Mining and health:
A Health Literacy Module

Training and Research Support Centre

in the

Regional Network for Equity in Health in East and Southern Africa (EQUINET)

September 2018

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HEALTH LITERACY MODULE ON MINING AND HEALTH

The aims of this health literacy module are to

1. Discuss the ways mining affects health in those working on the mines, ex-mineworkers and those in the surrounding and wider community;

2. Explain the policies, laws and programmes that should protect health and address the health effects of mining

3. Discuss some of the shortfalls in current law and practice and what you can do about them and

4. Provide links to institutions and resources for further information

This module aims to provide information and to support discussion on how to ensure that the mining sector in east and southern African countries meets its duties for health and protects the right to health.

Most countries in east and southern Africa have rich deposits of a range of mineral reserves that are highly sought after in global trade. Extractive industries (EIs), largely multinationals from all regions of the world, extract these minerals, oil and gas from the earth through mining, dredging and quarrying. Countries in our region thus face a challenge to make and implement policy choices that link these natural resources to improved social and economic development, and to ensure that extraction processes do not harm health or environments.

The minerals, oil and gas extracted are largely exported outside Africa. Though the prices may go up and down, EI exports yield significant returns: In 2009, Africa's oil, gas and minerals exports were worth roughly five times the value of international aid to the continent (US$246 billion vs. US$49 billion). They can thus contribute significantly to economic growth. However, this growth can be very unequal. This may happen if the sector doesn't link with local producers, if EIs don't make a fair contribution to improved social and economic development, or even worse if they harm people's health and environments.

These issues are often left to "corporate social responsibility" (CSR). Companies may voluntarily contribute to environments and social development, such as by providing health facilities, investing in schools or buying products from local producers, such as for consumption on mines. However, protection against harm to health and environments and fair contribution to social and economic development cannot just be left to CSR. Communities have a right to health and mines have a duty to ensure that their activities do not cause harm to health. This includes making tax contributions for public services for health and ensuring that their activities do not leave communities or environments in a worse state.

This module discusses how to protect health in mining. It has been produced by TARSC in EQUINET. The full module can be implemented in one continuous session, such as a weekend, or it can be split into separate sessions for each section. It aims to encourage participation and discussion and to contribute to local action on the issues raised. Facilitators should be familiar with the module contents to facilitate discussions, and would be expected to have read the information listed in the "References and Resources". The module is in English so if you are working in local languages, discuss with health workers and local key informants the best words for any terms of the used. If you have queries please email admin@tarsc.org.

HOW DOES MINING AFFECT HEALTH?

This section explores how mining may affect health. Mining activities can bring benefits to workers, communities and the wider economy. They provide jobs, skills and incomes. Mines that provide housing, health care and pensions to workers and services and infrastructure in the areas they operate in contribute to wellbeing and income security. They can boost the local economy, such as when they purchase inputs from local enterprises or improve purchasing power in the local community.

However, they also bring health risks of injury and illness for workers and surrounding communities.

Water yellowed by cassiterite collected for sluicing, DRC, M Craemer 2010

Hazardous working conditions and air and water pollution from mining affect not only the health of workers, but also the health of the surrounding community. If not controlled, the dusts, gases and chemicals from mining may not only pollute the air, ground and surface water and soil for those currently living around mines. They may also harm children and future generations. Even after mines close, ex-mineworkers may suffer lung and other diseases that take time to be detected. Mine dumps can continue to pollute land and water years after mines close if they are not properly set up.

Mining activities attract new settlements for work or enterprise. They may also displace people who live in the areas mined. In both cases, poor living and community environments can lead to increased levels of tuberculosis, cholera, HIV and other communicable diseases.

These risks are well known. They are also preventable. The health and environmental impacts of mining can be identified even before the mine is licensed and activities begin, and plans can be put in place to control them.

Activity 1: What hazards for health do you know about from mining?

Method:	Filling the blanks
Approximate time:	1 hour
Resources:	Cards or paper (cut the paper into A5 size squares) enough for 4 per person, pen or marker pens, blue tak.

Several sheets of flip chart paper. Each sheet is pre-prepared with 3 columns that are blank and ready to write information in.
- Column 1 is titled "RISK";
- Column 2 is titled "TYPE OF MINE" and
- Column 3 is titled "GROUPS AFFECTED"

Procedure:

1. Explain that a health risk or hazard is the thing that causes a health problem in people who are exposed to it, in this case workers, their families or wider communities.

2. Ask participants to write on the cards / paper squares a health risk that they know about from mining. They should write in capital letters and put ONE risk on each card. They can use up to 4 cards each.

3. Give people 5-8 minutes to write their cards.

4. In an open space, ask people to bring their cards and put them down in a big circle with participants in the middle. Put cards with the same risk or hazard on top of each other.

5. When the circle is complete with all cards, start a discussion on each. A second facilitator should record the findings on the flip charts with the information in the relevant columns.

   - Which type of mining does that hazard come from?
   - What does that hazard do to health?
   - Which people are affected by the hazard/risk?

Note to facilitator: *Don't worry if people don't know the health effects- we will be discussing this further. For now this aims to gather what people already know or think.*

6. Review the findings recorded on the flip chart with the group

   - What types of hazards or risks can you see? (Machines? Chemicals? Dusts? Gasses? Movement and vibration? Other?)
   - Who is affected overall- which types of people?
   - How aware are we and the people affected of the health problems this hazards and risks can cause?

7. Finally, discuss the answer to the last question. What happens if people don't know the health risks? Who should know these risks and their health impacts (health workers? Management? Unions? Workers? Families? Anyone exposed to them?)

8. Explain that we are going to discuss what mining processes can do to health if the risks are not controlled.

The health risks of mining

Mining has been associated with a high rate of accidents and injury for workers due to the hazards from machinery and explosives. The minerals may be removed from the ground in open pit mining or from underground workings.

Working underground can be a very difficult and sometimes unpredictable working environment. There are possibilities of rockfalls, tunnels and surfaces collapsing, injuring or trapping mineworkers.

Mining produces dust, noise and, in some mines, heat, chemicals and gases that may be especially risky for mine workers if they work with poor ventilation or are exposed to the contaminants

Table 1 overleaf shows the known health risks associated with different types of mining, beyond the accidents and injuries noted above. How far these risks are controlled in the mining process will determine the extent to which people exposed to them are affected.

It is not only the workers who are affected. As we discuss later, if the noise, chemicals, dust or gasses contaminate the areas where people are living or working around the mines, they too may be affected.

Nhaka Underground mine Zambia, Mwansa C Mining and public health in Zambia, 2018

Small scale mining, Zimbabwe. Source: Newsday Zimbabwe 2015

Table 1: Health risks from selected mining activities

Area	Potential health risks
Coal mining	Coal mining can produce carbon dioxide, nitrogen, sulphur oxides and hydrocarbons in the air that can cause eye, nose and throat irritation and when breathed in can lead to lung diseases (black lung, silicosis) that can also complicate tuberculosis (TB). Coal miners may suffer higher rates of heart disease from breathing coal dust for many years. Communities living near coal mines may be exposed to carbon, nitrogen gas emissions, mercury, cadmium, copper, nickel, ammonia and fluoride and water, soil and air pollution from waste and fly ash spills. Exposed rock from rubble deposits (stockpiles) and mining waste in slurry ponds may release heavy metals and other pollutants that contaminate surface and ground water. The wastewater from washing the impurities off the coal is a slurry that contains various impurities, including coal dust and chemicals. The slurry may be injected into underground mine workings or captured in slurry ponds (large unlined catchment basins). From there it can seep into groundwater. People who drink this water may be exposed to arsenic (a carcinogen), sulphate, iron, manganese, selenium, mercury, and chromium. Toxic gases, such as methane, radon and carbon monoxide from coal mining pose an immediate explosive hazard to mine workers, and can also contaminate groundwater. People who live in the vicinity of coal mines have been found to have higher rates of birth defects, cancer, and kidney, heart and respiratory disease. Trucks and trains hauling coal may release coal dust into the air along their haul route leading to respiratory diseases.
Gold mining	Gold mining has a risk of exposure to silica dust and arsenic, leading to lung disease and lung, liver and oesophageal cancer. There may be mercury contamination of water, soil, and food from gold mining, raising the risk of lung, gastrointestinal, nerve and kidney disease, and reproductive risks in female workers. The chemicals from gold mining may contaminate water resources, especially if there are unlined mine tailings. Cyanide is often used to extract gold and silver from metal ores. Although certain cyanide compounds degrade quickly in the environment, their by-products are also frequently toxic and more persistent. If they persist in ground water, and accumulate in fish, people who drink the water or eat the fish may experience breathing difficulties, chest pain, vomiting, headaches, and thyroid disease.
Uranium mining	The fine particles of uranium and radon gas in uranium mining can lead to bronchial and lung cancer, leukaemia, stomach cancer, silicosis and kidney damage. Radiation may cause genetic damage, disrupt hormone levels, and reduce blood cell counts. One of the decay products of uranium is radon, a radioactive gas that causes cancer. Radon concentrations are likely to be higher near uranium deposits. Radon can accumulate in residential buildings or enclosed spaces such as mine shafts. Breathing radon gas can lead to lung cancer. One of the most troublesome aspects of radiation exposure during mining is that these disease symptoms may not show until decades after exposure. Radioactive contamination of groundwater and heavy metals; use of waste rocks from mines to improve roads and radioactive metal reuse by locals to make utensils and other goods may expose people to the same risks, especially if contaminated water is pumped back into rivers and lakes or people are exposed to arsenic in tailing ponds of abandoned mines. This may mean that toxic and radioactive substances continue to contaminate water and air even after mining has stopped.
Copper mining	Long-term exposure to copper dust causes respiratory irritation, headaches, dizziness, nausea and diarrhoea. Water with high levels of copper may cause nausea, vomiting, stomach cramps or diarrhoea.
Cobalt mining	Cobalt mining has been linked to asthma, pneumonia and metal lung disease due to chronic exposure to dust or fumes and skin rash in people whose skin is exposed to cobalt dust or fumes.
Energy (hydro-power)	Hydropower plans may release asbestos dust and chemicals from lubricants and insulation products and equipment may be contaminated with polychlorinated biphenyls. If they reduce the water supply downstream they may affect the people and fish population downstream of the projects.

Nchanga open pit mine Zambia, Mwansa C Mining and public health in Zambia, 2018

Open pit mining and stripping removes soil and vegetation from the surface to access the minerals. When explosives are used they may spread chemicals and dust, including into the atmosphere, rivers and other water sources. The waste from mining activities may contain metals and chemicals that can contaminate surface and underground water. Water collecting in pools in open pit mines can be sites of mosquito breeding, increasing the risk of malaria.

For reflection or discussion:

- How do the risks raised in the table compare with those you raised in the previous activity?
- In buzz groups of 3-4 people, each discuss one of the mines in *Table 1*. What new information does it have about the health risks of mining?
- Report back on your findings to the full group.

The risks to communities

These various risks not only affect workers. As described in *Table 1*, they also affect their families and people living around mines, such as when contaminants go into the soil, air or water.

Their health effects often combine with those from poor housing, water supply and sanitation. People are drawn by potential incomes from mine-related activities and unplanned settlements grow. This can lead to the spread of infectious diseases such as tuberculosis and HIV, and raise the risk of epidemics, such as cholera and typhoid.

Mining activities can require extensive land and water resources, displacing local people. This affects their living conditions and economic activities. Pipelines can cross land, affecting local economic activities and access to water, flora, arable land and pastures for livestock. These effects can be worse if those affected are not consulted. Resettlement plans are generally discussed with government, but not always with local communities. Frustrations over this situation has led to conflict and protest, especially when methods for dealing with grievances are weak or unresponsive.

Many others may be harmed, but lack the voice to make their situation known. For example, as noted in *Table 1*, women who collect and use contaminated water may be especially affected. Women who wash uniforms with hazardous chemicals or dusts may themselves be exposed. Women living around mines have been found to be more anaemic. If pregnant, their babies may be exposed in utero to heavy metals, leading to low birthweight. Cadmium can pass from mothers to children through breast feeding affecting their learning ability. With high levels of poverty in women, public health services may not relate these problems to exposure to the hazards from mines.

Children living near lead mines who are exposed to lead in soil, air or water may have reduced physical and mental growth and attention deficit hyperactivity disorder. Children are much more sensitive to lead exposure than adults. The case study from Zambia in *Box 1* shows an example of this in our region.

Box 1: Lead exposure in Kabwe

Dr J Yabe, University of Zambia has carried out research on blood lead levels in Kabwe, Zambia, together with other institutions in the Kabwe Mine Pollution Amelioration Initiative (KAMPAI). Lead and zinc was mined in Kabwe from 1902 to 1994. Kabwe soil was found to have very high levels of lead. Many children were found to have critically high blood lead levels, particularly those living closer to the mine dump and downwind of the mine.

After environmental remediation programme was carried out the blood lead levels fell from 2014 to 2016, but were still high. The researchers suggest that lead in soil may be taken up through roots and leaves, and consumed in vegetables or as pica in pregnant women. Lead dust is also being carried by wind to communities. Children may also be absorbing lead by playing on lead contaminated soils. Lead contamination may also be occurring through placental transfer and after birth in breastfeeding.

Read more about this in the Ministry of Health Zambia, EQUINET (2018) Mining and Public Health in Zambia Meeting report , at https://tinyurl.com/y9r32sxm

Contaminants from lead mining, Kabwe, Yabe 2018

For reflection or discussion:

- How do the groups affected by these health risks from mining compare with those you raised in the first participatory activity?
- Which people do you think is are affected by mining locally? Why?

What happens after mines close?

While these risks take place during mine operations, some may continue long after mines have closed. The example from South Africa below shows some of the ways mines can affect health after they close, through the mine dumps and residues left behind from the mining process.

As noted earlier the lung disease, cancers and other chronic conditions that are associated with these risks may take time to appear and may only emerge after the mining companies have closed. The health of ex-mineworkers and communities living near mines continues to be an issue long after mines have closed, as described in the case study in *Box 2* overleaf.

For reflection or discussion:

- What does the story from South Africa overleaf say about how mines can affect health after they have closed?
- Do these risks also take place in your country? Who is affected?
- What is being done to monitor and address the health of ex mineworkers and people living near mine dumps?

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Box 2: Health risks after mines close in South Africa

After mines close they may leave mine dumps made up of crushed, sand-like by-product refuse material containing metals and dust particles. This can lead to dust exposure for communities living nearby, particularly during windy conditions and when it's dry and vegetation cover is low. When mines stop producing, their pits and underground workings are typically allowed to naturally fill with water over time. This creates artificial lakes and flooded underground caverns. They may also be back-filled with waste rock. In either case, old mine sites can be potential sources of acid mine drainage contaminated with toxic metals such as arsenic, mercury and lead.

An estimated 1.6 million people live in informal and formal settlements on – or directly next to – mine dumps in South Africa. Children living in communities close to mine dumps are more likely to have asthma and wheezing compared to those living in other studies conducted in cities. Acid mine drainage has destroyed water habitats, affecting fish and potentially people who drink affected water or fish.

The mining industry has in the past, implemented various strategies to reduce pollution from mine dumps. This has included spraying mine dumps with water and planting grass on dumps to catch the dust.

Communities that live near mines are exposed to dust from these mines
Source: Shuttershock in Nkosi 2018

These strategies can, however, be ineffective when the grass withers during the dry season and when sprayed water is absorbed or evaporates. It has thus been suggested that there be buffer zones between mining dumps and where people live.

Read more at Nkosi V (2018) How mine dumps in South Africa affect the health of communities living nearby, The Conversation, 2/5/2018 online at https://theconversation.com/how-mine-dumps-in-south-africa-affect-the-health-of-communities-living-nearby-77113

In summary, this section has discussed a range of direct and indirect risks from mining, to workers and communities. Some health effects are immediate and others emerge after many years, and may also affect future generations. They may take place while mining is underway, but may also continue after mines close, from mine dumps and other sources of water, air and soil contamination.

These risks can be controlled if they are assessed, if plans are made to control them, and if resources are applied to these plans. Mining is a very capital intensive activity and countries may seek to attract foreign investment in mining by giving generous tax exemptions. However this may limit EI's contribution to measures and services to deal with these issues. If local communities are not involved in decisions on these conditions, they and the public services they use can bear a disproportionate share of these long term social costs of mining.

Yet health is a right and no-one should face harm from economic activities. Let us look further at the laws and programmes in place to protect health in mining.

This section discusses the laws, policies and programmes that protect health in mining.

The corporate response to these health and social issues is often framed in terms of corporate social responsibility (CSR). CSR has sometimes preceded the duties being set in laws and regulations. Voluntary CSR may also be a response to the law and guidance in the source countries the multinationals that work in mining come from.

Many companies 'measure' their CSR commitment in terms of the resources they allocate and their investment in social development programmes or in terms of the business opportunities they create outside the direct mining activities. They may focus on visible projects that can boost their public relations. These CSR activities may make valuable contributions in the community, but may also not be planned and negotiated with the affected local governments or communities so that they align with and feed into their own priorities and plans.

While an important contribution, in all these cases, CSR should not be seen as a substitute for mining company and state duties to protect against harm to health. Further, voluntary activities by some companies should not be used as an argument to delay or stop the adoption of more formal duties in law.

For reflection or discussion:

- Do you know the CSR activities currently being done by mining companies in your country/ area?
  - What are they doing? What is their purpose – from the view of the company, or the government and of the community?
  - Who was involved in planning them? Who are the main beneficiaries?
  - Have any issues been faced in implementing them?
- In your opinion, which of these CSR activities that you have discussed should be voluntary and which should be duties that are set in law? Why?

Regional commitments say that health rights should be protected

The right to life is protected in all national constitutions in the region. Many also provide rights to health care, clean water and sanitation. All countries in the region have made commitments to the International Covenant on Economic, Social and Cultural Rights, which obliges states to ensure: "the right of everyone to the enjoyment of the highest attainable standard of physical and mental health." Our public health law usually sets a duty on everyone, individuals, companies and institutions, for their activities to avoid harm to health or health 'nuisances'.

In our region, the member states of the Southern African Development Community (SADC) agreed in 2004 on a Protocol on Mining that committed states to develop, adopt and enforce appropriate and uniform regional health, safety and environmental guidelines for the mining sector as an *immediate* milestone. There has been work to harmonise standards for TB, HIV and occupational health. However, at the time of producing this module, the harmonised standards for public health had not yet been set. In 2004, the SADC and UN Economic Commission for Africa (UN ECA) in a document on Harmonisation of Mining Policies,

Standards, Legislative and Regulatory Framework in Southern Africa recommended that mineral policies take into consideration health and safety, gender, housing and living conditions, labour relations and environmental standards. They recommended that countries pursue regional strategies for this, including environmental and social impact assessments, and provide resources to reduce adverse impacts on community livelihoods.

Other African regions have done the same. In West Africa, ECOWAS has set a Directive on the *Harmonization of Guiding Principles and Policies in the Mining Sector*. In 2009, the African Union (AU) in its *African Mining Vision* called for all African countries to ensure that EI activities are safe, healthy, environmentally friendly, socially responsible and appreciated by surrounding communities, as shown below.

The 2009 African Union (AU) African Mining Vision

states a policy intention that African countries should ensure national and social benefit from mining sector activities. Amongst other issues this indicates that mining activities should be *"safe, healthy, gender and ethnically inclusive, environmentally friendly, socially responsible and appreciated by surrounding communities."*

International standards call for health to be protected

Many EIs are multinationals that come from countries that have made similar commitments. There are over 25 international standards, codes and guidance documents on the practices of EIs and multinational enterprises set by the United Nations (UN) multilateral institutions, high income countries and financial institutions, as well as by business and civil society. *Box 3* below outlines some of these standards. You can find more details of what these documents contain in *Annex 1* to the module.

Box 3: International standards and guidance on EIs and health

There are a range of international standards and guidance documents on EIs

- **UN and international guidance:** UN Universal Declaration of Human Rights; UN Guiding Principles on Business and Human Rights; Voluntary Principles on Security and Human Rights; UN Global Compact; UN Declaration on the Rights of Indigenous Peoples; Kimberley Process; Global Reporting Initiative; ILO Core Conventions, UN Framework Convention on Climate Change, ILO Multinational Enterprise (MNE) Declaration, Extractive Industries Transparency Initiative (EITI) Principles; Santiago Principles, WHO Air Quality Guidelines.

- **OECD guidance:** OECD Guidelines for MNEs; Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

- **Financial institution guidance:** viz the Equator Principles (which includes the International Finance Corporation (IFC) Performance Standard on Land Acquisition and Involuntary Resettlement); IFC's Performance Standards on Social and Environmental Sustainability; IFC Social and Environmental Performance Guidelines.

- **CSR standards developed by business,** including GRI Sustainability Reporting Guidelines; Responsible Care Guidelines; the Global Mining Initiative; Mineral and Sustainable Development project of the International Council on Mining and Metal and the ICMM Sustainable Development Principles; and

- **Civil society guidance,** including the Natural Resource Charter and Initiative for Responsible Mining Assurance.

Across them on EIs and health, these international standards provide for

a. Consultation, impact assessment and protection of health in negotiating prospecting rights, including social rights to culture, identity, employment, education, and fair benefit sharing.

b. Health and social protection in resettlement/relocation of affected communities.

c. Occupational health and safety (OHS) for employed workers and sub-contractors.

d. Health benefits for workers and their families.

e. Environmental, health and social protection for surrounding communities, and access to remedy where harm has occurred.

f. EI fiscal contributions for health promotion and health care.

g. Fair local benefit from EI activities.

h. Transparent, democratic and accountable governance of these issues, by government, civil society, affected communities and industry, on an equal footing.

(*See further detail in Annex 1*)

There are also standards proposed by the International Monetary Fund called the *Santiago Principles* that provide for good governance and transparency in the sovereign wealth funds that are often funded from mining activities. The key areas of these principles are shown in *Table 2* below.

Table 2: The Santiago principles for sovereign wealth funds

Operations	Investments	Management	Transparency
The fund has clear objectives	No use of revenues as collateral for loans	The role of government agencies is defined	There is a formal oversight mechanism
Rules set how much money can be withdrawn per year	Clear investment rules aligned with fund objectives	There are penalties for misconduct	Fund reports are regularly compiled for public disclosure
There are rules for what revenues can be deposited in line with objectives	The risks of investments are limited	There are ethical standards for managers and staff	Internal audit reports are publically disclosed
	The investment portfolios are published and in public domain	The responsibilities of investment managers are defined	

The Extractive Industries Transparency Initiative (EITI) also sets principles that require disclosure of payments from and to EI enterprises and for government accountability in mining. The EITI provides for joint civil society, government and industry reports on how far the principles are being achieved. For example, by 2012, Mozambique, DRC and Zambia had implemented two rounds of EITI reporting and Madagascar had published one report. Zimbabwe had set up a Mining Revenue Transparency Initiative Oversight Group that included government, mining companies and civil society.

Beyond these international standards, some source countries of MNCs in mining have laws that apply even in other countries. This enables them to prosecute a company that breaks these laws, even if the infringement occurs in another country. For example the United Kingdom, Canada and China all have laws that prohibit bribery in another country: these are the UK Bribery Act 2010, the Canada Corruption of Foreign Public Officials Act 2013, and the Peoples Republic of China Criminal Code 2011.

For reflection or discussion:

- Do you know if your country has adopted any of these international standards in law? Has it set up any mechanisms to do this?
- Are your officials, parliaments, trade unions and civil society organisations aware of these standards?
- Has your country set up a joint mechanism and / or submitted a report for the EITI?
- What actions do you think need to be taken to advance and apply these international standards in your country?
- What role should be played by trade unions, civil society organisations and parliaments in the countries the MNCs come from?

Regulating rights and duties for mining and health in our region

The rights and duties in relation to health and mining can be found in our laws and regulations. Some countries in our region have already begun to use international standards to review their own laws. South Africa, through the *King Committee Report on Corporate Governance 2009*, aims to bring local companies in line with global best practices. Kenya in the *Nairobi Process: A Pact for Responsible Business* aims to apply the *UN Guiding Principles on Business and Human Rights*, in the emerging oil and gas sector.

Environmental damage from mines P Botes 2016

Indeed some of these international standards on health and EIs are included in national laws of our countries. No country in our region covers them completely, however.

Tables 3a and *3b* overleaf summarise how comprehensively ESA countries cover the health areas set in international standards on the practices of EIs, based on what is found in our country constitutions, health, occupational health, environmental, labour, mining and company laws.

You can find more detail on the specific national laws and clauses in a 2016 EQUINET discussion paper 108 at https://tinyurl.com/zm7afbk and its supplement at https://tinyurl.com/h5egdsa.

Table 3a: Health provisions in ESA country laws, post-2010

The shading indicates how completely the area is covered in law: the darker the green, the more comprehensive the cover, yellow = less well covered and red = not covered in laws sourced

COUNTRY	Consultation and protection of health in negotiation of prospecting rights/ licenses and EI agreements	Health and social protections in resettlement/ relocation of affected communities	OHS for employed workers/ contractors	Health benefits for workers and families	Environment, health and social protection for surrounding communities
Angola	dark green	light green	green	yellow	dark green
Botswana	yellow	yellow	green	yellow	yellow
DRC	light green	yellow	green	yellow	yellow
Kenya	green	yellow	dark green	yellow	green
Lesotho	yellow	yellow	light green	yellow	green
Madagascar	yellow	yellow	yellow	red	light green
Malawi	light green	yellow	green	yellow	green
Mozambique	green	dark green	green	yellow	light green
Namibia	light green	yellow	yellow	yellow	yellow
South Africa	green	red	green	yellow	yellow
Swaziland	light green	yellow	green	yellow	green
Tanzania	green	green	yellow	yellow	yellow
Uganda	light green	yellow	light green	yellow	light green
Zambia	green	yellow	yellow	yellow	green
Zimbabwe	light green	yellow	yellow	yellow	light green

Source: Loewenson et al (2016) EQUINET discussion paper 108

Table 3b: Health system provisions in ESA country laws, post-2010

The shading indicates how completely the area is covered in law: the darker the green, the more comprehensive the cover, yellow = less well covered and red = not covered in laws sourced

COUNTRY	Health benefits for surrounding communities	Fiscal contributions towards health and health services, specifically in relation to EIs	Forward and backward links with local sectors and services supporting health; use of wealth funds, community ownership for local well-being	Post-mine closure obligations	General governance issues
Angola	red	light green	light green	green	light green
Botswana	red	yellow	light green	yellow	yellow
DRC	red	light green	yellow	yellow	light green
Kenya	yellow	light green	green	green	light green
Lesotho	red	yellow	yellow	light green	yellow
Madagascar	red	yellow	yellow	yellow	yellow
Malawi	red	light green	green	yellow	yellow
Mozambique	red	light green	yellow	yellow	green
Namibia	red	light green	light green	yellow	yellow
South Africa	red	yellow	green	green	yellow
Swaziland	yellow	light green	light green	yellow	light green
Tanzania	red	light green	yellow	yellow	dark green
Uganda	yellow	light green	light green	yellow	light green
Zambia	light green	light green	green	yellow	green
Zimbabwe	red	green	green	green	light green

Source: Loewenson et al (2016) EQUINET discussion paper 108

Activity 2: How well do our laws protect health in mining?

Method: Line ups

Approximate time: 1 hour

Resources: A4 sheets of paper as signs, one with "TOTALLY AGREE", one with "TOTALLY DISAGREE" in big letters.

Tables 3a and *3b* on page 12; blue tak, flip chart paper and marker pen.

Procedure:

1. Put the two A4 signs on the wall at opposite ends of the room so there is space for people to line up at and between them

2. Ask people to come to a central space and to bring *Tables 3a* and *3b* with them.

3. Explain that you will read a statement and ask them to stand next to / near to/ in relation to the sign

4. Tell them that not everyone needs to be in the same place and that they shouldn't feel pressure to go where others go. They should go to a place that reflects what they think!

5. Explain to them they will need to look at *Tables 3a* and *3b* to decide where to stand as the information is there and they will need to explain their choice of where they stand. **If you are doing this in a particular country then they should look only for the laws of that country in the table.**

6. Read out the first statement
    "Our laws protect the right to consultation, impact assessment and protection of health in negotiating prospecting rights, including social rights to culture, identity, employment, education, and fair benefit sharing".

7. When you have read it (and you can read it twice or more) ask people to go in the line up to where they feel about the statement after checking the tables.

8. Discuss why people have taken the positions they took in the line-up. As a facilitator ask people in different positions to justify their choice. *What parts of the table were they referring to? Do they have other information to contribute on this?* Refer to the table of laws to see what it says and come up with a majority position on this issue for the group.

9. Note the majority position (eg whether the area is well protected in law or not well protected in law) for that area on a flip chart.

10. Now do the same steps 6, 7, 8 and 9 for the next statement
    "Our laws provide for health and social protection in resettlement/relocation of affected communities"

11. Continue in the same way as in steps 6 to 9 for all the statements below
    - *Our laws provide for Occupational health and safety (OHS) for employed workers and sub-contractors*
    - *Our laws provide for Health benefits for workers and their families;*
    - *Our laws provide for Environmental, health and social protection for surrounding communities, and access to remedy where harm has occurred;*
    - *Our laws provide for EI fiscal (tax) contributions for health promotion and health care and fair local benefit from their activities*
    - *Our laws provide for transparent, democratic and accountable governance of these issues, by government, civil society, affected communities and industry, on an equal footing.*

12. Finally summarise what you have found
    - Which areas of health in EIs are better protected in law?
    - Which areas of health in EIs are not well protected in law?
    - What does that mean for people's health?
    - Whose role is it to ensure that the law does protect these areas of health?

The analysis of our country laws as of 2017 across the region as a whole as presented in the *Tables 3a* and *3b* shows that:

a. All countries in our region have laws that protect environments in negotiation of prospecting rights or licenses for EIs. This is generally done through environmental impact assessments (EIAs). Only a few countries (such as Kenya and Zambia) explicitly include **health or social impact assessment,** and no laws require health sector approval of EIAs.

b. There are weak *specific* provisions for **health and social protection in the resettlement or relocation of displaced communities.** The laws that are there are mainly to observe the 'interests of local communities' and to 'pay fair compensation for disturbance of rights or damage done'. Some laws have duties to avoid displacement, provide homes, jobs and services and to negotiate resettlement as a formal agreement involving representatives of the community. Few laws specify health duties, such as for provision in resettlement areas of safe water and sanitation, health services and community health workers.

c. All countries provide in their laws **protection of occupational health and safety (OHS) for employed workers and contractors** in the mining sector and require periodic medical examinations.

d. Fewer countries include in their laws a duty to provide or cover with insurance wider **health benefits for workers and families,** such as healthcare or public health screening. This is often regarded as a matter for voluntary CSR.

e. **Environment protection for surrounding communities** is better provided for under environmental laws. **Public health laws often specify that no-one shall cause harm to health.** Environment laws often include 'polluter pays' duties. The most comprehensive provision for this in Kenya obliges mine license holders to pay for an environmental protection bond as financial security for any damage caused.

f. The provisions for **tax contributions towards health and health services** largely relate to general taxes and royalties. Angola, Kenya, Mozambique and DRC require that municipalities in mining areas benefit directly from a share of taxes, or vary tax/royalty levels based on the contribution to national development. Some countries include specific levies for health that cover mines, such as Zimbabwe's *National AIDS Trust Fund Act.*

g. Some countries require EIs to **stimulate forward and backward links with local sectors and to support services** to obtain incentives or mining rights. South Africa and Zimbabwe have provisions for historically disadvantaged people to benefit from mining.

h. Most ESA country laws include **post-mine closure obligations,** but these mainly relate to environmental and safety issues. None have provisions for handover of social services, or for duties post-closure in relation to occupational lung and other chronic conditions.

Water yellowed by cassiterite collected for sluicing, DRC, M Craemer 2010

In relation to **governance** of these issues, most countries in our region have constitutional rights to information, association, assembly and participation. Company laws set registration and reporting duties; OHS and labour laws provide for consultation mechanisms and newer environmental laws require public information and consultation.

Some laws (in DRC, Mozambique, Kenya, Tanzania) include governance arrangements specifically for EIs, such as mechanisms for informed participation of affected local communities. They prohibit public officers from acquiring mining interests to protect against conflicts of interest. Tanzania has a specific *Extractive Industries (Transparency and Accountability) Act* that provides for transparency, an independent oversight committee involving civil society, reporting and disclosure obligations of EIs and public reporting and citizen awareness on agreements.

You can read more about what your country law says in the EQUINET discussion paper 108 supplement at https://tinyurl.com/h5egdsa. (Also listed in the References).

For reflection or discussion:

- How do the laws protecting health in EIs in your country compare with the region as a whole?

- Do people know these laws? How can awareness be increased? What role can you play in this?

- What gaps did you find that need to be addressed?

- How can these gaps be addressed? What role can you play?

This section has discussed the rights and duties in relation to health and mining set out in our laws and regulations. It indicates that some areas, such as OHS and labour laws and environmental protections, are better covered than others, such as health and social protection of surrounding or displaced communities, or the duties after mine closure to the health of ex mineworkers. Let's discuss the gaps further….

WHAT GAPS AND SHORTFALLS ARE THERE IN OUR LAWS?

The previous section shows the health issues that have better or worse protection in our current law. The Appendix of laws for EQUINET Discussion Paper 108 in the reference list details the laws and clauses in your own country and your discussions in the previous activity will have added to this.

This regional picture is summarised in *Table 4* below. The green shading indicates what is well provided for in law. Red indicates what is not provided for. Yellow indicates what is partially provided for and orange more poorly provided for.

Large plumes of contaminated dust clouds from uranium mining, Nuclear Costs SA, 2016.

Table 4: How well do the laws in ESA countries protect health in EIs?

Area of law	Level of protection
Consultation and protection of health in granting EI prospecting rights / licenses	Generally provided for environmental impacts assessment but not for health or social assessment
Health in resettlement of displaced communities	Poorly provided for in many ESA countries
OHS for employed workers / contractors	OHS provisions for workers relatively well provided for
Health benefits for workers and families	Limited provision of a duty for health benefits or health care coverage for workers and their families
Environment, health and social protection for surrounding communities	Recent environment laws provide environmental protections; social protections more limited
Health benefits for surrounding communities	Most countries have no duty for mines to ensure health services for communities living in their environs
Fiscal contributions from EIs for health and health services	Very limited duties to make fiscal contributions for health; tax duties set but with options for exemption
Forward and backward links with local sectors; funds, local community schemes	Most countries have general provisions encouraging mines to support local development
Post-mine closure obligations	Few countries provide for health duties post closure
General governance issues	Participation and information rights in recent environment laws and in a few countries through in transparency laws

Source: Loewenson et al (2016)

Most countries have laws covering health and safety protection for employed workers and contractors in OHS and labour law and environmental health protections for surrounding communities covered in environment law.

It is however an important gap that while many countries have environmental impact assessments, few have laws that require *health or social impact assessments* before mines are licensed. Few explicitly require health sector approval of environmental impact assessments.

Fewer ESA country laws have specific provisions protecting the health of communities that have been resettled or relocated due to mining. While employees may have health benefits, there is less provision in law for what duties the mines have in relation to the health of the surrounding community.

Few laws provide for mines duties for longer term health consequences after mine closure.

One of the main ways that mines contribute to health and public health services is through the taxes they pay, that are then spent on community health or health services. Some countries have specific health taxes, like the AIDS levy in Zimbabwe. Only one country provides a specific duty on EIs to contribute to health services in their area and there is no duty for comprehensive insurance coverage of workers or their families.

Few laws provide for pooling of funds for financial security against risk or harm, as is the case in Kenya's environment fund or Zimbabwe's AIDS Levy Fund.

The fact that many laws in our region provide for exemptions for EIs from these tax contributions for various development contributions, at discretion of the state, means that they may not even make these tax contributions. Further, while some laws do provide for a share of revenues to be used locally, it is not always clear who decides on use of these funds.

Only Tanzania has a law that is explicit on transparency and public accountability on EI resources. It can be a problem that the same government executives who oversee regulation of EIs also encourage their economic contribution. This makes **public information access** for and **prior informed consent** from affected communities very important. This too is not always clearly provided for or implemented and needs to be negotiated. This is further discussed in the next section.

Small scale mines may not be covered even by existing laws, or may face challenges in implementing these laws. This too is further discussed in the next section.

South Africa underground mines fire taps Wikimedia creative commons,

For reflection or discussion:

- Review each of the gaps in the laws on pages 16 and 17. Which apply in your country?
- What do these gaps mean for health of workers and communities?
- Which do you think are a priority to address?

WHAT ISSUES DO WE FACE IN IMPLEMENTING OUR LAWS?

Even where laws exist, people need to know them and the state needs capacities and resources to enforce them. Do these conditions exist in our countries?

For reflection or discussion:

- Who knows the laws protecting health in mining in your country? Who doesn't know these laws? How does that affect their implementation?
- What other factors affect enforcement and implementation of these laws in your country?

The international and regional standards we have noted earlier will be voluntary if they are not included in national laws. Few national constitutions specifically provide otherwise. However, even where the national law has provisions that protect health, they may be overlooked or poorly enforced.

Activity 3: What factors are affecting implementation of our laws?

Method: Spider diagram

Approximate time: 1 hour

Resources: Flip chart paper, blue tak and marker pens.

Procedure:

1. Divide people into 6 groups. Give each group an area of the law.
   a. Consultation and protection of health in granting EI prospecting rights / licenses
   b. Health in resettlement of displaced communities
   c. OHS for employed workers / contractors
   d. Environment, health and social protection and benefits for surrounding communities
   e. Tax and local contributions from EIs for health and health services
   f. Post-mine closure obligations

2. Give each group a piece of flip chart paper and ask them to draw a circle in the middle (as in the picture adjacent) and to write the area they have been given in the middle of the circle in capital letters (where the – is in the picture). As them to draw legs from their circle as for a spider.

3. In the groups now ask each group to write in capital letters at the end of each leg a factor that they think is affecting implementation of their area of the law. If it is positive, enabling implementation then they should put it above the spider body (the circle). If it is negative, blocking implementation, than they should put it on the legs below the spider body, the circle.

4. They can add more legs if needed!

5. After 30 minutes ask each group to put their flip charts on the wall and walk around and discuss them. For each diagram let the group present and then discuss the enabling and disabling factors.

6. After you have seen all 6 groups 'spiders' discuss as a plenary:

Which enabling factors were common across the groups? Which of these can be addressed locally? How?

Which disabling factors were common across the groups? Which of these can be addressed locally? How?
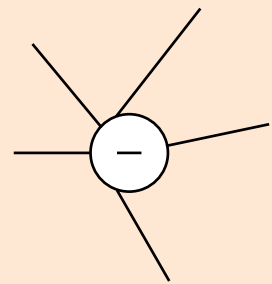
Multinational mining companies may argue that implementing these legal duties erodes their viability and discourages investment. Our countries are often keen to provide investor friendly conditions and may be influenced by these arguments. The companies are also powerful global negotiators. They have for example challenged tax laws in Zambia, (in 2008 by First Quantum) and Tanzania (by Barrick Gold). These arguments need to be brought into public domain and scrutinised – are they valid? What are the real costs and for whom? What are the benefits and for whom? Why do these companies also successfully operate in countries with better law enforcement?

Officials may feel overpowered by the political interests at stake, or may even themselves have direct interests. This has led to some distrust by civil society that political executives prioritise the interests of their citizens over the company interests. As one response, Kenya's law specifically prohibits public servants being involved in decisions on mining having direct or indirect interests in mining.

At the same time, trade unions, civil society and communities may have to overcome a number of barriers to represent their interests:

Lonmin gold miners negotiations Govt of South Africa flickr stream

- Claims of health consequences can be difficult to prove unless countries have already made the link between risks and health consequences and the measures that should be taken, such as in health impact assessments done before mines are licensed.
- Local officials may be sympathetic but may themselves have inadequate capacity or resources to support claims.
- The law may be spread over multiple documents that are difficult to find and complicated to read.
- There may be weak or complicated mechanisms to redress grievances and taking up legal cases can be costly.
- Communities frustrated with weak grievance handling and protesting against unfair treatment may find that their protests are criminalised and suppressed.

These barriers may be significant. However, communities, civil society and social institutions have played an important role in producing better health and social protections in our region.

In Mozambique, the legal instrument to guide resettlement was only introduced in August 2012 after community unrest due to poor resettlement conditions.

In Malawi, the national mining laws did not address the risks posed by new uranium mines, and the churches and local NGOs took court action to block uranium mining until appropriate laws were in place.

For reflection or discussion:

- Can you think of an action that communities, civil society or trade unions have taken in your country to protect health of workers or communities in mining?
- Describe the action taken.
  - What was the issue that was taken up? Who was involved?
  - What factors enabled those who acted to take the action?
  - What factors were barriers to the action? How were they overcome?
  - What happened? Was the action successful? What influenced the outcome?

Let's look further at the actions that can be taken to apply rights and the law and the actions protect health in the mines.

ACTIONS TO PROTECT HEALTH IN MINING

Activity 4: What can we do to better protect health in mining?

Method: Margolis Wheel

Approximate time: 1 hour

Resources: Participants divided equally into 2 groups "PROBLEM GROUP" and "RESPONSE GROUP";

Drum/mbira/plate and spoon – something to make a noise; chairs (optional)

Procedure:

1. The "problem group" stand (or sit on chairs) in a circle, facing outward, not too close together. The "response group" make another circle around them, facing them, so that each person in the inner circle has a "partner" in the outer circle. Space out the circle so that each pair can have a conversation comfortably.

2. Explain what they are going to do. The 'problem group' must describe one of the problems we have identified in the previous sessions on mining and health: exposures; legal gaps or problems with implementing laws. The people in the outer circle – the response group– will suggest possible solutions or actions to be taken.

3. Tell them when they start that they will have three minutes to discuss the problem(s) and potential solution(s). Then – when you give the signal – the 'response group' will move one place to the left and talk to the next 'problem group' person about the same problem. (You bang a drum or plate etc., to show when it's time to move.)

4. After two rounds stop and ask each problem group person to present the problems they raised and the two different solutions / responses they were given. A second facilitator can record these on a flip chart. Discuss the solutions. Do they seem feasible? Do others want to raise further ideas?

5. Do a new round but ask people to switch: Problems become responses and vice versa. Ask people to raise problems that haven't yet been raised. If needed, suggest some of the issues raised in the prior sessions. Repeat the steps in 2,3 and 4 .

6. Finally ask everyone to sit down – in one big circle this time. Summarize the problems and the responses given. Ask if anyone has any further comments.

7. Note that at the end of this section we will revisit the 'Margolis wheel'.

In the Margolis wheel delegates may have raised a wide variety of problems and responses on health in mining. This section outlines some of the ways health can be better protected in mining activities.

Knowing and defending your rights

As we have discussed in previous sections, knowing your rights is a key step to protecting health, including the right to health.

Our national Constitutions set the rights of every person in that country. Different constitutions in the region (not all) include the right to heath care, to a healthy environment that does not harm health or well-being and to access sufficient food and water. Mining companies need to address these rights, such as in the way they use land and their impacts on air and water. The state needs to ensure this.

Unions and civil society should thus ask what a mining company will do to protect those working and living on the mines and to protect cattle, crops, food gardens and water sources against known hazards.

If community rights are violated, such as by harm to air and water supplies, a claim should be lodged with the relevant state authority for remedy of the problem. The mining company must then rectify the problem and compensate the community who suffered the damage.

Constitutions also give people the right to just administrative action. This means that decisions made by the government must be fair. Everyone with an interest in a decision should have an opportunity to raise their concerns and have these considered in decisions.

Unions and civil society have struggled for and achieved **'prior informed consent'** in many countries. This means that government and mining companies must consult communities and individuals affected by any decision. For this, those affected must be given whatever information is held by government and companies that they need to protect their health and rights. Local communities can demand to be consulted in a way that suits them. They can agree on the timings for such consultations, and whether they are in big public meetings or smaller group meetings, or even door to door.

Implementing a health impact assessment

Health impact assessments (HIAs) need to be implemented to identify, report on and plan for prevention or management of the potential direct and indirect impacts to human health of any mining activity and the actions to take to manage those effects.

These may be done for individual large mines or EI projects. They may also be done at district level where there are many small mines. Indeed where large and small mines are found in a district their effects may combine. A district health impact assessment implemented through the public health authorities with involvement of all including communities can identify, report on and plan for prevention or management of these combined impacts on health.

As we have seen, our current laws provide for environment impact assessments (EIAs), but few explicitly provide for HIAs, whether separately, or as part of Environment, Health and Social Impact assessments (EHSIAs). A separate HIA should be done at the same time, applying the one stop window concept. Simply integrating health into existing environment impact assessments (EIAs) may not be the best option, as EIAs are often done by companies. It should be done by public authorities with companies, workers and communities. A HIA can also be helpful in building bridges between workers in the mines and communities living around the mines, for both to identify their shared risks and joint actions.

A health impact assessment (HIA) is done before the license is granted. It is used to inform costed plans for management of the health impacts discussed in earlier sections, to obtain approval from health authorities of those plans, and to obtain prior informed consent from the communities affected.

A Health Impact Assessment involves a five step process:

1. **Screening:** Background literature and data on the project/ district to identify the situation and elements that could impact on health positively and negatively and to identify the key stakeholders to be involved.
2. **Scoping:** Identifying the areas for information gathering to investigate the potential health impacts, how the assessment would be implemented in terms of what should be collected, from whom and how.
3. **Appraisal / Impact identification:** Collection and analysis of information on the current situation and current and potential health impacts, including local data collection, key informant interviews, focus groups and other evidence.
4. **Reporting and recommendations:** Compiling the findings into a draft report and discussing the findings with key local stakeholders to find out what they recommend to be done in the short, medium and longer term and inclusion of this information in the report. *This should lead to the costed plans and intervention strategies proposed.*
5. **Evaluation and monitoring:** Follow up to assess the implementation of agreed recommendations.

Annex 3 provides a bit more detail on each of these steps. Your environment and health authorities should be able to provide information on how EIAs and HIAs are being done in your country and what improvements are being proposed to better implement HIAs. For unions and civil society it is useful to bring alive the conditions and voices of workers and communities in these assessments, such as through stories, photos and videos. It is also important to ensure that the information presented in a HIA is clear to and understood by affected communities and workers.

Where the EIA or HIA has been done by the mine, the companies should provide this information to the local community. This means that workers and communities should ask to see these reports. If they don't see the reports then it means that they were not properly consulted.

As noted earlier, where there are a number of mines in a district, it could be important to implement district wide ESHIAs, as the multiple mines have synergistic effects. A district wide HIA can provide information to plan for these wider effects within the district development plans.

For reflection or discussion:

Read the case study in *Box 4* below of a survey on their health conditions done by Bua mining communities South Africa with Benchmarks.

- Why did they do their own survey?
- Can these community surveys raise information that mine or state assessments may not raise?

Box 4: Health survey by Bua mining communities South Africa with Benchmarks

Joseph Magobe, Chairperson, Bua Mining Communities (BuaMC) presented this evidence at a session of the Alternative Mining Indaba in 2018 from a survey Bua mining communities implemented with Benchmarks on their health conditions.

Bojanala Health District South Africa performs poorly on a range of health and health service indicators. BuaMC receives consistent complaints from the communities in the district on health and service problems. It thus decided in 2014 to explore the effects of platinum mining on the people in the municipality, and the reasons for the poor health outcomes.

They found that the scaling down of operations by many mining companies has led to retrenchments. Ex mineworkers are no longer covered by the mine health care insurance but remain living in poor conditions in mine-hosting communities with migrants. This makes them and their families vulnerable and dependent also on public health care. A range of health problems were found to be related to the mines: asthma from air pollution; physical disability from injury; and chronic conditions.

Overcrowding of facilities led to long waiting times before getting treatment; but also raised tensions between different groups in the community, scapegoating migrants for example for overcrowding. The health workers suffered poor working conditions and high workloads, undermining quality of care. There was a lack of mobile services; ambulances and the opening hours were limited. The few home-based carers reported being underpaid and overworked. Long distances between facilities raised costs for already poor community members.
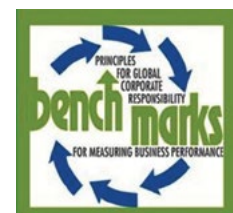
The study team made a number of recommendations to the government and the corporations:

- To take the full population in the area into account in planning, staffing, funding and delivering services, in in ensuring adequate medicines and emergency services.
- To work with clinic committees that involve the community in planning services, to strengthen dialogue between the community, workers and health workers on health care.
- To fund and improve health infrastructure and services, including community health activities, home-based care and health promotion.
- To train health workers from within the community living in and around the mines.

Water yellowed by cassiterite collected for sluicing, DRC, M Craemer 2010

They recommended that each village develop an action group to monitor and engage authorities and to work on community health issues; to engage and meet regularly with health workers to develop joint actions, and to prevent conflict among different groups of services users.

Presentation reported at the EQUINET (TARSC), SATUCC, Benchmarks Foundation, SADC CNGO (2018) Advancing public health rights, claims and standards in mining, Report of a Side Session at the Alternative Mining Indaba, 6 February 2018, Cape Town South Africa at https://tinyurl.com/y8wbjjbn

Organising to protect the health of workers and communities

There are separate texts on the occupational health and safety of workers that provide more detail on this area. They identify the priority for eliminating the risk and controlling it at the source.

Only if control at the source is not possible, then the next steps are to minimize the risk, and to use personal protective equipment. Mines need to apply these principles to control noise, vibration, health and ergonomic hazards, dust, chemicals and waste products, and to ensure that trenches and mine faces are securely supported. You can find more information on OHS on mines from your trade union and from the OHS authorities.

The International Labour Organisation (ILO) Convention 176 on Safety and Health in Mines, 1995 covers all mines. It provides a minimum safety requirement against which mine operations should be measured and procedures for reporting and investigating accidents and dangerous occurrences in mines. Governments need to designate a competent authority to monitor and regulate the various aspects of safety and health in mines.

As discussed earlier, communities should be informed of the risks identified in HIAs and of the plans to address them. In some laws communities are represented by the state, but this is now regarded as inadequate and more direct representation is called for.

Employed workers already have a more direct formal means of engagement with EIs through workplace committees and unions. Community members may engage through health centre committees and other associations. What is important is that workers and communities build dialogue across these associations and mechanisms around the health risks and protections to ensure that all are covered.

Civil society organisations (CSOs) have also become involved in local and national advocacy and action on health in mining. Civil society campaigns, like 'Publish what you pay' have sought greater transparency

CSOs at the 2017 Alternative Mining Indaba

in EI operations. Trade unions have promoted labour rights in large and small mines. Environmental lobbies have engaged on land reclamation and pollution. Civil society has campaigned on the rights of mining and resettled communities, including to free prior informed consent and participation in decisions affecting them. Communities supported by civil society have taken companies to court wh en they do not implement their legal duties.

For reflection or discussion:

- Read the examples in *Box 5* of civil society organisation action on health in mining
  - What were the issues that were taken up? Who was involved?
  - What factors supported the actions? What factors weakened it?
  - How can civil society action on health be strengthened?

Box 5: Civil society action to protect health in mining

In Tanzania, CSOs have been involved in a range of advocacy, lobbying, and public interest court cases, pushing the government to undertake policy and legal reforms on mining. In 2008 a presidential committee (Committee to Advise the Government on Oversight of the Mining Sector) recommended a review of the country's legal framework on mining and the creation of an environment conducive to social and economic development. Tanzania's Mining Act 2010 provides that discussions on new mining contracts must involve representation of CSOs and local small-scale miners. This collaborative and active planning approach is argued to more directly address the needs of local communities.

In Uganda, CSOs have engaged in the ongoing development of laws and institutional guidelines and standards on oil and gas. CSOs have called for Uganda's Environmental Impact Assessment (EIA) framework to be more actionable, participatory and responsive to environmental and social needs of communities, with measures for community monitoring. They also called for a Strategic Environmental Assessment, which considers cumulative impacts of EI projects across a wider area. The CSOs built a unified platform to strengthen their impact on current policy and legal debates. The Ugandan National Environment Management Authority (NEMA) heeded these calls and funding was secured to carry this out in the Albertine rift area of Uganda (where oil and gas were found). CSOs further called for government to provide access to information on contracts and agreements with mining companies.

In Kenya a CSO coalition brought several petitions to the Kenya National Commission on Human Rights in the early 2000s on behalf of communities in Malindi District. The petitions were in response to forcible evictions, health and safety violations, workers' rights violations, environmental degradation, and harassment by companies undertaking salt mining in the area. They reported that the local police, provincial administration, government ministries and local government were not protecting local communities. In response to this, the commission ordered in 2005 an investigation into the violations reported.

In Malawi, local CSOs took the Malawi government to court for constitutional and environmental law violations in its negotiation with Paladin Africa Ltd over a uranium mine in Kayalekere. It alleged that an environmental impact study had not been conducted, that the agreement had been kept a secret, and that the project should not have progressed in the absence of national laws to regulate uranium mining.

At regional level the Mining Indaba is a gathering of mining stakeholders and decision-makers that attracts about 7,500 participants with interests in mining in Africa. Perceiving inadequate voice of workers, communities and civil society in this forum, CSOs organised the People's Mining Indaba as a counter-event alongside the Mining Indaba, to formulate positions from the perspective of the affected public. It involved participants from Angola, the DRC, Kenya, Namibia, South Africa, Tanzania, Zambia and Zimbabwe to give voice to communities, share evidence and discuss priorities for action.

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Civil society and union action depends on informed workers and communities. Key focal points should be identified for workers and communities living in and on mines for dialogue across the groups and for active and participatory movement building. A partnership between workers and communities locally is an important basis for building wider alliances with others.

Regionally the Southern African Trade Union Co-ordinating Council can also draw attention to and negotiate health standards in the tripartite meetings of the SADC employment and Labour Sector.

March at the 2018 Alternative Mining Indaba, G Dilger 2018

Protecting health after mines close

This partnership between workers and communities extends to working with organisations of ex-mineworkers, such as the Botswana Labour Migrants Association (BoLAMA). BoLAMA is an organisation comprised of former migrant mineworkers and their dependants. Its core mandate is to provide assistance to former and current migrant mineworkers and their dependants on issues related to post employment rights, migration health, socio-economic interventions, community education and strengthening.

Recall our earlier discussion that mine sites should not be left in a condition that could harm the public or damage the environment. This involves (but is not limited to):

- Removing harmful or toxic substances, machinery, mine structure and other left-over material likely to be harmful to persons or nature.
- Refilling, levelling and putting fencing around deep excavations or holes that lead to falls.
- Re-contouring and stabilizing potentially unstable faces to reduce erosion.

For those leaving mines or post mine closure there needs to be better record keeping of who lives and works in these areas and their health literacy on effects, rights and duties

Port Harcourt Refining Ltd in Alesa-Eleme, Liberia. Used under creative commons license, Wish for Africa 2009

In the region organisations such as the Southern Africa Miners association bring together such country level ex-mineworkers associations to advocate on these issues at regional level. For example, the Regional Widows' Forum in the Mining Industry is advocating for mechanisms to address the challenges experienced by widows of ex mineworkers, in accessing their spouses unclaimed cross border social security benefits. This includes engaging social security funds and SADC National Committees on these social security and compensation benefits.

For reflection or discussion:

- Who represents ex-mineworkers and mine families in your country?
- What issues are they advocating for or engaging on?
- What else can be done to link unions and community associations to address these issues?

NEGOTIATING REGIONAL STANDARDS ON HEALTH IN MINING

In the beginning of this module we highlighted the SADC intention to harmonise the legal protection of health in mining across the region. The gaps in the law in the countries of the region point to the need to take this intention forward.

Despite the gaps in the individual country laws, there are provisions in the laws of the individual countries in the region that may guide this. Promising clauses from one country in the region may be good to include or adapt in the laws of another country in the region. These 'good practice' clauses can inform the content of harmonised regional standards. *Annex 2* on page 34 of this module provides a detailed outline of what these regional standards may contain and the clauses they are drawn from. You can find this and more explanation on it in EQUINET policy brief 42 at http://tinyurl.com/gr6yyza.

The proposed standards cover

1. Protection of health-related issues in negotiation of prospecting rights or licenses and EI agreements
2. Health and social protection relating to resettlement or relocation of affected communities due to mining activities
3. OHS protections for employed workers and contractors in the mining sector
4. Health benefits for workers, families and surrounding communities
5. Environment, health and social protection for surrounding communities
6. Fiscal contributions towards health and health services
7. Stimulation of forward and backward links with local sectors and services supporting health
8. Post mine closure obligations
9. Governance of these issues

This proposal for harmonised regional standards was also made by civil society in the SADC region, in both the Southern Africa Civil Society Forum, together with SATUCC and in the Alternative Mining Indaba 2018. *Box 6* below provides the recommendations of these forums, with the specific areas that were raised as priorities.

Box 6: Civil society recommends harmonised regional standards on health in mining

At the **13th Southern Africa Civil society Forum in August 2017** the forum adopted a recommendation that civil society demand harmonised standards for health in EIs, and that these include EI and state duties:

1. To implement environment, health and social impact assessments, with costed plans to manage harms, for resettlement and post mine- closure duties for health, obtaining approvals from health and local authorities and from communities *before* licenses are granted and making the assessments available in a public domain register at regional level.

2. To ensure health and avoid harm to health of all workers and of communities living in and around EIs; to remedy or compensate for damage; to prevent epidemics and emergencies, including from climate related health effects, and to report to health authorities the spread of infectious/notifiable diseases.

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3. To pay without exemption any taxes used for health, and contribute to public funds held to remedy harms or to meet post closure public health duties.

4. To ensure free prior informed consent and participation of communities on EI measures and plans to meet these duties above; with fair grievance management processes and prohibition of involved public officers from holding mining rights, to protect against conflict of interest.

9th Alternative Mining Indaba
5-7 February 2018, Cape Town, South Africa
Section on public health….full Communiqué at
http://altminingindaba.co.za/

5. **Public Health**

5.1. We reiterate that public Health rights and the right to life supersede all other claims. They have been won through social struggle and are a source of social power;

5.2. We note with concern the rights violations by mining companies relating to health and access to resources and services for health in and around mines. We recognize that health goes beyond voluntary corporate social responsibility and is a matter of legal rights and duties activated from the community;

5.3. We therefore commit to ensure they are protected for all living in and around mines in all our countries, including through negotiating harmonised regional and continental standards, national laws and enforcing them at the local level;

5.4. We also demand that community based health and social impact assessments are implemented that involve community evidence, including on assessing and planning for impacts after mines close, and for free prior informed consent on these issues to be given before mines are given licenses;

5.5. Social services including health, education, water services and infrastructures must be provided before people are resettled;

5.6. Measures to be put in place to protect health and prevent disease and injury, during mine operations and after closure;

5.7. Workers and communities to build dialogue between them and to be informed and fully participate in decisions on all of these measures.

At the same time, national and regional policy dialogue on harmonised regional standards offers an opportunity to strengthen public awareness and stakeholder consensus on the rights and duties for the protection of health in the extractive sector, to widen knowledge of the law and to address barriers to their implementation.

The Southern Africa Civil society Forum recognized that taking these proposals forward calls for a bottom up local to regional campaign for civil society to advocate for these harmonised standards for health in the mining (extractive) sector in SADC. Towards this various forms of action were identified:

*   *Locally,* we should spread popular and rights-based education in affected communities and community based organisations, and work with communities to document and expose violations of duties and to share positive practices.

- *Nationally*, we should build alliances of health, labour and environment awareness and activism on health in EIs within and across countries, including in civil society forums; national alternative mining indabas and health days. These alliances can engage ministries to support regional standards and engage parliaments, states and communities to enforce existing laws.

- *Regionally*, in alliance with health and environment civil society and traditional leaders, we should advocate for SADC harmonised standards for health in EIs. We can do this in many forums, such as in the regional Alternative mining indaba; the SADC Ministers of Health meetings, the SADC Employment and Labour sector Ministers and social partners meetings through SATUCC, in the SADC (PF) and other parliamentary forums; and other SADC and African Union (AU) platforms.

Civil society has argued that it is important to engage people within the state, like public health and local government personnel, as they can support health actions. There is also a need for a public protector or ombudsman to address community grievances where the state is not adequately doing this.

Activity 5: Revisiting our discussion: What can we do to protect health in mining?

Method: Margolis Wheel

Approximate time: 1 hour

Resources: Participants divided equally into 2 groups "PROBLEM GROUP" and "RESPONSE GROUP"; drum/mbira/plate and spoon to make a noise; chairs (optional)

Procedure:

1. Set up the "problem group" and "response group" as at the beginning of the session. This time give each cards to write down the proposals made.

2. Explain what they are going to do. We are going to repeat the discussion of the problems raised by the 'problem group' but this time the response group will add new information on possible solutions or actions using information and discussions held in this section.

3. Give three to five minutes for the first round. Ask the partners to record their proposed actions on the first card.

4. Ask people to switch– problems become responses and vice versa. Ask people to raise the second round of problems that they discussed earlier. Repeat the steps in 2 and 3.

5. Finally ask everyone to sit down – in one big circle this time. Ask each person to present the problem and responses for their problem. If more than one pair has the same issue take all the proposed actions for that issue and then discuss the full set of responses – how feasible they are and how important they are. A second facilitator should list these actions under each problem on a flip chart.

6. Do this for all the different problems.

7. When you have the full list ask people to look at the list and in buzz groups of three to identify two actions that they feel could be implemented immediately to take up and engage on health in mining.

8. Take the feedback from each of the buzz groups, putting a ticket against the actions identified, one tick each time it is raised.

9. When all have contributed discuss the three actions that have the highest number of ticks.

   - What actions would need to be taken, by whom and when to implement each action?
   - What resources are needed? Where will this come from?
   - What signs or outcomes will indicate that we are making progress?

10. Note the agreed steps and roles and indicate how the follow up will be co-ordinated, including to meet and review progress.

WHERE CAN I FIND FURTHER INFORMATION?

There are many resources on EIs and health that you can read to get more information on the issues raised in this module. As a start some of the key documents used to provide information for this module are listed below, and you can find them all online at the websites indicated.

1. Alaska Community Action on Toxics (ACAT) (2018) Various health briefings on mining at www.akaction.org
2. African Union (AU) (2009) 'Africa mining vision', AU: Addis Ababa.: www.africaminingvision.org/amv_resources/AMV/Africa_ Mining_Vision_English.pdf.
3. Centre for Environmental Rights, Lawyers for Human Rights (2013) Mining and your Community: Know your Environmental Rights, South Africa
4. EQUINET (TARSC), SATUCC, Benchmarks Foundation, SADC CNGO (2018) Advancing public health rights, claims and standards in mining, Report of a Side Session at the Alternative Mining Indaba, 6 February 2018, Cape Town South Africa
5. Loewenson R, Hinricher J, Papamichail A (2016) 'Corporate responsibility for health in the extractive sector in East and Southern Africa', EQUINET Discussion paper 108, TARSC, EQUINET: Harare. http://tinyurl.com/zm7afbk And the supplement at http://www.equinetafrica.org/sites/default/files/uploads/documents/EIs%20and%20health%20report%20 APPENDICES%20Nov2016.pdf
6. Loewenson R, Hinricher J, Papamichail A (2017) Harmonising regional standards for extractive industry responsibilities for health in east and southern Africa, Policy brief 42, EQUINET, Harare http://tinyurl.com/gr6yyza
7. Nkosi V (2018) How mine dumps in South Africa affect the health of communities living nearby, The Conversation, 2/5/2018 online at https://theconversation.com/how-mine-dumps-in-south-africa-affect-the-health-of-communities-living-nearby-77113
8. Southern African Civil society Forum (2017) Communique of the 13th Southern Africa Civil Society Forum, Johannesburg, South Africa, 16 August 2017
9. Southern African Development Community (SADC) (1997) 'Protocol on Mining in the Southern African Development Community', SADC: Gaborone.
10. United Nations Committee on Economic, Social and Cultural Rights (2000) 'The right to the highest attainable standard of health,' General Comment No. 14, UN New York
11. United Nations Economic Commission for Africa (UN ECA) (2004) 'Harmonization of mining policies, standards, legislative and regulatory frameworks in Southern Africa', UN ECA: Addis Ababa; SADC: Gaborone.
12. Walle M, Jennings N (2001) Safety & health in small-scale surface mines: A handbook, International Labour Office Geneva

Before we end we can also find out what people want to know more about, to gather information on this to share at a future meeting.

Activity 6: What else do we want to know more about?

Method: Circle announcements

Approximate time: 30 minutes

Resources: A5 pieces of paper, flipchart paper and markers

Procedure:

1. Ask participants to sit in a circle. Put a pile of small (A5) pieces of paper on the floor and a pile of marker pens

2. Encourage everyone in the group to think of between 1 or 2 ideas of what they still want to discuss or know more about. When they are ready, they write each idea on a separate piece of A5 paper, fold the sheet and put the paper back into the centre of the circle.

3. When everyone is finished, pick up the papers, shuffle them and distribute the papers to the group – each person getting a different paper from what they wrote.

4. Participants now, one by one, read out what is written on their piece of paper. A volunteer documents what people are saying on a large piece of flipchart paper, noting when more than one person has the same request.

5. Finally, everyone looks at the list and determines which issues need further information or discussion, and where the information can be obtained from or when the discussion can take place.

ANNEX 1: International guidelines relevant to health in EIs

Document	Outline
GOVERNMENTAL	
UN Universal Declaration of Human Rights	Adopted by the United Nations in 1948 describes the rights and freedoms of every human being "without distinction of any kind"
UN International Covenant on Civil and Political Rights	Adopted by the UN General Assembly on 16 December 1966 and entered into force on 23 March 1976, the ICCPR contains provisions on various civil and political rights affecting the right to health
UN International Covenant on Economic, Social and Cultural Rights	Adopted by the UN General Assembly on 16 December 1966 and entered into force on 3 January 1976. In Article 12, it establishes "the right of everyone to the enjoyment of the highest attainable standard of physical and mental health", and steps to be taken by states parties to achieve it. Article 12 states THE need to ensure: availability; accessibility; acceptability; and quality and to respect, protect, and fulfil the rights. Includes related rights, such as the right to work under safe and healthy working conditions and within reasonable working hours and special protection for pregnant women/new mothers and children
UN Declaration on the Rights of Indigenous Peoples - UNDRIP	A comprehensive international instrument on individual and collective rights of indigenous peoples, e.g., their rights to culture, identity, employment, health and education
UN Guiding Principles on Business and Human Rights	A set of global standards for identifying, preventing and addressing the impacts on human rights from business activity, endorsed by the United Nations Human Rights Council in 2011, and the first document on corporate human rights responsibility to be endorsed by the United Nations. Encompasses three principles: i. the state duty to protect human rights; ii. the corporate responsibility to respect human rights; and iii. access to remedy/redress for victims of business-related human rights abuses. Guide EIs to adopt a policy commitment to human rights, carry out human rights due diligence and provide remedies for rights impacts
ILO Declaration on Fundamental Principles and Rights at Work	Adopted in 1998, commits states to respect and promote principles and rights to freedom of association and the effective recognition of the right to collective bargaining, the elimination of forced or compulsory labour, the abolition of child labour and the elimination of discrimination in employment and occupation
ILO Tripartite Declaration of Principles concerning multinational enterprises and social policy	Guidelines to MNEs, governments, and employers' and workers' organisations on employment, training, conditions of work and life, and industrial relations, as reinforced by ILO conventions
ILO Safety and Health in Mines Convention	Adopted in 1995 sets duty for states that have ratified it and their employers to apply through law prevention of fatalities, injuries or ill health affecting workers or members of the public, or damage to the environment from mining operations
United Nations Global Compact	An initiative by the United Nations to encourage businesses to adopt and report on sustainability and socially responsible policies, focusing on issues around human rights, labour, the environment, and anti-corruption

Document	Outline
International Finance Corporation (IFC) Performance Standards	2012 standards for IFC clients on managing environmental and social risks in i. labour, working conditions; ii. resource efficiency, pollution prevention; iii. community health, safety, security iv. land acquisition, involuntary resettlement
OECD Guidelines for Multinational Enterprises	Voluntary principles/standards for multinational enterprises (MNEs) in/from 34 OECD countries plus eight non-OECD countries (none in ESA) for responsible business conduct, including on employment, industrial relations, rights, environment, information disclosure, competition, tax, science and technology
African Charter on Human and People's Rights	An international human rights instrument that is intended to promote and protect human rights and basic freedoms in the African continent
African Mining Vision	Adopted by Heads of State in a 2009 African Union summit, Africa's response to tackling mineral wealth existing side by side with pervasive poverty.
International Council on Mining and Metals Good Practice Guidance on Health Impact Assessment 2010.	A tool to assist companies in protecting the health and well-being of their workforce and local communities, describing processes, methods for a rapid assessment and advocating integration of health with environmental and social impact assessments, with management tools to achieve this
ICMM Good Practice Guidance on Occupational Health Risk Assessment, 2009	An information resource for Occupational Health Risk Assessments with thirteen steps to identify workplace hazards and their risks to health and to determine and evaluate appropriate control measures to protect the health and well-being of workers
ICMM Good Practice Guide: Indigenous Peoples and Mining, 2015.	Aimed at providing guidance to companies on good practice where mining-related activities occur on or near traditional indigenous land and territory
ICMM, Planning for Integrated Mine Closure: Toolkit, 2011	Guidance for closing a mine in a sustainable manner, addressing social, environmental, health, human rights impact/opportunity assessments and engagement with stakeholders to ensure lasting community benefits locally
Extractive Industries Transparency Initiative (EITI)	A global EITI Standard for revenue transparency and accountability in EI sector with a robust, flexible method to monitor and reconcile company payments and government EI revenues in a locally adapted process for country compliance
Danish Institute for Human Rights (DIHR) Guide for Integrating human rights into environmental, social and health impact ass.	2013 Guide with the global oil and gas industry association for environmental and social issues on how to integrate human rights into environmental, social and health impact assessments (ESHIAs) to evaluate projects and activities
Voluntary Principles on Security and Human Rights and Implementation Guidance Tools, 2011	Sets guidelines for companies for their security methods, based on the UN Code of Conduct for Law Enforcement Officials and the UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials, supported by tools set by ICCM, ICRC, International Petroleum Industry and IFC to implement the guidelines particularly in areas of geographical conflict and weak governance
International Organization for Standardization (ISO) ISO 26000, 2010	Standards for social responsibility. Does not contain requirements, and is therefore not certifiable. Encourages companies to discuss social responsibility matters with relevant stakeholders, to promote transparency and participation
Institute for Human Rights and Business Guide for Investors on Business and Human Rights	Shows investors how to integrate human rights into investment decision-making and corporate engagement, applying the UN Guiding Principles on Business and Human Rights, so investors can assess and address human rights risks in their portfolios and more effectively benchmark and engage the companies they hold
The Natural Resource Charter	A global initiative providing economic principles for governments and societies with twelve principles on the choices and strategies to pursue to support sustained economic development from natural resource exploitation

ANNEX 2: Recommendations for regional guidance on minimum standards for health and social protection in East and Southern Africa

1. **Protection of health-related issues in negotiation of prospecting rights/licenses and EI agreements** implies legal provisions for:

   - Approval of a mining right subject to ensuring that mining activity prevents any adverse harm to human health[1]. Mining rights holders' duty to promote public health and security in accordance with applicable national and international legislation[2].

   - Implementation and approval by relevant government departments, including environment and health departments[3], of environmental, social and health impact assessments (ESHIAs) that consider: environment, social and health impact of the specific EI project as a pre-condition for granting and obtaining mining rights[4].

   - ESHIAs submitted for approval of mining rights' applications to include costed impact prevention/mitigation; post-mining rehabilitation plans; evidence of ability to comply with health and safety law[5]; socially responsible investments for the local community[6]; benefit to and measures for engaging local communities; resettlement plans (where relevant); monitoring and audits and grievance and dispute settlement mechanisms[7].

   - Local authorities and local communities to be informed about the ESHIAs and consulted on the impacts and any measures to be taken that may affect them, or the area in which they live, before EI approval, with ESHIAs reporting on these consultations and their recommendations[8].

   - The state to implement wider ESHIAs that plan for the cumulative impacts of EI projects across a wider area and to set periods for updated ESHIAs for licensing renewal.

2. **Health and social protection relating to resettlement or relocation of affected communities** due to mining activities calls for legal provisions for:

   - State protection of communities in mining areas[9].

   - No forced eviction, avoidance of displacement of inhabitants[10].

   - When avoidance of displacement is not possible, minimising displacement by exploring alternative project designs; and a duty for companies to pay the affected communities a fair and transparent compensation fixed in a memorandum between the government, the company and the community as a requirement for the allocation of mining exploration rights[11], with resettlement plans included in the EHSIA, as above.

   - Fair compensation to cover: resettlement in dignified homes and in better conditions than previous; preservation of historical, cultural and symbolic heritage of families and communities; socioeconomic activities to re-establish or improve their living standards and incomes and social infrastructures for health, learning, sport in ways to be agreed[12].

   - EI duty to ensure informed participation of, constructive dialogue with and fair management of grievances from local communities at all stages in a resettlement process[13].

3. **OHS protections for employed workers and contractors in the mining sector**, to include:

   - The promotion and protection of occupational health and safety for workers and/or sub-contractors; EI duties of training in workplace health and safety; prevention and reporting of accidents and injury; provision of periodic medical examinations, with no exemption from these duties for those holding mineral rights[14].

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1   Zambia Mines and Minerals Act Section 80
2   Mozambique's Mining Law Art 36
3   Kenya's Mining Act Sec 36, (health further specified in the guidance proposal)
4   Most laws in the region provide for this.
5   South Africa's Mine Health and Safety Act Sec 23
6   As in Kenya's Mining Act Sec 101 and Mozambique's Mining Law Art 8
7   Angola Mining Code Art 66 and Mozambique's Mining Law Art 8
8   DRC Mining Code Art 69
9   Mozambique's Mining law Art 13
10   Angola's Mining Code Art 8 and as set in International Finance Corporation (IFC) Performance Standards 2012
11   Mozambique Mining Law Art 30
12   Mozambique Regulations for the Resettlement Process Resulting from Economic Activities
13   DRCs Mining Regulations Art 477
14   Kenya's Mining Act Sec 178 and as set in ILO Safety and Health in Mines Convention

- Legal objective to give effect to public international law obligations for OHS on mines[15].
- EI duty to make available to workers' representatives, competent authorities, workers' and employers' organisations and upon request information on the safety and health standards relevant to their local operations, those observed in other countries, and relevant special hazards and protective measures[16].
- Powers of state inspectors, including to suspend mining activity in the event of serious risk to life and health of workers and the population[17].
- Provision for workers' compensation for work-related injury or disease, and a presumption that an occupational disease was due to employment unless proved otherwise[18].
- Provision for workers to rescind an employment contract that exposes them to serious and unforeseen health and safety risks[19].

4. **Health benefits for workers, families and surrounding communities** to include:
   - EI duties to ensure healthy environments (see next section) and access to medical care.
   - EI owners to avoid harm to health, to prevent nuisances that would be 'injurious or dangerous to health'; to report and prevent the spread of infectious and notifiable diseases; to avoid or minimize the risks and impacts to community health, safety, and security that may arise from project-related activities, with particular attention to vulnerable groups[20].
   - Mining to be done in a way that promotes socioeconomic development, including the local community in the surrounding area based on prioritisation of community needs, health and safety[21].
   - Prohibition of employment of children and young persons in mining and quarrying.
   - Safe and healthy working conditions for migrant workers, workers engaged by third parties and workers in the client's supply chain[22].
   - EIs to make fiscal (and insurance) contributions to ensure access to health services for workers and their families.

5. **Environment, health and social protection for surrounding communities** to include:
   - Citizens' right to live in a healthy environment and benefit from rational use of natural resources. Activities with immediate or long-term effects on the environment to be analysed in advance, to eliminate or minimize negative effects and to support environmental conservation and protection and rational use of natural resources[23].
   - EI duties to implement ESHIAs (see above).
   - Mining zones and operations to not disturb the integrated social and economic development of regions and populations, with state power to suspend mining operations that cause serious risk to life and health of populations and harm to the environment[24].
   - Any person to apply for legal remedy to stop any act that violates the right to a clean and healthy environment, whether they are directly affected or not[25]. Freedom for any person to request information relating to the environment that is relevant to its conservation[26].
   - All persons or organisations whose actions cause harm to the environment, or the degradation, destruction or depletion of national resources to be held liable for the same and be required to repair such damage and/or pay compensation for damage caused[27].
   - Redress from those who cause damage to the environment and to human and animal health[28]. Contribution from mine license holders to an environmental protection bond, fund or other forms of financial security for any environmental damage[29].

15 South Africa's Mine Health and Safety Act Sec 1
16 ILO Tripartite declaration of principles concerning multinational enterprises and social policy (MNE Declaration)
17 Angola Mining Code Art 53
18 Tanzania's Workers Compensation Act Sec 23
19 DRC's Labour Code Art 73
20 Botswana Public Health Act Sec 14, and 43 and IFC Performance Standards 2012
21 Zambia's Mines and Minerals Development Act Sec 4
22 Lesotho Labour Code Arts 127, 132, ILO Convention 45 and IFC Performance Standards 2012
23 Angola's General Environmental Law Arts 3-4
24 Angola's Mining Code Art 13, 53
25 Kenya's Constitution, Art 70
26 Swaziland's Environment Management Act Sec 51
27 Angola's General Environmental Law Arts 3-4
28 Zimbabwe's Mines and Minerals Development Act Sec 87
29 Kenya's Mining Act Sec 181

- Relinquishing a mining right to not relieve the holders from meeting their environmental and community obligations[30].

6. **Fiscal contributions towards health and health services** includes:
   - Communities and local authorities in mine areas to benefit directly from a share of EI fiscal contributions, with at least 10% to local communities[31].
   - EIs to refrain from seeking or accepting exemptions not contemplated in the statutory or regulatory framework related to environmental, health, safety, labour, taxation, financial incentives or other issues.
   - State authorities to apply levies to EI activities that impact on environment, health and social welfare or EIs to contribute towards national funds for public health[32].
   - EIs to submit annual reports and information on use of local goods and services, corporate social responsibility and capital expenditures[33].

7. **Stimulation of forward and backward links with local sectors and services supporting health,** including:
   - Provisions for employment of local citizens; use of local goods and services; training programmes and skills transfer.
   - EI contribution to economic, social and environmental progress and socially responsible investment benefiting local communities, within community development agreements, share ownership arrangements, particularly for historically disadvantaged people[34].

8. **Post mine closure obligations,** including
   - EI duty to provide post-closure plans in ESHIAs before approval of mining rights.
   - EI duties post closure for fiscal, environment and other legal obligations, including in relation to screening, care services and compensation for chronic occupational diseases[35].
   - Ensuring environmental reclamation, public health and safety of the area[36], with measures for handover of welfare services and social infrastructures or other social or health aspects in consultation with affected communities.

9. In relation to **governance** of these issues, legal provisions for:
   - Rights to information, association, assembly and participation.
   - EI support and upholding of good corporate governance principles and development and practices that foster a relationship of confidence and mutual trust between enterprises and the societies in which they operate[37].
   - EI compliance with legal provisions for registration and reporting, joint consultation and co-determination between workers and managers on workplace safety and employment, disclosure and public information and consultation on ESHIAs.
   - EI duty to ensure informed participation of the affected local communities and to remain in constructive dialogue with them, community consultation prior to the granting of a license/right and a duty on government to create mechanisms and community capabilities for such engagement[38].
   - Transparency and accountability, for an independent oversight committee that includes civil society, with reporting and disclosure obligations on EIs and measures for public accountability, public reporting and citizen awareness, including of all past and current mineral development agreements[39].
   - Prohibition of public officers acquiring mining rights or interests and protection against conflicts of interest in decision making[40].

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30 DRC's Mining Code Art 79
31 Angola's Mining Code Art 245, DRCs Mining Code Art 242; Kenya's Mining Act; Mozambique's Mining Code Article 20
32 Such as in Zimbabwe's Environmental Management Act Sec 50 and National AIDS Trust Fund Act
33 Tanzania Extractive Industries (Transparency and Accountability Act) Sections 10-15
34 Kenya's Mining Act Sec 47; South Africa's Mineral and Petroleum Resources Development Act Sec 2, Zimbabwe's Indigenisation and Economic Empowerment Act and OECD Guidelines for Multinational Enterprises
35 Angola's Mining Code Arts 2, 71,75, 115 and 116
36 Tanzania's Mining Act Sec 62
37 OECD Guidelines for Multinational Enterprises
38 DRCs Mining Regulations Art 477, Mozambique's Mining Law Art 32
39 Tanzania's Extractive Industries (Transparency and Accountability Act)
40 Kenya's Mining Act Sec 220

ANNEX 3: Implementing a health impact assessment

A health impact assessment (HIA) is a combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population. Its aim is to improve knowledge about the potential impact of a policy / program/ investment project/ activity, to inform those involved and affected as decision-makers, and facilitate adjustment of the proposed policy / program/ investment project/ activity in order to mitigate the negative and maximize the positive impacts. It is usually applied prospectively, to inform prior informed consent and adoption / licensing of the policy / program/ investment project/ activity.

An HIA involves a five step process:

i.   **Screening –** background literature and data on the project/ district to identify the situation and elements that could impact on health positively and negatively and the key stakeholders involved

ii. **Scoping –** identifying the areas for information gathering to investigate the potential impacts, how the assessment would be implemented (what should be collected, from whom, how)

iii. **Appraisal / Impact identification –** collection and analysis of information on the current situation and current and potential impacts, including local data collection, key informant interviews/ focus groups and photographic evidence

iv. **Reporting and recommendations –** compiling the findings into a draft report and discussing the findings with key local stakeholders to find out what they recommend to be done in the short, medium and longer term and inclusion of this information in the report

v.   **Evaluation and monitoring –** follow up to assess the implementation of agreed recommendations.

In practice it should be implemented by public authorities, communities and the project/ company actors involved. It can be combined with an environmental impact assessment as a EHSIA. It can be implemented for the specific locality of the activity, or where a number of activities have synergistic and combined effects, it can be implemented district wide.

A broad protocol for taking forward the community driven HIAs is shown below, integrating key areas identified for the harmonised regional standards within the steps of the HIA process.

3.1. Screening

This stage involves the background literature and data on the project/ district to identify the situation and elements that could impact on health positively and negatively and the key stakeholders involved. The table below outlines areas of information that could be gathered on the district and or mine(s).

Table of issues and areas of evidence gathering

Area of information to obtained
Name of the district and location
Name, ownership, types and scale of all mines in the district
Population of the district, total, and by gender and age Other socioeconomic features, main occupations
Health pattern in the district: Major disease burdens and groups / areas affected; Health services (public and private) and service coverage data; Public health and health promotion activities in the district and by whom; Evidence on environmental health, community health; communicable diseases (TB, malaria, HIV, diarrhoea, respiratory conditions, other); non communicable/chronic diseases; injuries
Health pattern in the mines; major risks and occupational disease and injury from literature, From reported data Occupational Health services and provided by who
General health services on mines, provided by who Public health and health promotion activities provided by and used by the mines Services provided for ex mineworkers

Area of information to obtained
Health determinants Current coverage in the district and in the mines of -water and sanitation, -housing -schools, education primary and secondary completion, food security and food markets
Was a health impact assessment implemented prior to licensing? Implemented when? What were its findings? What were its recommendations? Were they implemented? Was there prior informed consent from the community? Has the local government office seen it?
Was an environment impact assessment implemented prior to licensing? Implemented when? What were its findings? What were its recommendations? Were they implemented? Was there prior informed consent from the community? Has the local government office seen it?
Were there costed plans for 1.   impact prevention/mitigation; 2.   post-mining rehabilitation plans; 3.   compliance with health and safety law; 4.   resettlement plans (where relevant); What were they and were they implemented?
Has the local government done an assessment or set a plan for the cumulative impacts of mine health impacts in the district? If yes, what does it include?
What procedures are in place for monitoring implementation and for grievance and dispute settlement on health issues?.
Have any communities been resettled due to the mining activities? By which mine(s)? What population numbers and types; Resettled to where? What were the conditions prior to resettlement? What were the conditions after resettlement? Did the community give prior informed consent to the resettlement
Were the following provided by the mine(s) in the new area prior to resettlement: -water and sanitation -housing -primary care health services -schools, primary and secondary -provision for food markets
Any change in health status noted after resettlement? What, in whom, and by whom?
In the mine what provisions in place for promotion and protection of OHS for workers and/or sub-contractors; training in workplace health and safety; prevention and reporting of accidents and injury; periodic medical examinations; workers compensation. What health issues raised and addressed by these services in recent years? Do the OHS provisions cover migrant workers and workers engaged by third parties?
What bipartite H+S committees on the mine(s)? What risks / hazards have they raised and addressed in recent years? When was the last inspectorate visit? With what actions taken?
What are the risks to health from the mine to families living on the mine? What actions taken by the mine (s) to prevent these risks, provide healthy environments and access to medical care to worker families? What are the risks to health from the mine to surrounding communities? What actions taken by the mine (s) to prevent these risks, provide healthy environments and access to medical care to surrounding communities? Are there any particular vulnerable groups? Who? Why? What actions taken for them?. Do the mines pay for/ cover with insurance/ contribute to health services for workers families? Specifically how?
In the communities surrounding the mines or those settling in the district as a result of mine activities are there risks of epidemics (eg cholera)? What and why? Do they face any immediate or long-term health effects? What remedies have been implemented for these risks, by whom?
Have any people taken up any action, legal claims over health in the district? How do people in the district access information on health, heath services and health risks?
What health risks are there in the district from old mines that have closed? For who? How are they being addressed? What health risks are there likely to be post closure from current mines?

Area of information to obtained
Does the mine (do the mines) have post-closure plans to address these risks? Do the plans include screening, care services and compensation for chronic occupational diseases? What?   Are there any plans for handover of health services run by the mines after closure? What?.
Apart from general taxes do the mines make any other financial contributions to health, or health care in the district? What? To whom? For what?
What mechanisms exist for information sharing and participation in planning in the district (district health council? Health centre committees (HCCs)? Other?   Do mine managers participate in the district health committees and HCCs and other dialogue mechanisms on health in the district? Do mineworkers participate in the district health committees and HCCs and other dialogue mechanisms on health in the district? Do communities living around mines participate in the district health committees and HCCs and other dialogue mechanisms on health in the district?
What provisions do the mines have for joint consultation and co-determination between workers and managers on workplace health? What provisions do the mines have for joint consultation and co-determination with surrounding communities on health   What dialogue on health has taken place between workers and surrounding communities on the mine(s)? When, with whom and on what?

From the above who are the key stakeholders in the district that have relevance to health: in the local government; in the heath and other sectors; in the mine management and workers and in the surrounding community?

3.2. Scoping

Identifying the areas for information gathering to investigate the potential impacts, how the assessment would be implemented (what should be collected, from whom, how). The findings from the data collection above are reviewed to identify what specific areas needed to be focused on for field assessment, to narrow this down to

i.   Evidence that is not available from secondary evidence but have importance for health
ii.   Evidence that needs to be further verified or validated from field assessment
iii. Perceptions of the mineworkers, affected communities, health and mine stakeholders in the area.

3.3. Appraisal / Impact identification

Collection and analysis of information on the current situation and current and potential impacts, including local data collection, key informant interviews/ focus groups and photographic evidence.

3.4. Reporting and recommendations

Compiling the findings into a draft report and discussing the findings with key local stakeholders to find out what they recommend to be done in the short, medium and longer term and inclusion of this information in the report.

3.5. Evaluation and monitoring

Follow up to assess the implementation of agreed recommendations.

EQUINET, (www.equinetafrica.org) is a consortium network of organisations based in the region has for several decades built research capacities and evidence at country and regional level on global health issues relevant to health equity in the region.

EQUINET has implemented research on extractive industries and health to review how far key guidance principles/standards on health in extractive industries are contained in domestic laws in countries in east and southern Africa as a basis for identified good practice that can inform the content for regional guidance for policy and law on extractive industries and health.

EQUINET implements work in a number of areas identified as central to health equity in east and southern Africa
- Protecting health in economic and trade policy
- Building universal, primary health care oriented health systems
- Equitable, health systems strengthening responses to HIV and AIDS
- Fair Financing of health systems
- Valuing and retaining health workers
- Organising participatory, people centred health systems
- Social empowerment and action for health
- Monitoring progress through country and regional equity watches

EQUINET is governed by a steering committee involving institutions and individuals co-ordinating theme, country or process work in EQUINET from the following institutions:

TARSC, Zimbabwe; CWGH, Zimbabwe; University of Cape Town (UCT), South Africa; MHEN Malawi; HEPS and CEHURD Uganda, University of Limpopo, South Africa, SEATINI, Zimbabwe; REACH Trust Malawi; Min of Health Mozambique; Ifakara Health Institute, Tanzania, Kenya Health Equity Network; and NEAPACOH

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