



MIGORI COUNTY ARTISANAL (MICA) MINERS CO-OP. SOC. LTD

WORLD ENVIRONMENT DAY

Theme: Biodiversity for Sustainable Livelihoods.

MICA's path to: Protecting, Restoring and Conserving the Environment within ASGM sites.

Gold mining is a key economic activity in Kenya. It contributes about 0.4% of the country's GDP and 2% of the country's export earnings. However, it is largely artisanal and small-scale in nature and hence highly hazardous to human health, biodiversity and the environment. It is often characterized by the clearing of vegetation to create room for mining activities and the transformation of the landscape into trenches, gaping pits and heaps of mined ore, which contain heavy metals, such as Lead, Cadmium, Arsenic and Chromium. Mercury is normally introduced to the crushed ore in the process of panning to amalgamate gold. These huge amounts of toxic heavy metals often find their way into surface water resources as mine tailings and also as dust in the atmosphere.

Concerns over the adverse impacts of artisanal and small scale gold mining on human health and the environment have led to a requirement by the state department of mining, for mining projects to develop mine closure and rehabilitation plans to ensure that disused mines are restored after the completion of mining operations. Artisanal and Small-scale gold Mining (ASGM) is also linked to environmental degradation, with deforestation and forest degradation among the most significant impacts. The Migori County Artisanal Miners Cooperative Society (MICA) intends to implement safe mining practices and apply decommissioning and rehabilitation of disused mines in the targeted areas in Migori County. The cooperative is working on safe mining practices with the aim of ensuring minimal impact to the environment through progressive rehabilitation of disused mines and reducing human exposure to heavy metals and chemical hazards to a bare minimum.

The Migori County Artisanal Miners Cooperative Society (MICA) received a grant from the GEF Small Grants Programme of UNDP in mid 2019 to implement safe mining practices and undertake decommissioning and rehabilitation of disused mines in targeted areas of Migori County. In collaboration with KEFRI and the County Government of Migori, MICA is implementing a range of interventions that seek to (i) prevent anthropogenic sources of toxic contaminants such as mercury and other heavy metals from entering the environment, (ii) reduce

changes to hydrological functions and water quality; and (iii) minimize negative human health impacts and other social costs. To this end, MICA has installed an improved milling plant that uses borax (an environmentally friendly substance) for smelting the concentrate, rather than mercury.

Since most sites are already contaminated with heavy metals arising from the traditional methods of operation, MICA is now promoting the planting of bamboo seedlings in Kabobo, Mikei and Osiri areas. Bamboo has been proven to be an effective plant for phytoremediation i.e. mopping up heavy metals from the surrounding environment. So far a total of 368 bamboo seedlings have been planted that are intended to protect about 6 acres of land. Other tree species like grevillea, acacia and casuarinas have also been planted to help restore the degraded sites (1200 seedlings), planted on privately owned mining lands. The target is to cover at least 20 acres by the end of this year (2020).



Mercury-free gold product.

Tree Nursery for rehabilitation



Bamboo planted for phytoremediation within a mining site

