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| Danish organisation | Dialogos |
| Title of the intervention | Free Your Mine 2025 |
| Partner name(s) | UNACOH |
| Amount applied for |  |
| Country(ies) | Uganda |
| Period (# of months) | 33 |

**Free Your Mine 2025**

**Relation to previous application**The present application is an expanded and improved version of the ‘Free Your Mine 2023’ (FYM2023) project submitted in March 2021. This project was deemed “worthy of support with condition and good advise” but rejected due to limited funding. In the present submission (FYM2025), we have carefully taken the advice in CISU’s detailed, and hence very helpful, assessment report. First of all, to better align with the general advice, the present project has been expanded to a three-year period with a correspondingly expanded budget. So, whereas the previous FYM2023 project was perhaps a bit overambitious, the present one is more realistic in terms of what may be achieved within the project period and budget. We have specified the strategy for capacity building miner’s organizations which was deemed too vague. We agree with this point of criticism and have addressed it explicitly in Chapter 3 by showing how the project is governed by an overarching strategy of aligning concrete interventions with broader civil society and capacity-building initiatives. This includes following the good advice of specifying the relevant sections in the Log Frame by explicating the project activities and corresponding provisions, and more specific targets for advocacy (Log Frame, Section 3). Similarly, we have taken the advice of systematically monitoring and documenting Ugandan miners becoming active miner trainers practicing the mercury-free method as central outcomes, just like we did in our project in the Philippines where these outcomes were documented in a scientific article (7). So, generally speaking, the present application is an expanded, updated and much improved version of the FYM2023 project which was deemed worthy of support.

1. **Objective and relevance**

The overall objective of the intervention is to stop mercury pollution from artisanal small-scale gold mining (ASGM) and to improve working and living conditions in gold mining communities in Uganda. The aim is that three ASGM communities over time become mercury-free and develop towards practicing responsible mining. We also aim to formalize and legalize ASGM in our project areas, as this seems to be the key to reach the overall objective. Furthermore, it is an aim to spread knowledge about the mercury-free method and advocate for responsible mining on a national level in Uganda. The advocacy effort will be directed locally by capacity building of miner organisations, training of health care workers and teachers as well as networking with local stakeholders; nationally the advocacy effort is directed towards decision makers like highly ranking civil servants, politicians and NEMA - the National Environmental Monitoring Agency.

This project is an independent intervention that builds on previous projects (New Horizons, 2017-2018 and Free Your Mine, 2018-2021). The project is carried out by the two main partners Diálogos and UNACOH (Uganda National Association of Community and Occupational Health) in cooperation with a number of miner organisations, the health care system, Busitema University, local and national government units and civil society stakeholders. The core of this new project is training of local ASGMs in mercury-free gold extraction, toxicology training of local health care workers and teachers, and capacity building of miner organisations and the civil society in the project areas. However, the new project significantly extends the previous projects to a wider national and international scale. While largely successful, the Free Your Mine project was negatively impacted by the COVID-19 pandemic. The core intervention is partly successful as gold is produced without mercury on a continuous basis in the training facilities in Tiira and was practiced in Buhweju until the mining area was shut down in 2019. However, the method has not been substantially disseminated in the areas. Consequently, there is a need for more local advocacy, training and capacity building activities in the existing project areas before we can expect to see a larger transformation of the mining processes nationally.

**Small-scale gold mining legalized in Buhweju**To understand the context for the present project - FYM2025 - it should be mentioned that during Free Your Mine in February 2021, 35km2 of land was given by the government to the local miners to mine legally in our project area Buhweju. For the first time in Uganda’s history ASGM was legalized. The previous projects were instrumental in initiating the process that led to thousands of ASGMs from all over the country peacefully occupying the president's office and eventually obtaining the parliament's decision to let the miners in Buhweju mine legally. This legalization now needs to be followed up by a structured process of formalization that can lead to responsible mining in Buhweju. An Environmental and social impact assessment is required by the guvernment. This is a major opportunity for obtaining the objectives of the proposed project, and the project includes a strategy to form the conditions on which responsible mining can be carried out in Buhweju. The project staff of UNACOH includes two medical doctors specialized in environmental and occupational health, and the director of UNACOH (Dr. Sikempi) is officially authorized to do the task. BUDUMICS can choose any authorized team to do the assessment. Thus, UNACOH will chair the committee of experts needed to make the Environmental and social impact assessment that is required by the government before the legal mining activities in Buhweju can begin. Making the assessment has been included as an activity and outcome of the project.

The proposed project builds on the experiences and results of the previous ones in Uganda, Mozambique and in the Philippines. Implementation of mercury-free ASGM is possible, but it requires long term intervention, strong local partners and collaboration with authorities (7). From our previous projects, we have learned that a collective decision to go mercury-free, anchored in local organisations and authorities, is more sustainable than decisions made by individual miners. Ultimately legalization and formalization of the small scale gold mining sector is key to improve working and living conditions in the mining communities.

**Responsible mining**

An ultimate goal for the project is ‘responsible mining’. Diálogos’ roots are in occupational and environmental health, and we know from past projects as well as the scientific literature that mining can be done safely. Small scale gold mining in Uganda is poverty driven and is often carried out under terrifying working conditions. However, mining can be carried out in a responsible manner which minimizes its pollution and environmental impact. Similarly, it is feasible to dramatically improve safety of working conditions. Thus, our concept of responsible mining includes stopping the use of mercury, safe handling of chemicals, safer working conditions in tunnels and by machines, less polluted rivers, less dust and noise. In order to reach these goals, the miners must invest in their mining facilities, and they’ll be more prone to do so if the mining is legal. However, ASGM will never be legalized if the miners continue using mercury. Therefore, mercury-free mining is a logical first step towards responsible mining.

**COVID-19**
The Free Your Mine project was hampered by the COVID-19 pandemic. Thus, some activities reappear in the present FYM2025 activities, for instance miner-to-miner training sessions in Buhweju and Tiira. However, the present project expands its range on several levels. It does so physically, by including a new strategic project area, content vise by creating a template for formalizing the now legal mining activities in Buhweju, as well as thematically by instituting a collaboration with the mining department at Busitema University near our project area in Tiira, exploring opportunities for fair trade gold and by participation in organising the global MinOSH conference (Mining Occupational Safety and Health www.icoh-minosh.com) taking place in Uganda 2022.

**Central interventions**
The proposed project continues the central interventions:

* Technical training of miners in a mercury-free mining method.
* Empowering miners, healthcare workers and the municipality with knowledge about mercury pollution; there will be a specific focus on women and youth.
* The project will facilitate organisation of miners, especially women and youth. - Assist national and local authorities in making a sustainable regulation of the ASGM sector in accordance with Ugandan law.
* Local healthcare workers will receive a two days’ course/refresher course in mercury toxicology.

And adds these new interventions:

* New project area in Kagaba.
* Collaboration with Busitema University (BU).
* Formalisation of ASGM in Buhweju, by making the *Environmental and social impact assessment* as required by the government. The assessment serves as a template for future legalized mining communities.
* Collaboration with the national federation of small-scale miners, The Uganda Association of Artisanal and Small-Scale Miners (UGAASM).
* Explore the market for mercury-free gold or sustainably mined gold e.g. Fairtrade gold or similar traceability system by entering into dialogue with fairtrade organisations and businesses sourcing gold in Denmark.

Altogether, the suggested project aims to expand previous efforts to impact the national level through a number of initiatives involving collaboration with Busitema University, networking activities with key national stakeholders, contributions to national efforts to curb mercury use and further engagement with international stakeholders, such as United Nations Environment Program (UNEP).

**Context of the intervention**

The general problem of mercury use in ASGM

All over the world, ASGMs mix mercury with a mineral concentrate from gold ore in a washing pan. The gold in the ore forms an amalgam with the mercury. The amalgam is then recovered and burned resulting in highly toxic mercury vapors that are inhaled by miners, their families and people in the community. Approximately 1 gram of mercury is used to produce 1 gram of gold with this traditional method. This method is used in our project areas. However, gold extraction is semi-industrialised with machinery crushing the gold ore: a ball mill. A ball mill is a drum of steel with steel balls inside. An engine rotates the drum and the balls crush the ore to a fine powder. Whole-ore-amalgamation is a novel method used by ASGMs in many countries. A large amount of mercury is put directly into the drum where it is mixed with the non-concentrated ore. Beside the mercury vapors from burning amalgam, whole-ore-amalgamation results in a major loss of mercury to the tailings i.e. the fine sand that is the waste product from ASGM. Approximately 20 gram of mercury is used to produce 1 gram of gold with whole-ore-amalgamation (2). The spread of this method is the main explanation that ASGM contributes at least 37% to the global outlet of mercury every year (3). The miners in our project areas have ball mills and use them, but luckily they do not put mercury in the drums - yet. While the aim of the project is phrased as a reduction in mercury use, it could also have been framed as prevention of whole-ore-amalgamation that typically follows when ASGM is semi-industrialised with milling stations. Fortunately, the miners in Uganda seem not to have adopted whole-ore-amalgamation unlike their peers in Tanzania, Kenya and DR Congo.

Health consequences of mercury pollution

Mercury is a potent neurotoxin that is persistent in the environment. Some of the serious health consequences of exposure to high levels of mercury are brain damage and kidney damage. It is well documented that even tiny doses of mercury affect the intellectual and physical performance of children when mothers are exposed during pregnancy (4,5). Developmental delay of the generations to come combined with personality changes and poor mental and physical health of exposed parents is a dangerous cocktail for the socioeconomic future of the mining communities and their downstream neighbours. Mercury evaporates easily and has the capability of long-range transport and contamination of areas far from the source. In the ecosystems, mercury is transformed to organic compounds which are built into microorganisms that enter the food chain. Eventually, mercury from ASGM ends up in the air we breathe, and in the fish we eat all over the world. However, the local mining communities remain subject to the most immediate consequences of mercury pollution. The Minamata Convention is an international treaty designed to protect human health and the environment from mercury pollution (6). The convention has been ratified by 127 countries and Uganda is among the countries that have approved it.

The mercury-free method

In a fact finding mission financed by the World Bank in 2007, MD Rasmus Køster-Rasmussen and geologist Peter Appel (both core members of the Diálogos gold team) found that a group of ASGMs from Benguet in the Philippines were using a mercury-free method for extracting gold. The method has been used for more than 30 years in Benguet and today approximately 40,000 ASGMs earn their living by using the mercury free gold extraction method(1). The method has subsequently successfully been introduced by Diálogos with local partners in other mining communities in the Philippines (7) and in Mozambique (8) and is now being introduced in Bolivia. UNEP has supported teaching of the method in other countries such as Mongolia. German GiZ has funded a project of mercury-free gold extraction to be taught in Mauritania. The essence of the method is a refined use of the gravity method and smelting of the mineral concentrate with borax (a salt of the element Boron) (9). Borax is nontoxic in moderate concentrations. Borax is the main ingredient in detergent for laundry machines, and it is used in cosmetics and other products. It is widely available for instance in any welding shop. The Danish Society of Occupational and Environmental Medicine concludes based on literature (10,11) that it seems unlikely for ASGMs using borax to have an increased risk of adverse reproductive or other health risks because of the exposure to borax. The mercury-free method is not only superior in health and environmental terms but also yields from 20-80% more gold (12-14).

Diálogos’ projects have been documented in a number of scientific articles published in peer reviewed journals. Diálogos implemented the method in three mining communities using mercury in the Philippines 2011- 2017 in a CISU funded project, and managed to entirely stop the use of mercury in one project area and to substantially reduce the mercury consumption in others (7). Recent communication with the healthcare staff in the mining community confirms that Gaang has now been mercury-free for 7 years. In an EU financed Diálogos miner-to-miner training session with scientific monitoring in 2018 in Mozambique, the mercury-free method yielded 0-78 % more gold than the locally used method (13). In a similar scientific monitoring in 2019 in Uganda the mercury-free gold extraction method yielded 40% more gold (14). In 2020 we revisited our project area in Mozambique and found that one mining community had completely stopped the use of mercury. The Free Your Mine project in Uganda indicates that the mercury-free method works and that it is possible to implement it in ASGM mining communities that have previously been using mercury. However, the newest results have not been systematically evaluated yet. But, the conditions for a successful implementation are present. Borax is cheap and easily accessible. The mercury-free method does not require new tools or equipment that the miners don’t already possess, other than a blower that is available in any village blacksmith workshop, or can be built from second hand materials like a plastic bag and scrap metal. However, the new method does require new skills. Therefore, further training and practice is required before the miners are confident with the new method.

ASGM in Uganda

Uganda’s mining sector is a mix of officially registered mining companies (both local and international) and ASGM. A large World Bank/Nordic Bank mineral survey estimated that ASGM is responsible for more than 90 percent of Uganda’s gold production and that it provides livelihood to approximately 200,000 individuals. According to the Independent news (June 19, 2017), 400,000 miners are directly involved in ASGM in Uganda and 2 million people are indirectly benefiting from the sector (15). Furthermore, a recent study estimated that 10 to 15,000 children are working in ASGM (16). In Uganda most of the gold that is mined is unaccounted for in official national estimates. According to official statistics, gold mining in Uganda has during the last 15 years produced less than 30 kilograms of gold annually. In contrast, a study on ASGM commissioned by the Ministry of Energy revealed that Uganda in 2008 produced about 1,200 kg of gold. During the last decade Uganda has experienced several “gold rushes” (including in the Mubende District with more than 10,000 artisanal gold miners, in the Rupa Gold Mine and in Karamoja with 15 to 80,000 miners). Potentially the government could get a major tax-revenue, and legalisation of ASGM could contribute to a stronger and more stable economy for the country as a whole.

During the last decade, gold mining in Uganda has been growing in magnitude and so has the associated mercury pollution which now is one of the main pollution challenges facing the country (17). The processing of gold often takes place in wetland and other water systems which directly exposes the ecosystems to mercury. For the mining families mercury is only one among many dangers such as unsafe work environments, lack of safety equipment, harassment from authorities etc. Diálogos has learned from previous projects that the road to better working and living conditions goes through organisation. We believe that formalisation of the sector is an important step towards regulation of the working conditions. Likewise, the only way to sustainably secure mercury-free mining is through legalisation. Uganda has laws forbidding mining with mercury and has taken steps to make certain that all ASGM areas remain free of mercury. Any gold mining area needs to be certified to a local organisation of gold miners to be legal and pay 5 percent tax of the sold gold to the government. The government has given powers to the mineral police to ensure that gold mining areas are legalised and certified. However, these are all relatively new initiatives and although the mining communities where the project takes place have been supported to become legalised, most ASGMs remain largely illegal. Therefore, we find that the most promising approach consists in training miners in the mercury-free method in tandem with capacity building local and national organisations including the mineral police that seek to organise the miners.

As a consequence of the New Horizons project (2017-2018) the National Environmental Management Agency (NEMA) became aware that ASGM is the largest contributor to mercury pollution in Uganda. NEMA decided to start regulating the use of mercury, and to monitor levels of mercury in the air, land and water. However, enforcing a mercury ban and regulating the use of mercury is an enormous task and NEMA is undermanned. Only five inspectors are allocated to the monitoring. Among other outcomes, our collaboration with NEMA resulted in a video describing the situation for ASGM in Uganda on UNEP’s website (18).

The political context affecting ASGM in Uganda

The government of Uganda signed the Minamata convention in 2013 and ratified the convention about six years later in March 2019. The government has carried out a Minamata Initial Assessment to help develop and implement strategies and best practices that minimize and eliminate human and environmental exposure to mercury. This identified AGSM as a critical source of mercury exposure. NEMA has developed a National Action Plan on the use of mercury in ASGM as a step towards the implementation of the Minamata Convention in Uganda. Until recently, ASGM was largely considered to be an illegal activity as no law or policies existed to manage ASGM. This changed when the government implemented a legal and regulatory framework. There are now laws to abide by, mandatory licensing, loyalty payments, and a mineral police to effectuate the government's decisions.

The Free Your Mine project generated a lot of positive feedback both locally and nationally in Uganda. For instance, NEMA formulated a national strategy for the regulation of mercury, based on implementing the mercury-free method as suggested by our project (1). This strategy was a result of collaboration between NEMA and UNACOH (presented in chapter 2).

As an outcome of the New Horizons project, the gold miners that participated in the MinOSH conference in Denmark, formed a national federation of small-scale miners; The Uganda Association of Artisanal and Small-Scale Miners (UGAASM). The suggested project will closely collaborate with UGASSM. The government has plans for identifying the perceived 400,000 ASGMs during the coming year; and has tasked UGAASM with ensuring the registration. Furthermore, the government seeks to engage stakeholders in ASGM communities at both the local and national levels. Thus, Uganda is slowly moving forward with efforts to implement the Minamata Convention.

Last year the Ugandan parliament gave the miners organized in BUDUMICS in Buhweju legal rights to mine. BUDUMICS is a new organisation, and much depends on how well BUDUMICS is organized and on what values the organisation administers their newly acquired mining rights. Diálogos and UNACOH have a very good relation with many of the key persons in BUDUMICS, and some of them were with us in Thyborøn and Odense during the New Horizons project. Along with the local members of UGAASM, UNACOH and Diálogos initiated the formation of BUDUMICS. The project will continue to support and build the capacity of BUDUMICS and UGAASM. The proposed project contributes to the formalization process by putting our fingerprint on the Environmental and social impact assessment in Buhweju.

**The project areas**

The Free Your Mine project included two mining areas: Buhweju and Tiira (Busia). For the proposed FYM2025 UNACOH and Diálogos have decided to expand with one more (large) mining community: Kagaba in Bukuya, Kasanda District, formerly part of Mubende District. The choice of project areas is based on criteria that include comparatively high stability, stable and good relation to the local government, low degree of migrant miners, and good infrastructure as well as basic civil society assets (schools, health clinics etc.). In Buhweju and Tiira there is a need to further implement and spread the everyday use of the mercury-free method. To expand the use and further establish the mercury-free method as the method of choice when extracting gold in ASGM in Uganda, we will establish and implement a training station in Kagaba, a mining area which now has a licence. In these three mining areas, the miners are in a process of organising themselves in cooperatives with the support from UGAASM, which constitutes the nationwide organisation of small-scale miners. The miners in Buhweju and Kagaba have earlier experienced a closure of their mines due to lack of licensing. Since the licensing requires, among other things, that gold is mined in a mercury-free manner, the incentives for acquiring the skills offered by the project are substantial.

Buhweju is a mining community located in the South Western part of Uganda. It is one of the oldest mining areas in the country with several mining sites and around 10,000 people working with ASGM. Unlike many other mining areas in Uganda, the ASGM workers are mostly locals and few migrants are working in the area. On Wednesday 10th February, 2021 the Minister of State for Minerals, Hon. Sarah Opendi officially handed over an exploration licence for about thirty five square kilometers 35 km2 of land to ASGMs in Buhweju; the Danish ambassador Nicolaj Hejberg Petersen and Diálogos addressed the gathering. This licence provides the ASGMs security to carry out their mining activities within the law, and therefore an optimal setting for disseminating the mercury-free method to a large number of miners. We are very optimistic regarding the development in Buhweju.
Tiira is a small mining village in a larger mining community located in the Eastern part of Uganda. Gold mining has been practiced in the Busia area since the 1950s and is today regarded as the biggest mining area in Eastern Africa. According to local authorities, ASGM is the most important sector in the area employing more than 20,000 people. Like in Buhweju, most of the ASGM miners are inherent workers, with some migrant workers from Kenya. Like many border towns in Uganda, Tiira has been severely affected by Covid-19 and the area went through an extended lockdown. However, the mercury-free demonstration site remained in operation on a daily basis, and despite that formalized training events were not allowed by the authorities, a substantial number of local miners have been trained in the technique individually. We collaborate with one of the local ASGM cooperatives TISSMA (Tiira Small-Scale Miner Association) and they host the training facility on their land. The collaboration is fruitful, and a local field officer employed in the project ensures the daily mercury-free processing and informal training activities.

Kagaba is located in Bukuya Sub County in Kasanda District located in the Central Region of Uganda. Prior to 2013, the town was a quiet rural settlement. Then someone discovered a gold nugget on one of the hills in town. While gold has been known to exist in the area, this new find led to an influx of "prospectors'' from outside the area. They came from as far away as Rwanda and DR Congo in a virtual goldrush, with miners, washers, refiners, middlemen, buyers and exporters. In collaboration with UNACHO, Kagaba is selected as a new project area because of its potential to become mercury-free. Furthermore, the very active Mubende Women Gold Miners Association (MUWOGOMA) has expressed a strong interest in collaborating about advocacy, running the novel mercury-free milling station and facilitating training sessions (see picture below). In Kagaba, no previous projects have addressed the mercury problem.

**Fragile context**

By use of the INFORM model the project context can be regarded as fragile due to the vulnerability and lack of coping capacity of the ASGM sector in Uganda. The ASGM miners are mostly very poor. For example, the Uganda Bureau of Statistics estimates that 62% of the inhabitants in Tiira live from less than a dollar a day, which makes the group of miners “very vulnerable and therefore incapable of investing in, and thereby acquiring, new practices”. However, our experience so far has shown that the conditions can be changed and that the local miners can acquire new skills. But, it is a challenge that most miners need an income every day to get food for themselves and their families, and cannot easily participate in a 5 days course without economic compensation. Therefore, food and allowance are offered to the participants in the training programs. Also, the miners in Tiira are in lack of coping capacity due to the unregulated state of ASGM, which severely impeaches the degree of protection and rights of the miners. The informal state of most ASGM communities in Uganda makes the miners vulnerable to sudden closure and thereby removing their means of livelihood overnight. However, the political situation in our project areas seems relatively stable at present. The project aims to improve the resilience and security of the mining communities through empowerment of the local miner organisations and cooperation with the local government unit and environmental protection authorities.

**Key contributions of the intervention**

Strengthening of the civil society and strengthening of institutions
The intervention’s central contribution to civil society is the formation and support of organisations working to secure the rights of the vulnerable and marginalized groups of miners, youth and women. The project empowers ASGMs to practice mercury-free mining, to organise and to cooperate with the authorities. On top, existing institutions like the local government units, the local health care sector, Busitema University and NEMA are capacitated with knowledge, visions and concrete strategies for responsible mining and a more just life for the inhabitants in the mining communities.

Reductions in mercury pollution and improved working conditions in small-scale mining
Along with reducing mercury emissions locally, the project works to formalize and legalize small-scale mining. Formalization is the key to responsible mining with better and safer working conditions. The project contributes on several levels to the miners in Tiira and Kagaba to acquire the same legal rights as in Buhweju. The project also contributes to reducing the global mercury emission. Mercury molecules that evaporate, condense again many years later. Some of the mercury vapor from mining in Uganda ends up in the fish we eat and the air we breathe all over the planet.

Social justice
There is plenty of gold in the Ugandan mountains and rivers. It makes a lot of sense to mine it to improve living conditions for the people of Uganda. Diálogos and UNACOH support the idea that the gold belongs to the people rather than to large scale mining companies - often owned by first world investors. We consider it social justice that the gold ends up in the pockets of the miners who dig the holes, rather than in the pockets of stockholders of mining companies.
The project works to formalize and legalize ASGM. Often ASGM communities are harassed by authorities confiscating their equipment or enforcing a lock down of a mining area for a short or longer time. The miner organisations give the miners a platform from where they can fight for their rights and work for legalization, just like we witnessed last year in Buhweju. The project also contributes with support to form and capacitate organisations for the most vulnerable groups of women and youth in the mining communities so that they can become aware of their rights.

Preventing migration
Many Africans migrate towards the EU because the living conditions in their homelands are unbearable. Small-scale gold mining and migration have in common that people are driven by poverty and a dream about a brighter future. If a brighter future were an option in Uganda, perhaps fewer people would choose the dangerous voyage over sand and sea. FYM2025 points to a strategy that improves the rights and working conditions in the mining communities, making life as a gold miner an alternative to migration.

Overall climate- and environmental impact
The climate impact of the project has to be weighed against the factual and potential reductions in mercury pollution. Even though it is comparing apples and pears we will make an attempt. The set up with south-south capacity building and a multidisciplinary Danish team consisting of environmental, medical, geology, communication and project management experts, makes the CO2 impact of the project relatively large. Altogether, 11 international return flights are necessary. This corresponds to approximately 24 tons CO2 equivalent to 1.3 average Dane´s emission in one year. This has to be weighed against an estimated minimum of 500 kilogrammes yearly reduction in mercury emission during the first years, and a possible upside of hundreds of tons of yearly reduction if the method is disseminated as expected. In this light, we find that the reductions in mercury emission by far outweigh the CO2 impact of the project.

**2. The partnership/collaborators**

**UNACOH**

The Uganda National Association of Community and Occupational Health (UNACOH), is a public health NGO Registered in 1991 under the NGO Act. The Association brings together health professionals, individuals and organisations interested in the improvement of health in Uganda. UNACOH aims at promoting a positive health culture and influencing healthy public policies in Uganda through advocacy, education and research by involving public health professionals, policy-makers, health media practitioners, social scientists and teachers, among others. The organisation is structured around the National Executive Committee; a team of 11 independent professionals with expertise in health, development and environmental disciplines. The overall function of the National Executive Committee is to put forward specific policy guidelines that are approved by the General Assembly.

UNACOH considers gender as an important aspect of its work and has played a major role in establishing rights and opportunities for women in a traditionally patriarchal society. In 2017 UNACOH was supported by CISU under a joint project - New Horizons - with UNACOH, National Association of Professional Environmentalists (NAPE) and Diálogos. The partnership focused on advocacy, networking and capacity building regarding mercury-free mining in the ASGM sector. The New Horizons collaboration as well as the Free Your Mine project have been instrumental in establishing a robust and trusting partnership with UNACOH, which is the basis for the present project.

Over the last five years, UNACOH has been involved in awareness raising activities regarding harms of mercury and the need for the ASGM sector to convert to mercury-free methods. UNACOH has a long-standing collaboration with the Ugandan ASGM community and has considerable experience with conducting projects that concern mercury pollution. UNACOH has long-standing partnerships with several other well-established local and international organisations. These include the Zero Mercury Alliance, the International POPs Elimination Network as well as the Global Alliance for Incinerator Alternatives. UNACOH is hosting the Network on Sound Management of Chemicals in Uganda. UNACOH is soundly managed organisation funded by an extensive list of international donors including the Swedish Society for Nature Conservation, The European Union, National Committee of the Netherlands, International Alliance on Natural resources in Africa and several others. Based on the work done by UNACOH, the NEMA has been involving UNACOH in the reviews and development of local policies and legislation in Uganda. Furthermore, UNACOH has developed multiple awareness-raising materials on mercury toxicology and contributed to campaigns in schools and communities through physical meetings, on TV, radio and in the print media. Finally, UNACOH continues to be actively engaged in activities of the Implementation of the Minamata convention and has to this effect participated in the NEMA led development of the National Action Plan. UNACOH’s work has contributed to the implementation of the Strategic Approach to International Chemicals Management, the Stockholm Convention on persistent organic pollutants, Basel Convention on hazardous waste, and many other international instruments.

**Diálogos**

Diálogos is a Danish organisation founded in 1994 with 220 members. The organisation has substantial experience with health and environment interventions mainly through CISU financed projects in Bolivia, Nepal, Uganda, and in the Philippines. All projects are rooted in Diálogos’ vision: that the worlds’ poor and marginalised people have knowledge about and are able to take care of their basic health, and that they live in a healthy environment. The work is based on values like empowerment, volunteer work in the North, local anchoring of the projects in the South, interdisciplinarity and scientific documentation. Diálogos has a proven track-record of collaboration with organisations ranging from local NGOs to government authorities, universities, and international organisations such as the WHO.

In Denmark, Diálogos has raised awareness about the mercury issue via public meetings, professional networking and by use of an active media strategy across regional and national media platforms. In the last 4-5 years the project has been described in for instance DR P1 Panorama and Orientering, DR webdokumentar, TV-Midtvest, Herning Folkeblad, MetroXpress, Avisen.dk, Geoviden, videnskab.dk and Politiken. In addition, a 10 minutes’ film introducing the mercury-free method, has been viewed >1,1 million times on YouTube (11). Versions of the video with Spanish and Indonesian voice-over exist as well.

For each Diálogos project, a Danish project group is appointed. The Danish group works voluntarily and is only paid a salary when working abroad on a short-term basis. Members of the mercury project group are highly qualified people with professional backgrounds within areas such as toxicology, geology, occupational health, public health and health care planning, environmental planning, anthropology, philosophy and medical teaching and research. Several of the group members are researchers at Danish universities and the gold team have published a range of scientific articles about ASGM and mercury pollution.

**Collaborators**

Busitema University
Busitema University (BU) is a government university with the main campus located in eastern Uganda at Busitema, in Busia District. It is one of the few universities with a department of Mining Engineering. Due to this BU has taken interest in the mercury-free gold mining/processing technology, promoted by the Free Your Mine Project. BU, Department of Mining and Water Resources Engineering, wishes to collaborate with FYM2025 and mining communities in Busia and other parts of Uganda to mutually promote mercury-free ASGM technologies. The department offers a 4 - year Bachelor of Science in mining engineering, which course is very vital in promoting enhanced research on mercury-free gold mining.

UGAASM
The Uganda Association of Artisanal and Small-Scale Miners (UGAASM) was registered as an umbrella body of miners across Uganda in 2019. As of June 2020, 104 associations of 192 groups with a current membership base of 55,000 ASGMs had been registered with UGAASM. The association is headed by a board with eight male and five female members. The board has an equitable representation from all regions of the country elected in a democratic election. Each region has a 13 people team with equitable representation and at least five women and both youth and an elder represented. UGAASM pursues transparent, safe and secure operations, environmentally and socially sustainable mining practices and trusting stakeholder partnerships. The association pursues this aim by cultivating relationships through a bottom-up structure. UGAASM advocates for the collective interest of miners and the advancement of the sector through education and collaboration with members, government, indigenous people and other stakeholders. This includes UGAASM securing basic rights of miners including in cases of police violence and legislative disputes.

The three pillars of UGAASM’s mission are: **Advocate, Educate** and **Collaborate**.

Advocate: By advocating on behalf of its members UGAASM raises the profile of the sector and gives voice to the sector's concerns in order to improve the legislation in Uganda.

Educate: Through education programmes UGAASM helps Ugandans understand the contribution, values and sustainability including safety of the artisanal small scale mining.

Collaborate: Collaboration with miners, government, regional and district leaders, mining police, and other stakeholders in order to achieve good working conditions in safe and healthy mining communities.

Given the alignment of UGAASM’s central aims with the present project, Diálogos, UNACOH, and UGAASM will join forces in a partnership for advocacy of mercury-free ASGM at the national level. This involves joint progress meetings hosted by UNACOH under the project. Given UGAASM’s strong presence at the national level, these meetings will include a focus on advocacy at the governmental level in cooperation with Diálogos. Moreover, UGAASM will contribute to advocacy and organisation of miners in the ASGM sector at the project sites.

MUWOGOMA
Mubende Women Gold Miners Association (MUWOGOMA): Is a registered local women’s umbrella organisation that works to promote the interests of female miners who are often marginalised and underrepresented in local decision making processes. But while the association is a women’s organisation, it also works with the youth and men who are also represented on its executive committee. MUWOGOMA is headed by an Executive Committee of nine members. It is a member of the Mubende United Miners Association as well as the UGAASM.

Emerald Mountain
The mercury-free gold extraction method was invented by a small-scale gold miner more than 30 years ago in Benguet province, Philippines. The method quickly gained momentum and today several thousand miners use the method every day. Leoncio Na-Oy is one of the leading persons in the Benguet Federation of small scale miners. Leoncio has established a group, Emerald Mountain, which specialize in peer to peer training in mercury-free gold extraction.

NEMA
The National Environment Management Authority (NEMA) is the Uganda Government agency responsible for environment protection. The project will advocate the mercury-free method and responsible mining both for, and in collaboration with, NEMA. Within the context of the project, NEMA is a duty bearer insofar as it is the main authority on natural resources and organiser of stakeholders for implementation of the Minamata Convention in Uganda. However, NEMA has few resources and many areas to cover in terms of environmental management. Our collaboration with NEMA has been very positive, but in reality NEMA does not have the capability or resources needed to initiate a national push for implementation of mercury-free ASGM. Therefore, UNACOH will continue to expand the collaboration with NEMA in FYM2025.

**Roles and responsibilities**

UNACOH will be responsible for the day-to-day management of the project including project management, implementation, monitoring, data collection, awareness raising, capacity building and advocacy. A core project team shall be responsible for planning, monitoring and implementing the project and conducting meetings with stakeholders. The UNACOH team will be in regular contact with the Diálogos project group through emails and Zoom meetings and make progress reports for Diálogos on a quarterly basis.

UNACOH will base a field officer in each project area to take care of the training facility, train local miners in the mercury-free method and other project activities. Furthermore, UNACOH establishes and capacity builds organisations that will manage the training facility. Diálogos will hold a gold processing workshop and deliver lectures at Busitema University and furthermore, in collaboration with Busitema University, develop a course for ASGM.

Diálogos is overall responsible for the economy and the progress of the project. Regarding activities, Diálogos is responsible for bringing in qualified miner trainers from Emerald Mountain who master the mercury-free method and are experienced in miner-to-miner training of trainers. Furthermore, Diálogos will conduct mercury toxicology training of trainers and build general capacity in UNACOH regarding mercury toxicology and scientific monitoring and reporting. UNACOH, UGAASM and Diálogos will in collaboration undertake advocacy initiatives, such as stakeholder meetings, at the national level.

Diálogos has the responsibility towards CISU, and UNACOH is responsible towards Diálogos. CISU’s guidelines for monitoring, auditing and reporting will be followed at all times. The executive Director of UNACOH shall account for all funds advanced to UNACOH from Diálogos.

Agreements of responsibilities will be elaborated and signed by participants once the project is financed.

**Staff job descriptions (UNACOH)**

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| **JOB TITLE** | **DUTIES AND RESPONSIBILITIES** |
| **Project Coordinator** (15%) Dr. Deogratias Sekimpi, Ag Executive Director | ● To be the Authorised Representative of UNACOH on the Project and to ensure that the project agreement is adhered to. ● To provide strategic coordination of the Project with Diálogos, and with other international and national partners. ● To review project reports from the technical team and to forward the project reports to Diálogos, and authorise disbursements from the project account. |
| **Project Manager**(80%) Geoffrey Kamese | ● Organise/coordinate/conduct capacity building and awareness on mercury for mining communities. ● Ensure that project activities are well coordinated and implemented effectively and efficiently and supervise project officers during the project. ● Ensure that project reports to the partners are produced and submitted in a timely manner.  |
| **Assistant Project Manager**(50%) Dr. Victoria Mukasa | ● Review and adjust capacity building and awareness materials on OSH for the project. ● Prepare FYM project reports on OSH in a timely manner. ● Carry out stakeholder training and awareness materials on the project. ● Organise/coordinate OSH training and awareness in the project area. ● Prepare monthly and quarterly work plans and discuss them with the Project Manager/Executive Director.  |
| **Project officer** (100%) Betty Obbo | ●Develop training and awareness materials for teachers and school children. ●Organize/coordinate/conduct capacity building of teachers.●Monitor project development (output and outcomes) in project areas. ●Prepare monthly and quarterly work plans and project reports. |
| **Project officer** (100%) Lydia Arinaitwe | ● Assist in preparation of FYM Project Reports and provide administrative support. ● Monitor project development (output and outcomes) in project areas. ● Assist in generating information for websites and social media. ● Facilitate UNACOH strengthening in the project districts and other districts in Uganda. |
| **Project Admin & Finance Officer**(60%) John Mukisa | ● Ensure that project budgets are prepared and requests for funds transfer from Diálogos are made as and when appropriate. ● Ensure that proper accounting records are maintained for the project and that all administrative issues relating to the project are taken care of to ensure smooth running of the project. ● Disbursement of funds for project activities and quality accountability of project funds. ● Prepare Project Financial Reports including Annual Audits. |

**3. Target groups, objectives, strategy, and expected results**

The development objective is to stop mercury pollution from ASGM and to build capacity in the civil society in three mining communities in Uganda. The aim is mercury-free ASGM and safer working and living conditions for the ASGMs and their families by stopping the pollution and continuing the process of formalisation of ASGM which was started in our previous project FYM. The three project areas will serve as bridgeheads for dissemination of mercury-free gold mining in Uganda. The specific project objectives include:

1. Civil society empowerment in the project areas

Civil society stakeholders, such as local, regional and national miner organisations, are empowered to support the miners in their transition to mercury-free mining techniques, and the miners themselves are empowered to advocate for improved conditions.

2. Miners’ conversion to mercury-free practices

ASGMs in the project areas - women and men - will convert to the mercury-free gold extraction method.

3. Project sustainability, collaboration with key stakeholders and advocacy
Beside advocacy activities in the project areas, it is an objective to advocate for mercury-free mining and formalisation of the ASGM sector at the national level. Such advocacy outside the project areas will take place in collaboration with UGAASM and Busitema University's bachelor programme in mining through a focus on education and research in mercury-free technology. UNACOH will create platforms for engagement between policy makers and the miners at local and national level to facilitate meaningful engagement for the formalisation of ASGMs in Uganda.

**Target groups**

Miners

The rate of unemployment in Uganda is high leading thousands of unemployed Ugandans into ASGM every year. Among the ASGMs that went along with Diálogos and UNACOH to the MinOSH conference in Odense in August 2017 (funded by the Environment and Climate fund) were an educated lawyer, an historian and an engineer. Still, ASGM in Uganda is mainly poverty driven and carried out by miners without a formal education in mining. Often ASGM is a supplement to income from farming. Both men and women work in ASGM, but the majority of miners are male. In the chosen project areas, there are only a few migrant miners. For more than a decade, UNACOH has been in contact and dialogue with miners in the project areas. The development of the FYM intervention originally took place at the MinOSH conference in Odense in 2017 during a series of round table discussions where gold miners from Uganda and the Philippines along with UNACOH and Diálogos gold team sketched the project. The Ugandan miners involved later founded the national federation of ASGMs UGAASM. UNACOH and the locally employed field officers report that the local miners express the need to organise and get further training. Miners are a primary target group who will be taught about mercury toxicology (Log Frame 1.1) and receive training in mercury-free extraction methods (Log Frame 2.1-2.3) and be directly involved in the project’s civil society initiatives (Log Frame 1.1-2.5). We estimate that altogether 10,000 miners in the three project areas, not participating directly in the activities will benefit from the interventions.

The miners’ organisations

BUDUMICS: Buhweju District United Miners Co-Operative Society Limited: Leading organisation in Buhweju administering the mining licences. Several of the miners that visited the MinOSH conference in 2017 in Odense are board members. They were very active in establishing the mercury-free milling station in the FYM project, in order adhere to their agreement with the government. The Society managed to have the Minister of Mining opening their new licenced area to ASGM.

TISSMA: The federation of ASGMs in Tiira managing the mercury-free project milling facility has contributed with inputs to the cooperation with Busitema University and have shown interest in developing, elaborating and refining their concentration methods using machinery like shaking tables and centrifuges that were donated by a project in a neighboring village to the FYM project training milling station. Thus, the miners are eager to improve their methods.

Kagaba/Kasanda District Miners: The mining area was closed to ASGMs for more than two years during which the miners worked hard to have the government understand the conditions for ASGMs. A deputation even met with President Museveni. Their advocacy work was supported by UGAASM and has led to the mining area being licenced to ASGMs. By law the area allocated to them now has to operate mercury-free. Consequently, they lobbied UNACOH and Diálogos to help implement mercury-free methods through establishing a milling station and training in using the mercury-free method.

Women

Even if the women in the project areas are aware of the dangers of mercury for themselves and their offspring, they have no choice but to keep on using mercury in order to get gold to feed their families. It is common practice that female miners bring their children along to mining activities - including those that involve mercury. Although there are many female ASGMs in the project areas, women in general in Uganda remain largely marginalised and outside the labour market. In this project, women will play a key role in advocating for and implementing mercury-free mining. Josephine Aguttu has been a small-scale miner since she was 12 years old. She participated in the round table discussions during the MinOSH conference in Odense and advocated for a larger focus on empowerment of the female miners by making specific training sessions in mercury-free mining for women. She is still a driving force in TISSMA - the mining collaborative housing our mercury-free training facility in Tiira. She has reported that the training sessions for women conducted so far have been very popular and instrumental in strengthening the women miners’ organisation in Tiira. Female miners are therefore a primary target group (Log Frame1.4, 2.3). In line with this, increased capacity of the existing two organisations is an expected outcome along with the strengthening of the women's miner organisation in Kagaba in Bukuya Sub County (Log Frame 1.4.). Furthermore, women in the project areas are important secondary target groups insofar as spouses of miners are affected by the mercury pollution. An estimated 5,000 women are indirectly reached by the interventions. In Kagaba, Kasanda District, the women gold miners association MUWOGOMA has offered to host the mercury-free demonstration site.

Youth

The youth miners are the main victims of mercury pollution. Delays in intellectual and physical development are well known effects of even mild mercury intoxication. The youth are at high risk for unemployment and migration and often find themselves with no other option than to go into unregulated ASGM involving mercury. Youth in the project areas is a primary target group because they constitute an especially vulnerable demographic group that will benefit from reduced mercury use in ASGM. Organisation of the youth can help them learn about and claim their rights. As a secondary target group benefiting indirectly from the intervention is approximately 1,000 youth miners in the project areas.

Health Care Workers

The role of health care workers in ASGM plays a key role in ensuring that the health of the miners is maintained. The health care workers are directly responsible for health in the community. Health care workers are therefore a direct target group, and at least 90 health care workers will receive either a two days’ training course or a one day refresher course in mercury toxicology (Log Frame 1.2). The training of health care workers will furthermore focus on how to disseminate the importance of mercury-free ASGM in order to obtain a “trickle-down” effect on indirect target groups such as their patients and colleagues and the civil society stakeholders with whom they collaborate. These groups can be regarded as secondary target groups and make up an estimated 1,000 people that are indirectly affected by the project.

Teachers

Teachers influence children. They will be instrumental in teaching the coming miners about mercury toxicity and in how to mine without mercury. At least 150 teachers will receive a 2 day course or a 1 day refresher course. An estimated 7,500 children and their families will indirectly be affected by the project.

Local Government Officials / Local Government Units (LGU)

In Uganda NGOs are required to work with local governments in providing community services. UNACOH has a long track record for working constructively with both national and local government officials. UNACOH is already collaborating with the LGUs in the two existing project areas and will solidify the collaborations during the suggested project. Local government officials are part of the primary target groups as the project involves them in local mercury phase out committees (Log Frame 1.5.) and as secondary target group in interventions towards health care workers and miners. Secondary targets of the collaboration with the LGUs are all members of the mining communities - approximately 30,000 individuals.

**Assumptions and risks**

Acquirement of the expected outputs and outcomes as described in the Log Frame are based on a number of assumptions. The assumptions behind these goals are that miners will stop using mercury when:

* Awareness about health effects has become common knowledge among miners, their families and stakeholders in the communities including the health care sector and LGU.
* Miners have learned to practice the mercury-free method and in addition realise that the gold yield is higher than with amalgamation.
* The government/mining authorities promise to formalise ASGM on the condition that artisanal miners eliminate mercury use.

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| **Risks** | **Mitigating actions** |
| **Conflicts authorities.** The interventions in the project areas can be regarded as being carried out in a fragile social context. ASGM is mainly poverty driven, and gold among poor people often leads to crime. Armed guards, drug abuse and work accidents are not uncommon. Furthermore, ASGMs are often hassled by police and mining authorities that may shut down mines without warning and confiscate mining gear. Obviously, such social instability may compromise project activities. | We have chosen project areas at low risk of being closed down since all three areas have a temporary or permanent mining permit. Including government and other stakeholders in the project it will increase commitment towards the project areas and lower the risk. Furthermore, our partner and collaborators are well connected, which has been very helpful in similar situations in FYM 2018-21 project. In general, the FYM2025 project aims to not only deal with the symptoms of social instability, but to address the underlying cause by capacity-building the miner organisations to work with the government to secure legislation of responsible mining. |
| **Flooded mining area.** During the initial project, one of the project areas suffered partial flooding which severely impacted mining activities which led to postponed miner-trainings and capacity-building events. Generally, the downstream effects of such events can impact the project severely. Due to poverty among the miners, the target population may be far less receptive to the project interventions whenever natural challenges, such as flooding, occur. | Although natural occurring challenges are somewhat unpredictable, we are more familiar with seasonal weather patterns and will, as advised by our local partners, seek to plan both miner training and capacity building events outside of the high-risk season. In addition, we will plan events in an agile manner that allows for flexibility in terms of when the specific events are conducted. |
| **The miners do not adapt the technique**In previous projects in the Philippines and in Mozambique, some mining communities did not adopt the mercury-free method, while others did. One important factor for success is the support from stakeholders in the civil society groups. | The project will create a pressure for changing to the mercury-free method by involving many different groups that influence the lives of the miners e.g. women, youth, health care workers, teachers, and LGU . Moreover, part of the capacity-building of partner organizations has the aim of enabling them to negotiate legalization of safe ASGM using the mercury-free method. This will generate a major incentive to adopt the mercury-free method. |
| **COVID-19 pandemic** The miner training sessions, health care training, teacher training and advocacy meetings may be hampered or in the worst case scenario be rendered infeasible by COVID-19 pandemic. | The project can accommodate the challenges if COVID-19 continues to impact the implementation in Uganda. In the last project (FYM 2018-21) our partner quickly adjusted training and meetings to smaller groups and adapted social distancing measures. Advocacy, meetings and other activities in Kampala can be conducted online, but in the project areas capacity building and advocacy require physical presence. For example, we will host more miner training sessions with a smaller number of people instead of a large crowd. If it is impossible to hold the final conference due to COVID-19, it may be conducted online. Still, if the government announces a lock down for very long periods of time, our partner’s ability to carry out all activities will be compromised and the outcomes may only be achieved in part.  |

**Strategy of the intervention**

The deliverables which consist of miner-to-miner training in the mercury-free method are the core of the project. However, experience from previous projects has shown that this intervention must be anchored within a broader civil society intervention. Sustained mercury-free practices require advocacy activities which involve education, capacity-building in miner organisations, advocacy at the regional and governmental level. Such broader activities will contribute to two strategic aims. First, they will ensure that the primary outcome of mercury-free ASGM in the project areas is lasting. Second, they will help to ensure that the project activities become examples for similar interventions and policy-making regarding ASGM in Uganda. Thus, the overall strategy for the project is to carry out the specific miner-training activities in sync with broader efforts pertaining to education, capacity-building, and advocacy.

The advocacy activities for mercury-free ASGM are carried out at local, national and international level throughout the project. The advocacy activities are aligned and carried out in partnership between Diálogos and UNACOH, BUDUMICS, and TISSMA local committees - notably with UGAASM which has recently become a driving force in ASGM advocacy. Finally, we are collaborating with Busitema University with regard to both dissemination (organisational capacity to educate artisanal miners in the mercury-free extraction method) and advocacy in terms of raising awareness of the problem and solutions through peer-refereed evidence-based research.

UNACOH in partnership with Diálogos will conduct training in the three areas targeting the different stakeholders; including members of TISSMA, BUDUMICS, UGAASM, MUWOGOMA, women and youth organisations, as well as other miner's groups. The capacity building training will include; but will not be limited to: organisational management, fundraising and reporting of funds, strategic planning, conflict management, policy development and implementation. The project will build the capacity of the mercury-phase-out-committee and the demonstration sites management committees on the different aspects of management. As part of enhancing capacity, exchange visits among the different sites will be utilised. This exemplifies the overall strategy of connecting specific implementation initiatives to broader advocacy that has been successful in previous projects. Thus, the central strategic deliveries align specific interventions pertaining to miner-training with broader civil society and advocacy initiatives.

Miner-to-miner training

24 miners, as well as 6 representatives from UGAASM, are selected to become local miner trainers. UNACOH is responsible for the selection on the basis of the miners enthusiasm for mercury-free mining and overall mining ability. Experienced ASGMs from the Philippines conduct a series of training sessions. Local miners, who learn to master the mercury-free method and learn to teach it become certified miner trainers. The miner-to-miner training takes place in the training facility. 6-10 participants can join each course. It takes 3 days to learn to master the mercury-free technique. Along with the technical training, the miners receive a 1-hour course in mercury toxicology including instructions in how to avoid mercury fumes from fellow miners who are still using the amalgamation method. UNACOH will promote and impart practical skills and actions-oriented knowledge transfer during the training. The trained miners will be helped to form groups of “practice” where they will not only carry out mercury-free mining but also continue sharing mercury-free knowledge locally. This peer-to-peer learning will be critical in helping miners adopt and practice the mercury-free gold mining method. The number of peer-to-peer learning activities will be monitored and used as a measurement for advocacy. UNACOH will continue issuing certificates to nurture the spirit of belonging to the mercury-free gold initiatives promoted by UNACOH in partnership with Diálogos.

Training facility

The training facility is a milling station with an adjacent sluice and launder system. Mercury is absolutely prohibited in this facility. Here the local certified miner trainers teach their fellow Ugandan miners the mercury-free technique. In the startup phase, a full time UNACOH staff will man the station, organise training activities and oversee day to day operation of the facility to ensure that it serves the purpose for which it was established. To manage and sustain this training facility in the long run the project will establish an organisation of the certified miner trainers; this activity will be supported by local consultants in the start-up phase. The training facility is also a tangible hub for some advocacy initiatives. In particular, it will be critical to secure training activities to have a multiplier effect as knowledge is expected to be passed on to fellow ASGMs in their cooperatives and villages as they realise the economic, environmental, and health benefits of mercury-free gold extraction. Likewise, the facility will be shown to regional and political stakeholders. This exemplifies how specific interventions go hand-in-hand with the broader strategic aims of the project.

Training of health care workers

Part of the civil society intervention is training of health care workers and staff from all healthcare facilities associated with the project areas. Doctors, nurses, midwives and assistants will receive training suitable for each of their levels, in mercury toxicology and in how to communicate the message and advocate for phasing out mercury. The training is carried out by Diálogos in a 2 day course. An essential part of the course is how to pass on the knowledge and change the perception of mercury toxicity to fellow health care workers and to the public. The health care workers will in turn pass their acquired knowledge on to the villagers through the Village Health Teams (VHTs) at Level 1 of the Health Care system in Uganda. Expected female-male ratio is 2-1. A 2 day training workshop for VHTs could be facilitated by the trained health care workers at sub-county level, in the 3 mining districts. VHTs are residents in the communities. They will always be available to exchange knowledge of how they are doing with the mercury-free mining and to resolve issues and coordinate advocacy efforts.

Training of teachers

Another part of the civil society intervention is training of teachers from the project areas. Teachers will receive training in mercury toxicology and in how to communicate the message and advocate for phasing out of mercury. The training is carried out by UNACOH in a 2 day course. An essential part of the course is how to pass on the knowledge of mercury to the children and actively involve the children in phasing out use of mercury in the 3 mining districts. The teachers will be encouraged to have environmental days with focus on mercury toxicology for the children.

Formation of national partnership for mercury free gold miningThe project will advocate for national partnerships for mercury-free gold mining in Uganda through the following activities, A-C:
A: Quarterly High Level meeting in partnership advocating for mercury-free gold mining between UNACOH, UGAASM, NEMA and other important national stakeholders including Minamata Convention Committee Uganda, Makerere University, Parliamentary Committee of Natural Resources, Parliamentary Committee for Health, Directorate of Geological Survey and Mines, Mineral Protection Police, Ministry of Health, Ministry of Gender, Labour and Social Development (Occupational Health and Safety Department). Activities include joint advocacy and articulation of a strategy for mercury-free gold mining. The New Horizon Project involved similar high-level Advocacy Meetings which was well received as a platform for advocacy and disseminating knowledge.

B: Media Advocacy – Newspapers, Magazines, Radio, TV, Social Media; Sports events, Music/Dance/Drama events. Local newspapers will be invited to write and photograph project activities. When bigger events take place national newspapers, radio and TV are invited. Social Media will be used to exchange experiences between the mining areas - a WhatsApp group will be formed for miners to exchange their experiences with using Borax. Likewise, a Facebook Page will be developed to inform about the mercury-free method. These social media efforts will be monitored and used as a measurement for advocacy. This is an example of the strategy of basing capacity-building and advocacy efforts on specific interventions in the mining areas.

C: Exchange annual visits. During these exchange visits among the three sites (Buhweju, Busia, Kassanda) the three groups will have sports and music/dance/drama activities used as educational events on mercury-free ASGM. A football tournament between the three sites will attract spectators. In the breaks between matches there will be pop-up posters and practical demonstration of mercury-free gold extraction techniques and use of safety equipment. These demonstrations of safe gold mining will take place during the exchange visits and thus, the specific projects will contribute to both capacity-building and broader advocacy in accordance with the overarching strategy.

Environmental and social impact assessment

UNACOH will chair the committee of experts needed to make the Environmental and social impact assessment that is required by the government before the legal mining activities in Buhweju can begin.

Collaboration with Busitema University
The present project includes a collaboration with Busitema University. Research and knowledge and skills regarding mercury-free gold mining and occupational safety and health in mining will be promoted. The university will be offered lectures from Diálogos specialists and experienced Philippine miners. We plan to conduct lectures at University level about mercury toxicology and about why small-scale gold miners lose gold with amalgamation. Local and international trends and practices in ASGM will be described - these include UNEP resources. We plan a 3-day workshop with experimental research comparing gold yield in traditional methods with mercury with the mercury-free method. Together with UGAASM and Busitema University we will develop a short course for ASGMs. We will advocate for the university to include mercury-free mining in future education and training initiatives for engineering students and support the development of the training. Likewise, we will support the university’s research projects on mercury-free ASGM . As a scientific component to the broader advocacy aims, Busitema University will participate in the scientific studies and research on mercury-free gold mining. They will be invited to participate in the MinOSH conference in Kampala in 2022 and thereby be capacitated with knowledge about occupational safety and health in mining, and develop an international network. As such, the collaboration will contribute to advocacy through evidence-based research and university-level dissemination and awareness-raising.

The MinOSH conference 2022

The International Commission on Occupational Health is an international non-governmental professional society which aims to foster the scientific progress, knowledge and development of occupational health and safety. The Scientific Committee Mining Occupational Safety and Health (MinOSH) has an annual conference with the objectives of promoting occupational safety and health in mining globally and locally, and to positively influence policies on mining worldwide through advocacies at international bodies such as the United Nations, World Health Organisation, and the International Labour Organisation. In September 2022 the MinOSH conference will take place in Kampala, Uganda. This is a major opportunity for advocacy, capacity-building and networking for all partners and collaborators in the suggested project. In 2017 the MinOSH conference was set in Odense in Denmark, and members from Diálogos, UNACOH and 12 small-scale gold miners from the Philippines and Uganda participated with great benefits. For instance the Ugandan delegation of miners founded UGAASM after having met at the MinOSH conference in Odense. The project will contribute manpower from both UNACOH and Diálogos to the organisation of the conference. Our advocacy aims at the conference consists of raising awareness of mercury problems in ASGM, showcasing the ongoing interventions in the project areas and providing evidence-based research in collaboration with Busitema University.

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| LogFrame**Objectives** | **Outcome** | **Output goal** | **Activities** | **Indicators** | **Means of very-fycation** |
| **1.****Civil society****empowerment in the mining** **community****1.****Civil society****empowerment in the mining** **community** | 1.1. The miners know about mercury toxicity, and know that mercury-free processing is possible. | 1.1.1. One thousand (1,000) miners have been trained in mercury toxicology. 250 in Buhweju. 500 in Kagaba. 250 in Tiira. | 1.1.1. One day information program about mercury toxicology and the mercury-free method targeted miners.  | 1.1.1. Nbr of miners that completed the mercury toxicology program. | Group photos. |
| 1.2. Local health care staff know about occupational health in ASGM and mercury toxi-cology and they are able to communi-cate this know-ledge to people in the community. | 1.2.1. Ninety (90)health care staff have been trained. Basic course: 30 in Kagaba. Refresher course: 30 in Buhweju30 in Busia. | 1.2.1. Courses in mercury toxicology and mining occupational health for health care workers. Basic course is two days and includes communication training. The refresher course is a one day course.  | 1.2.1. Nbr of health care staff who get certificate for participation in basic or refresher courses. | Group photos. |
| 1.3. A federation of local miner organisa-tions exists in each area. The federations work to formalize ASGM, improve living and working conditions and phase out mercury. | 1.3.1. In Kagaba a federation of miner coope-ratives is established. 1.3.2. In Tiira and in Buhweju existing federations are strengthened. | 1.3.1 Facilitation of collaboration between local miner organisa-tions. The activities include meetings, facilitation of demo-cratic organisation (agreed bylaws and annual general assemblies) and advocacy training. | 1.3.1. Nbr of active federations as estimated by UNACOH. | Memo-randum of under-standingExternal Evaluation |
| 1.4. A women miners’ organisation exists in each area that works to improve working and living conditions for the mining families and to phase out mercury.  | 1.4.1. Three (3) women miner organisations. 1.4.2. Three (3) miner-to-miner training workshops for female miners. | 1.4.1. Capacity building of women miners orga-nisations. The activities include meetings, facili-tation of democratic organisation (agreed bylaws and annual general assemblies) and advocacy training. 1.4.2. Mining workshop for female miners. | 1.4.1. Nbr of women miners´ organisations. 1.4.2. Nbr of workshops for female miners. | Group photos. External evaluation. |
| 1.5. Miners, LGU, environm. prot. authorities and stakeholders form a committee in each area that fo-rmulate a strategy and timeline for phasing out mercury. | 1.5.1. One local committee for phasing out mercury is formed in Kagaba. 1.5.2. Capacity building of the two existing committees in Buhweju and Tiira. | 1.5.1. Meetings with stakeholders, establishment of a committee in Kagaba. In all three areas the activities include capacity building of the committees, and formulation of a strategy and timeline for phasing out mercury. | 1.5.1. Nbr of active committees for phasing out mercury. Nbr of strategies and timeline for phasing out mercury. | Strategy document. External evaluation. |
| 1.6. A youth organisation in each project area is advocating against pollution, safer working conditions and for the mining families’ rights. | 1.6.1. A youth organisation is formed in Kagaba. 1.6.2. Two existing youth organisa-tions in Buhweju and Tiira are strengthened. | 1.6.1. Facilitation of youth organisations in each project area. Activities include capacity building and advocacy training as described below. | 1.6.1. Nbr of youth organisations. | Photos from activities. External evaluation. |
| 1.7. Teachers know about mercury toxicology in ASGM, and are able to communicate this knowledge to children in the schools. | 1.7.1. One hund-red and fifty (150)teachers have been trained. Basic course: 50 in Kagaba. Refresher course: 50 in Buhweju50 in Busia. | 1.7.1. Courses in mercury toxicology in mining for teachers. Basic course is two days and includes communication training. The refresher course is a one day course.  | 1.7.1. Nbr of teachers who get certificate for partici-pation in basic or refresher courses. | Group photos. |

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| **Objective** | **Outcome** | **Output goal** | **Activities** | **Indicators** | **Means of** **verification** |
| **2.****Miner** **conversion to****mercury-free** **practices****2.****Miner** **conversion to****mercury-free** **practices** | 2.1. Local miners in the project areas have advanced to become miner trainers. They practice the mercury-free method and teach it to fellow miners in the community. | 2.1.1. Thirty (30) miners are certified trainers in the mercury-free ethod. 6 in Buhweju. 12 in Kagaba. 6 in Tiira. 6 UGAASM. | 2.1.1. Miner-to-miner trainings and certification of local miner trainers.  | 2.1.1. Number of miner trainers practicing the mercury-free method in the project areas.2.1.2. Number of training sessions conducted by each miner trainer. | Interviews with miner trainers at follow-up study. |
| 2.2. Miners that are active in UGAASM become miner trainers. They practice the mercury-free method and teach it to fellow miners.  | 2.2.1. Six (6) miners appointed by UGAASM are certified trainers. | 2.2.1. Training and certification of UGAASM miner trainers.  | 2.2.1. Number of UGASSM miner trainers practicing the mercury-free method.2.2.2. Number of training sessions conducted by each UGASSM miner trainer. | Interviews with miner trainers at follow-up study. |
| 2.3. Local miners in the project areas practice the mercury-free method. 40% of the miners practicing the mercury-free method are female. | 2.3.1. 750 local miners (min 300 female) have learned the mercury-free method. 400 in Kagaba. 175 in Buhweju. 175 in Tiira. | 2.3.1. Locally certified miners conduct miner-to-miner training programs in mercury-free gold extraction for local peers. 2.3.2 Trainedminers train otherminers, women andyouth and promoteuse of the mercury-free Milling Facilities. | 2.3.1. Nber of certificates issued to local miners trained by local miner trainers. 2.3.2 Nber of miners, women and youth trained by certified trainers.2.3.3 Nber of trained miners,women and youth who usethe mercury-free Milling Facilities.  | Group photos. Copy of certificates for men and women.Followup study |
| 2.4. Mercury-free milling facilities are recognised and honoured. |  | 2.4.1. UNACOH visits and accredits mercury-free milling facilities with diplomas and the mercury-free ASGM flag. | 2.4.1. Number of mercury-free milling facilities. | Baseline and follow-up studies. |
| 2.5. In each project area there is a location for practicing, teaching and learning the mercury-free method for gold extraction. | 2.5.1. Three (3) well-functioning mercury-free milling facilities. One in each project area. | 2.5.1. Construction of a mercury-free processing facility in Kagaba. 2.5.2. Maintenance of existing training facilities in Tiira and Buhweju. | 2.5.1. Number of well-functioning mercury-free processing facilities with teaching activity. | External evaluation. |
| **Objective** | **Outcome** | **Output goal** | **Activities** | **Indicators** | **Means of** **verification** |
| **3.** **Project** **sustainability, collaboration with key** **stakeholders** **and advocacy****3.** **Project** **sustainability, collaboration with key** **stakeholders** **and advocacy** | 3.1. A national partnership advocating for mercury-free gold mining in Uganda, with a realistic strategy for the facing out. | 3.1.1. Formation of a national partnership for mercury-free gold mining in Uganda. | 3.1.1. Quarterly high-level meetings partnership advocating for mercury-free gold mining. Activities include joint advocacy and articulation of a strategy.  | 3.1.1. Joint strategy with timeline. | Document outlining joint strategy with a timeline. |
| 3.2. A partnership with Busitema University. The bachelor program in mining adapts the mercury free agenda. | 3.2.1. Collabo-ration with BU3.2.2. One scientific article with experimental research | 3.2.1. Signing MOU. Lectures by Diálogos specialists. Development of a short course for ASGMs. 3.2.2. Processing work-shop with exp. research. | 3.2.1. Course developed. 3.2.2. Scientific article in peer reviewed journal. | MOU. Course curriculum. Scientific article |
| 3.3. In each area there is an organisation sustaining mercury-free training and use of the facilities.  | 3.3.1 Three well-functioning local organisations sustaining the local training facility.3.3.2 Operational business model for sustainable mercury-free milling facility.   | 3.3.1.1 Establish an organisation in Kagaba. 3.3.1.2. Financing plan for running costs. 3.3.1.3. Legal documents establishing operation rights and obligations.3.3.2.1. Study / analysis of business models.3.3.2.2. Workshops with partners.3.3.2.3 Implement business model for mercury-free milling facilities with local organisations. | 3.3.1. Plan of operation of training facilities. 3.3.3. Legal documents. | Legal documents. Plan of operation. |
| 3.4. The mercury-free gold extraction method is known and recognized in the UNEP ASGM Partnership. | 3.4. Partici-pation in UNEP ASGM Partnership sharing knowledge.  | 3.4.1. Contribute project results to UNEP ASGM partnership and sharing experience (virtual meetings) | Minutes from meetings. | Participation in the UNEP ASGM partnership. |
| 3.5. UNACOH staff knows mercury toxicology and can advocate for mercury-free ASGM. | 3.5 A mini-mum of 10 staff members from UNACOH participate in the course. | 3.5.1. Two days Diálogos course in toxicology and public health strategy. | Minutes from meetings. | Group photos. |
| 3.6. Capacity building of Diálogos. | 3.6.1.Two Diálogos trainees visit the project. | 3.6.1. Capacity building and supervision of new project group members. |  | Diálogos project visit reports. |
| 3.7. Media exposure in radio electronic media, tv and Exchange visits about mercury toxicology, ASGM and the project. | 3.7.1. Ten media reports in Uganda. 3.7.2. Two media reports in Denmark.3.7.3 AnnualExchange visitamong minersfrom the 3districtsassociatedwith learningand advocacy | 3.7.1. Facilitate reports about the project in public media in Uganda. 3.7.2. Facilitate reports about the project in public media in DK.3.7.3 Exchange visit, sports gala and media outreach once a year. The local Miners Association hosting each year (Buhweju, Busia, Kassanda). | 3.7.1. Nbr of reports in public media in Uganda. 3.7.2. Number of reports in public media in Denmark.3.7.3 Annual Exchange visitreport. | Project media log.All 3 districtminer groupsto host andadvocate formercury-free ASGM intheir district. |
| 3.8. Scientific documentation of change in mining practice, with BU | 3.8.1. One article about change in mining practice. | 3.8.1. Gathering of baseline and follow-up data. 3.8.2. Producing a scientific article. | 3.8.1. Publication of a scientific article with the effects of the project. | One scientific article published in a peer reviewed journal. |
| 3.9. National and international stakeholders know the mercury-free method. | 3.9.1 MinOSHConference2022. | 3.9.1. Participation in MinOSH conference 2022 in Uganda. 3.9.2. Concluding confe-rence for government + partners + stakeholders. |  | Programme for MinOSH conference in Uganda. |
| 3.10.Possibilities regarding certification of fair trade gold are explored. | 3.10.1.Meetings with sustainability deps. and CSR in, e.g. Vestas + Grundfos.  | 3.10.1. Meetings between Diálogos and potential industrial consumers of certified gold in Denmark. |  | Group photo. |
| 3.11. Mining activities in Buhweju are formalized and there is a legal opening of the Buhweju mining area.   | 3.11 Environmental and social Impact Assessment is received by authorities,ASGM associations and UNACOH.  | 3.11.1 Conducting Environmental Impact Assessment for BUDUMICS.3.11.2 Dissemination Workshop of EIA.3.11.3 UNACOH Capacity building in EIA. | 3.11.1 EIA report.3.11.2 External Workshop.3.11.3 Internal workshop.  | 3.11.1 Formal acceptance from authority.3.11.2 Minutes from workshop.3.11.3 Minutes from workshop.   |

**Sustainability**

The intervention contributes to establishing sustainable and lasting improvements by rooting project ideas about mercury-free mining in the health care sector, in schools, through the LGUs in mining licence contracts, in NEMA and in Busitema University, combined with technical training, and capacity building of male, female and youth miners in the mining communities in terms of organisation and health knowledge. The project works for formalisation and legalisation of ASGM which is essential for long term sustainability. Furthermore, we believe that the miner organisations and women organisations will continue to advocate for the rights of poor and marginalised individuals in the target groups. We believe that the miner organisations are sustainable instruments for carrying out the mercury-free agenda for many years to come. Long-term sustainability of the project concept is strengthened through sharing experience from the project through network activities with international stakeholders like UNEP and participants at the MinOSH conference. UNACOH and Diálogos will strengthen their international network and increase the likelihood of future funding from larger international funding bodies.

**Monitoring, experience collection and use**

Routine monitoring consists of quarterly reporting in a short narrative report, a financial report along with an ‘activity-output-indicator’ sheet. The purpose of the ‘activity-output-indicator’ sheet is to keep track of the cumulative progress of activities, outputs and indicators from the Log Frame. It is our experience from earlier projects with UNACOH that it is the most efficient way of monitoring the project. There are quarterly zoom meetings between Diálogos gold team and UNACOH project staff where we discuss the quarterly reporting from UNACOH. Additionally, ad hoc monitoring is carried out with Zoom meetings, emails and WhatsApp calls when required. In the present project Diálogos and UNACOH are in contact on a weekly basis. In this way experiences are collected and used along the way.

Project visits in Uganda During project visits Dialogos will follow up systematically on the project progress, as well as participate in activities, advocacy and capacity building of UNACOH, for instance by supervising on how to design the follow-up monitoring study.

Two scientific articles are planned. Dialogos have considerable experience in scientific reporting from our projects, and have published a long list of peer reviewed articles; for instance (7,8,12,13,14):

1. “Pepsi vs coca cola test”. Gold yield with amalgamation is tested against gold yield with the mercury-free method under controlled conditions. The experimental research will be carried out along with the Department of Mining and Water Resources Engineering at Busitema University. The goal is to give Busitema University ownership of knowledge about the mercury-free method.

2. “Outcome study”. Based on baseline and follow-up data the change in use of mercury among ASGMs in the project areas is estimated and project outcomes are analysed. The aim is to evaluate the project design of the interventions using quantitative and qualitative methods to understand what activities and inputs have resulted in the planned outputs and outcomes and what have failed to do so. The outcome study will for some parts be inspired by an earlier study (7).

An external evaluation is planned and budgeted for.

**4. Intervention-related information work in Denmark**

The many project results and stories will be communicated by Diálogos to the following target groups: General public: Reports from project visits (e.g. concluding conference) in Danish national media like P1, Politiken and TV Lorry (minimum two reports).

Members and general public: Project updates on our webpage, www.dialogos.dk, and our social media platform (Facebook). Public meetings / webinars with stories and pictures from the project along with information about mercury toxicology in a global and in a Danish context (minimum two meetings).

Downstream value chain of gold, Danish goldsmiths and industries e.g. Vestas and Grundfos: Meetings with Danish businesses or their business associations using gold in their products. The purpose being to start a dialogue about mercury-free gold and sustainable ASGM communities in gold producing countries.

**5. Supplementary financing**

Diálogos is contributing with supplementary financing by managing the project on a voluntary basis and contributing with competences and knowledge. Some technical support is done at a voluntary basis without pay, noted as supplementary financing (in kind man-hours) in the budget.

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