 2005).

Most of the mining sites are ill-equipped to cope with pressures of rising population growth especially during periods when newly discovered gold reefs are being mined. Workers are mobile, moving from one mine site to another, depending on availability of gold. Once a site has been exhausted, water logged or is considered too dangerous to work, workers move to new prospective mining regions. This has

led to environmental damage in addition to other negative social impacts such as family life disruption especially children's education and farming activities.

Findings from this project study established that there are no official government records on the scale of ASGM activities in Migori County. This is mainly because of the informal nature of activities within the area. The government therefore considers the ASGM activities to be illegal, thus mostly ignoring them. Despite this, almost all rural households in the project area are engaged in ASGM activities either directly or indirectly.

The study also established that most of materials used to support the industry are smuggled to the region by controlled by cartels. Mercury for instance is sold through chemists and by cartels within the surrounding towns and remains a closely guarded secret only known to those who deal in its trade.

National Environment Management Authority (NEMA), Kenya's national public environmental watchdog underscores that mercury is a controlled substance that is not allowed to be sold over the counter in Kenya. This therefore points to the fact that mercury is illegally traded in the area without compliance to existing regulations on the use of controlled substances.

**Describe the nature of ASGM activity in your project area (legal, illegal, traditional, basic or well developed, combination of the above):**

ASGM activities in Masara, Mikei, Macalder, Osiri mining areas of Migori County are largely informally, unregulated and thus viewed as illegal by the government. However, some mining companies have been granted exploration and mining rights in these areas, although most of them have faced challenges operating in the region due to conflicts with the local communities who view them as competitors.

Mining activities are largely crude or basic, characterised by lack of specialised equipment and skills, and prone to various occupational health and safety hazards, with several cases of fatalities reported in the area. Discussion with the miners revealed that the miners in Migori do not have necessary licenses to mine. This is attributed to the fact that the mining legislation of Kenya, (Mining Act cap 304, 1940) ignored ASGM with a provision only for prospecting rights for the miners. The lack of clear legal framework made it difficult for the government to regulate the sector and thus contributing to the informality of the sector.

Majority of the sites in the project area are privately owned i.e. pits found in people's homes. The pits are very deep and characterized by individuals carrying out prospecting for gold. In our visit to the area, we established that in almost every home, there are mining pits and activities going on.

Gold mining in Migori involves hard rock mining which takes place underground evidenced by deep pits found in the mining sites. Basic tools and equipment are used to dig the tunnels. Others such as explosives are used to blast and remove the ores containing gold.

The ore is extracted from the pits and processed on the surface. Once the ore has been extracted, a process which is mainly carried out by men, the ore then undergoes several processing stages to extract gold. The first stage involves milling the ore into smaller rock particles using a 'milling' machine and also through manual crushing (hand stamping). The ore is thereafter crushed to produce a finer powdered ore. However, this is only found in few mechanized mining sites owned by individuals who have invested in such machines.

Findings from our field study established that in some sites, the finer powder concentrated into a rich gold mineral processed into two stages. The first stage is where the powder is subjected to gravity separation using sluice boxes, shaking tables and simple pans (mostly undertaken by women) to reduce the amount of mercury used. Whereas in other sites, whole ore amalgamation is used whereby the ore is mixed with mercury and washed inside a water pool where the mercury is used to capture the gold forming an a mixture known as amalgam.

From there, the amalgam is heated in the open within the site and in some cases in closed rooms to evaporate the mercury, leaving gold. Finally, the residual gold is

melted down to remove excess mercury. Please see the attached Figure 1 of pictures illustrating gold mining process in Migori.

Describe the environmental and human health impact of mercury use in ASGM in your project area (provide pictures, data, media reports, sampling, surveys or other evidence if available):

Various studies carried out in the Migori–Transmara region have revealed high levels of mercury contamination in soils, water bodies, and plant matter. High mercury concentrations have been 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  $\mu\text{g kg}^{-1}$  (Table 1). World average levels of mercury in soil are recorded as 10–200  $\mu\text{g kg}^{-1}$  (Adriano 2001) and 10–500  $\mu\text{g kg}^{-1}$ .

In the Migori– Transmara area, this critical value is exceeded in five plots (5 % of samples) and only 14 plots showed values higher than 200  $\mu\text{g kg}^{-1}$ . Mercury concentrations in the sediments collected from the bottom of rivers ranged from 30 to 2,380  $\mu\text{g kg}^{-1}$  (Table 1), with the lowest and the highest levels recorded from the Migori River and the Lolgorien River.

Most of the rivers in the gold seams region ultimately drain into Lakes Victoria, Turkana. These lakes are important for fish production which is not only an important source of dietary fish but is also a source of 4% of Kenya’s gross domestic product (GDP). (GoK, 2012)

Table 1 Statistical summary of the Hg concentration ( $\mu\text{g kg}^{-1}$ ) in the soil, ore sediment (tailing and river), lichen and moss samples

	Number	Mean	Median	SD	Min.	Max.	1st Qu	3rd Qu
Soil	103	140	100	170	20	1,100	70	130
Ore	42	410	350	380	10	1,500	140	420
Tailing	41	8,900	2,560	9,990	200	31,500	890	14,560
River sediment	69	430	230	510	30	2,380	100	600
Lichens	45	430	220	430	60	1,040	160	670
Mosses	57	400	210	470	150	2,020	150	430

Source: Odumo et al 2014

In this study, the mercury within the tailings ranged from 200 to 31,500  $\mu\text{g kg}^{-1}$ , with an average of 8,900  $\mu\text{g kg}^{-1}$ . Tailings are local “hot spots” with high mercury concentrations. As a rule, between 20 and 30 % of mercury during amalgam roasting are lost to tailings (van Straaten 2000).

The gold mining activities also lead to land degradation, deforestation and soil erosion. At look at the Migori mining sites, heaps of waste rock dumped as tailings can be seen all over in addition to abandoned mining pits and open trenches.

A study by J.S. Ogola *et al* (2001) found that mining in the area has left behind dredged out and contaminated streams, disturbed vegetation and littered landscapes, open trenches and gaping pits filled with water.

According to the study, plant growth on the wasteland is inhibited, and this seems to be due to acid mine drainage. Toxic compounds and heavy metals previously locked in the undisturbed strata and minerals are leached to the environment.

During gold rushes to the district, the large number of miners put much pressure on the environment in terms of energy resources; thus large quantities of trees are cut down either as firewood or as timber for support of weak mine workings. This causes deforestation and soil erosion. Lack of sound mining techniques and procedures often result in the collapse of the wall rock and eventual subsidence of mined areas. This often results in loss of life.

For example, a media article in The Standard newspaper quoted that in a site in Mikei, 30 people died in local mining tunnels after they caved in on them, a figure from the records of the Lakeside Mining Co-operative Society (LMCS), which is managing the site.

Use of mercury and other toxic chemicals including haphazard mining technologies have also led health impacts including mental disorders, respiratory problems and physical injuries.

The main health problems of the mining community in the Migori district include the spread of respiratory ailments and diseases related to impacts of mining. Water logged pits and trenches, are breeding sites for mosquitoes (J.S. Ogola, et al, 2001).

In addition, Inhalation of large amounts of siliceous dust, careless handling of mercury during gold panning and breathing mercury vapour during the heating of gold-mercury amalgam and having a large number of miners sharing poor quality air in the mines are some of the causes of poor health among miners specifically linked to mining and processing of ore were some of the main causes of the health problems in Migori.

However, the health effects of mercury in the mining communities remain poorly studied in Kenya, therefore comprehensive information on the mercury effects have remained lacking.

Provide insight into the supply chain and availability of mercury to workers in the ASGM operations (is mercury stockpiled in your country – in what volumes?):

In Kenya, mercury is a controlled substance thus requires special licensing procedures for handling. However, in the ASGM areas, mercury is used in ore

amalgamation by all miners. The source of mercury used in the mining operations is unknown, as it is mainly distributed illegally by cartels.

In most of the mining sites in the project area, miners are employed by owners of the mining sites (land owners) as workers. In the discussions with the miners in the sites visited, it came out that the workers are not aware of the sources of mercury. They pointed out that they are given the mercury by the owner of the site they are working in; some however claimed that the mine owners buy the mercury from particular local vendors found in the local rural centres. They believe that the vendors also buy the mercury from some sellers found in towns around the area such as Migori, Kisumu and Kisii.

The KIIs interviewed (government officers) however believe that the mercury is sold through chemists within the towns and it's a closely guarded secret only known to those who deal in the trade.

In as much as mercury is a controlled substance and there exists regulations (EMCA, Controlled Substances Regulations, 2007) that prohibit use, handling and access of such substances, strict enforcement by authorities such as NEMA has been weak. In addition, artisanal gold mining in the county is an informal sector with very little government control.

**Provide detail on the manner in which mercury is utilised in the ASGM activity (ball mills, whole ore amalgamation, panning, concentrate amalgamation etc):**

Mercury is used in both concentrate amalgamation, panning and in some cases whole ore amalgamation, depending on the mining site.

In some mines visited, the miners were using sluicing technology to recover gold, prior to amalgamation. This technology helps in reducing the amount of mercury used in the process, as only the concentrate is amalgamated however; cases of whole ore amalgamation were also witnessed during the field work process. Of key importance to note is that in all cases, amalgamation was done by women, and no cause of personal protective equipment was recorded. It was also noted that the mercury-gold amalgam is burned in the open near the mining sites. These processes expose the miners to mercury poisoning and are a great risk to the health of the miners and the people living in the area especially, the women and children.

**Characterise the techniques used to minimise mercury exposure to workers and their families and /or recycle mercury (retorts, fume hoods etc). Also provide details if these techniques are available but not used due to some cultural, economic or practical reasons:**

**a) Sluicing, borax and use of retorts**

The adoption of sluicing reduces the amount of ore used in amalgamation and consequently, the amount of mercury used thus reducing exposure, as well as the demand for mercury. Some cases where the miners use retorts were also recorded,

especially in organised groups where awareness on dangers of mercury has been undertaken.

Interviews with the miners also revealed that use of borax has also been tried by some mining groups. However, the group cited challenges such as the high amount of heat required and the longer time it takes as one of the major reasons why its uptake was so low. Other challenges include little knowledge among the miners on the mercury free alternative technologies, unavailability of such technologies that the miners can adopt as well as high cost required to buy these alternative technologies.

Consequently, these challenges have resulted in low use of such techniques that reduce mercury use and emission. However, discussions with the miners pointed that they are willing to adopt and use these technologies especially if the challenges are addressed especially the issue of costs and the limited awareness/knowledge on the use of alternative technologies.

To demonstrate their willingness, the miners cited an example on how the use of a 'rock crusher' was adopted in the region. They pointed that when they learnt of an alternative technology to crushing the rock was available in the neighbouring country Tanzania, the miners sent a few of their representatives who visited Tanzania pretending to be University students on research, and on reaching, learnt how the crushers are fabricated and also took photos so that they could replicate them in Kenya . On return, they engaged local fabricators who made replicas of what they saw in Tanzania and were eventually to make their own rock crushers which has been adopted and used in almost all mining sites in Migori.

**Describe the level of awareness of mercury toxicity among ASGM workers and their families in your project area:**

Findings from the literature review and interviews with miners established that the awareness levels on mercury and its toxicity is still very low among miners in the project area and Kenya in general. This is because there have been little concerted efforts to increase public awareness on the dangers of mercury on the health of miners and to the environment by the relevant stakeholders such as local authorities and government ministries.

A few activities (which have also not been consistent) have been carried out by players such as NGOs towards raising awareness of the miners on the effect mercury on their health and the environment. For example, in a discussion with the miners, one of the miners had this to say about what she knows about the dangers of mercury.

...”Sometime there are those who when they want to squeeze mercury, they do with their teeth, so that mercury is not suppose to get in between his/her teeth”  
.....*A female miner narrating what they have heard should not be done while using mercury at a site in Masara, Migori*

Studies done in the area have also established that most artisanal and small scale miners lack awareness or knowledge on the environmental and health impacts of their activities such as use of mercury. They are mainly driven by the need to earn a living through ASGM as the only viable economic activity in the area. Other factors for the low awareness levels could be attributed to illiteracy and unavailability of mercury free alternative methods.

**Describe the demographic of ASGM workers in your project area (such as roles of men and women/children, education and poverty levels.) Also provide information on workers employment arrangements and organisation (e.g. indentured/poorly paid or independent):**

Field investigations revealed certain levels of organisation and division of labour within the mining sub-sector. Men were mainly involved in the excavation works inside the mines. Once the ore is brought to the surface, both men and women were engaged in crushing activities. However, it was noted that sluicing and ore amalgamation was predominantly a women and children affair.

We established from interviews with the miners that, most of the miners in almost all of the mining sites visited, are employed as workers by site owners who are the land lords. The land lords have invested in equipment and infrastructure used in the excavations and processing of the gold ores such as crushers, mills and sluice boxes among others. They also supply the workers with mercury used in the processing of gold.

The workers are mainly employed as casuals and are controlled by the land lords. The mode of payment is based on agreements between the land lords, the investor, and the workers. In some cases, payment is done in cash, while in other cases; payment is based on a percentage sharing of excavated ore.

**Specify the factors driving ASGM in your project area (e.g. poverty, conflict, criminal activity, gold rush):**

ASGM in the area is driven by poverty, compounded by declining basic sectors that used to support livelihoods, such as agriculture. The rising interest from well established companies exploring for gold the area has also fuelled the feeling of gold rush amongst the residents, who are now viewing the industry as the possible source of wealth.

## **Project Outcomes:**

### **Describe the activity conducted:**

The following were the main activities carried out in the implementation of the project.

#### **a) Identification and mobilization of partners and targets**

The first activity carried out was a reconnaissance field visit to the project site, in Masara carried out in December 2014. The visit's purpose was to conduct a scoping exercise to identify and introduce the project to the local partners, establish the specific areas for detailed field study, mode of engaging the project targets and establish the local stakeholders for the key informant interviews.

As a result, the project identified and partnered with the Mining Community Development Programme (MICODEPRO) located in Masara town centre and Artisanal and Small Scale Miners Network (ASMINET). The partners helped in identifying local mining areas which were visited for the purposes of the study and organized site meetings with local miners in which awareness and sensitization activities were carried out.

In addition, other stakeholders such as government ministries/agencies, NGOs and media practitioners involved in the sector were identified for interviews. The stakeholders identified for consultation during the scoping exercise were: Ministry of mining, NEMA, Public health department and the media (a local journalist).

#### **b) Development and Production of awareness materials**

Awareness materials in form of leaflets and posters were developed and produced for awareness raising and sensitization, targeting the miners and communities living near the ASGM areas.

The materials produced contained information on mercury as a toxic element, its impacts on human health and environment, exposure sources, ways to minimize exposure as well as the Minamata Convention on Mercury and its objectives. A total of 300 leaflets and 250 posters were produced and disseminated to the project targeted population.

#### **c) Field visit**

A field visit to conduct a study of the ASGM in Migori County was carried out from 2<sup>nd</sup> to 6<sup>th</sup> February 2015. Visits were carried out in Masara, Osiri and Mikei gold mining areas. Among the activities carried out during the visit included;

##### ***1) Awareness and sensitization meetings***

Awareness and sensitization meetings were held with the miners in Masara, Mikei and Osiri gold mining sites. In each of the sites visited, CEJAD staff conducted focus group discussions in which the miners were sensitized on the hazards of mercury, its impacts on health and environment. The discussions also touched on topics such as; mercury sources used by the miners, description of the mining methods, challenges faced by the miners as well as ways of reducing mercury use in the ASGM.

In addition, the leaflets and posters were also disseminated to the miners in each and every site visited within the three areas covered during the field study. These materials were also disseminated at a miners meeting which was held in Masara town which was convened by the local provincial administration to meet the miners in the area. In attendance was, the Deputy County Commissioner of the area, area chiefs and sub chiefs, Ward Administrator who represented the county government of Migori, local leaders and the miners.

During the meeting, CEJAD was given opportunity to address the meeting and used the opportunity to introduce the organization and the project. The Provincial Administration (PA) welcomed the organizations initiative and called for further collaboration and working relationship to address the poor working conditions faced by the miners particularly the occupational hazards of exposure to harmful chemicals such as mercury.

## **2) Video documentary**

CEJAD undertook a video recording of the activities in all the mining sites visited. The video recorded the prevailing conditions of the activities being carried out in the sites providing a first hand situation on the ground. Interviews with the miners were also video recorded and provided stories of the miners with regards to the mining activities they do as well as challenges they face in their daily activities. Among the highlights from the community stories were the:

- The situation on the ground such as activities carried by the miners including using mercury;
- Miners challenges in their day to day activities;
- Source of mercury used in the ASGM in the area and levels of awareness on its dangers and impacts;
- The working conditions of the miners which they described as poor due to lack of necessary equipments such as PPEs thus being exposed to occupational hazards including dangerous chemicals such as mercury.

The video is available in the CEJAD website (<http://cejadkenya.org/>) for wider dissemination and providing first hand information on the situation and effects of the use of mercury in the gold mining sites of Migori County in Kenya.

## **3) Interviews**

To achieve the project objectives, CEJAD staff conducted interviews with relevant stakeholders in the sector. Among the stakeholders interviewed were;

- The County Mining Engineer, Ministry of Mining,
- Deputy County Director of environment, NEMA,
- Masara Public health officer, Ministry of Health
- Local miners association representatives

The interviews were conducted on 2<sup>nd</sup> and 3<sup>rd</sup> of February 2015.

**Describe the substance of the information and key message you want to intentionally transmit to the target audience and the method used to achieve this:**

The projects' aim was to raise awareness and sensitize the miners on the environmental and health problems associated with the use of mercury including feasible alternative technologies that can be used to reduce mercury use and exposure.

The project therefore developed awareness materials that contained key information and messages on mercury and its impacts to human health and environment. In addition, the materials contained information on the recently enacted Minamata Convention on Mercury which aims to significantly reduce mercury use in the ASGM. The message passed to the miners was that the Mercury Treaty has key objectives to be achieved and we specifically highlighted to the miners', contents of Article 7 of the treaty which relates to ASGM.

The following activities were conducted to disseminate and pass the messages to the miners and the community in general:

**a) Dissemination of awareness materials**

This was carried out through focus group discussion with the miners in the mining sites that were visited. The information was disseminated to the miners using the posters which contained the key messages that were to be passed. In addition, leaflets which contained much more detailed information were given and picked by individual miners for in depth reading.

**b) Community meetings**

A community meeting bringing together all miners in Masara was convened by the local Provincial Administration. The community meeting was attended by the Deputy County Commissioner including other local administrators as well as a representative of the Migori County government.

The meeting was called by the Commissioner to discuss the issues affecting the miners in the area as well as seek ways of how miners can engage and work with the government for sustainable activities being the predominant livelihood activity in the area.

Through the local partners, CEJAD attended the meeting and was introduced to the meeting by the partners. The project and the organizations work was then introduced to the miners and all the participants in the meeting. CEJAD's remarks touched on its interest on ASGM in particular the need to reduce mercury use and

protect miners from the harmful effects of the mercury to the miners' health and surrounding environment. In addition, the Mercury Treaty was introduced to the miners as well as the ongoing policy and regulatory reforms on the mining sector in Kenya. The awareness materials, the posters and leaflets were also disseminated to the miners in the meeting.

**Describe the methods of Engagement with of and impact on Target Groups:**

A number of miners in Migori belong to organized groups and associations despite the fact that the sector is largely informal. Therefore, engagement of the target groups employed an approach that involved introduction of the project to the local association of the miners based in Masara. CEJAD met with top officials of the group known as MICODEPRO in a meeting held at the groups' offices in Masara.

The meeting was used to introduce the project's objectives, activities, expected outcomes, benefits and modality of working together to achieve the projects goals and objectives.

The officials then introduced CEJAD and the project to its members and miners in the mining areas of Mikei, Osiri and Masara. This was used to prepare ground for the proper project activities such as awareness raising, sensitization meetings and mapping which were conducted during the field visits.

As a result of this approach, the miners and the community were very receptive as was evidenced by their attendance and participation in the activities which were conducted. For instance, at the site in Osiri, members of Migori County artisanal and small scale miners Sacco (MAIKA) and Nyatike arid lands and mining society (Namasako), a membership Sacco for the miners in the area attended held a meeting with CEJAD in Osiri. The project was introduced to the miners and actively participated in meeting discussions lauding the initiative started by the organization. In addition, the meeting resulted in the acceptance of the project due to the involvement of the miners own associations and leadership. The miners met in Osiri took charge of the mobilization of the miners for project activities in each of the mining sites visited.

This was seen in all the areas visited in other project sites such as Masara and Mikei including in the meeting of the miners which was called by the area chiefs and held in Masara centre.

**Report the result of the activity and specifically the impact on targeted policies:**

The main goal of this project in terms of policy target was to highlight that the ASGM activities including the use of mercury in Kenya particularly Migori County is 'more than insignificant' thus requires development of an ASGM Action Plan as required by the Minamata Convention in Article 7 of the treaty.

However, the achievement of this goal will be dependent on the findings of this study as detailed in this report. This will require development of a lobbying and advocacy strategy to influence policy change towards development of the action plan. With these findings, CEJAD will develop and implement the strategy subject to availability of funds.

Outreach to Stakeholders: Provide details of the stakeholders and sectors (development, environment, health, agriculture, industry etc.) that were engaged in this activity, and the potential for follow-up to advance the relationships with these stakeholders:

The following stakeholders were consulted and interviewed in the implementation of the project. The stakeholders were drawn mainly from the government ministries and agencies from the health, environment, and mining sectors as follows:

1. Ministry of Health, the public health department
2. National Environment Management Authority (NEMA)
3. Ministry of Mining

From the discussions with the stakeholders, it was established that an inter-ministerial committee has been formed and is being spearheaded by the County government of Migori to address the challenges of the ASGM sector in the area. CEJAD, as an NGO stakeholder, has established contacts with the relevant institutions through the interviews that were conducted during the project for follow up, potential collaboration and engagement with all the stakeholders and players to advocate for the establishment of policies for sustainable management of the ASGM sector in the area.

**Deliverables, outputs and/or products: List the types of outputs from the activity, including reports, brochures or other information and education/communication materials:**

These include:

1. Posters and leaflets developed and produced as information and awareness materials on mercury and its impacts
2. A DVD video documentary of the activities on mining in the project areas
3. An online map showing the mercury ASGM hotspots and made available on the CEJAD website
4. Photographs of ASGM activities in selected project areas of Mikei, Masara and Osiri.

Communication Efforts: Describe efforts to communicate this activity to the media and/or general public:



*Miners' holding leaflets disseminated by CEJAD keenly listen at a miner's sensitization meeting held at Masara, Migori County. Photo credit: Enid Nzisa*



*Griffins Ochieng of CEJAD talks to a group of miners holding posters on mercury and its impacts at a gold mining site in Osiri, Migori County. (Photo credit: Aron Kecha)*

**Report on Communication with National or Local Authorities:**

The activities of the project were shared with the National Focal Point of the Minamata Convention in Kenya, the Ministry of Environment, Water and Natural Resources at a meeting held on 31<sup>st</sup> March 2015 at Ministry's offices in Nairobi.

Among the items shared included:

- Photos of the activities carried out in the mining areas
- Video documentary of the prevailing conditions in the ASGM sites including miners own stories from the ground.

Minamata Convention Focal Point: Provide the name and contact details of your National Minamata Convention Focal Point:

The Principal Secretary  
Ministry of Environment, Water and Natural Resources  
P.O BOX 30126-00100  
Nairobi, Kenya  
+254 20 2730808/9/+254 20 2725707/ +254 20 2725707  
<http://www.environment.go.ke>

**NGO Recommendations for next steps:**

- Communication activities to increase public awareness mercury and the concern of its impacts including use of locally understandable and comprehensible languages;
- In depth inventory study on mercury use in ASGM in Kenya including establishing the sources of mercury;
- Baseline assessment of the ASGM activities and use of mercury including the levels of awareness of the miners to the impacts of mercury, challenges to embracing alternative technologies;
- Promoting mercury free alternative methods for ASGM in Kenya through pilot projects and demonstrations;

**What, if anything, changed from the original plans and why?**

**None**