Supporting Inclusive Resource Development (SIRD)
East Africa
TRAINING PROGRAM
2019

THE CANADIAN BAR ASSOCIATION

Global Affairs Canada | Affaires mondiales Canada

EAST AFRICA LAW SOCIETY

LAW SOCIETY OF KENYA

Tanganyika Law Society

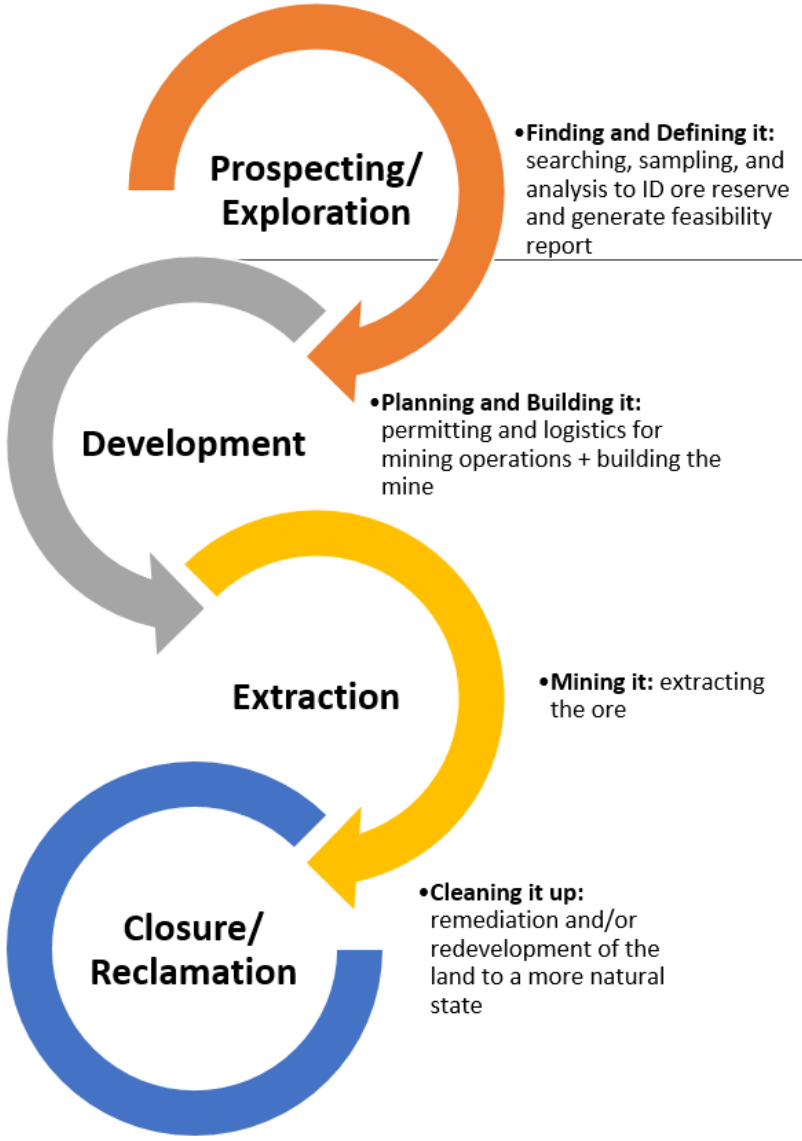
UGANDA LAW SOCIETY

SESSION 5
CLOSURE OBLIGATIONS

BY ERIC MCDEVITT DAVID

1. Introduction.
2. When to deal with closure obligations.
3. The content of the closure plan.
4. Community consultation and participation.
5. Closure costs: how much?
6. Closure costs: who pays?
7. The social and economic repercussions of a mine closing.
8. Examples of successful and failed mine closures.
9. Closure rules in the Canadian province of Quebec.

1. INTRODUCTION



(https://www.superfund.arizona.edu/learning-modules/tribal-modules/copper/mine-life-cycle)

- Topic deals with the 4th and final cycle of a resource project (as presented in Session 1).
- We are dealing with finite resources: extraction will necessarily come to an end at some point. This is to be distinguished from renewable resources (forestry, farming, fisheries, etc.).
- Ideally, closure obligations are dealt with in legislation. Alternatively, can also be handled in contract between government and developer.
- We will look at international best practices (http://www.icmm.com/website/publications/pdfs/closure/190107_good_practice_guide_web.pdf) and will examine the closure obligations contained in the legislation of the Province of Quebec as an example of how the issue is dealt with in Canada.

2. WHEN TO DEAL WITH CLOSURE OBLIGATIONS

- Not at the closure; must be dealt with at the first stages of project and throughout the life of the mine.
- Current best practices dictate that all mines should be "designed for closure", i.e. the goal should be to operate in a way that reduces long term negative impacts (for example, BHP in Western Australia, ICMM Guide, p.13 and Rio Tinto in NW Territories of Canada, ICMM Guide, p.42).
- A closure plan should be a condition for approval of a project and for obtaining a license.
- Plan may evolve over the lifespan of the mine.
- If the project is developed in phases, the closure plan should be implemented throughout every phase: progressive closure should be the norm (for example, the Glencore mine in NSW, Australia, ICMM Guide, p.58). However, if the project site is relatively self-contained, then it could make sense to implement the closure plan at the end of the development.
- The problems of temporary or sudden closure need to be addressed as well.

3. THE CONTENT OF THE CLOSURE PLAN

- Need to develop a clear vision of post-closure land use. Properly conceived and executed closure and rehabilitation can lead to continued prosperity:
  - Creation of additional farm land. This can significantly improve conditions for the local community. Women can play a vital role in such projects since studies have shown that women farmers produce 70% of Africa's food.
  - Creation of bodies of water as reservoirs, for fishing, for recreation. This can greatly impact women since in many communities, women and girls are responsible for water collection.
  - Creation of tourist attraction.

- Closure activities (i.e. the physical work to be carried out to close the site) should be detailed in the closure plan. This work can provide jobs beyond the life of the mine. Companies should also consider how to recruit women for these jobs and how to make the worksites safe spaces for women.

- Environmental problems must be addressed, especially where there has been deposition of hazardous waste or there is a change in land use after reclamation. These problems can have a specific impact on women since they are often responsible for farming and water collection.

- Use of success criteria to ensure results. It is usually necessary to demonstrate that the success criteria have been met before releasing the financial guarantee and before issuing a certificate of release. The success criteria must be clearly defined and they should be agreed to between the mining company, the government and the local community. Examples of success criteria:

    - Completion of a specific task based on an independant inspection (ex., fencing).
    - Revegetation targets.
    - Water pollution levels.
    - Verification of soil quality.

- Relinquishment is the final step, but this does not necessarily put an end to the developer's obligations and liabilities (ex., Texaco/Chevron case in Ecuador).

4. COMMUNITY CONSULTATION AND PARTICIPATION

- Essential for inclusive development.
- Diverse and broad consultation with communities is required when developing closure plans or when modifying them, because closure can greatly impact communities: there can be both immediate and long term economic impact and use of reclaimed land can be very different from the original use.
- Successful closure plans therefore require the consent and collaboration communities.
- Particular attention should be given to consulting woman:
  - Women often bear the brunt of economic hardship. Unemployment can lead to the disintegration of unions and the dislocation of families.
  - Lower government revenues can imperil publicly funded programs which are often aimed of children and women.
  - Women can play a crucial role in the post-closure economic transition (development of farmlands; creation of small businesses; etc.).
- Consultation is an on-going necessity: communities must also be kept informed of changes to the closure plan and its implementation during lifespan of the mine.
- Transparency is the best way to counter distrust and foster community support.

5. CLOSURE COSTS: HOW MUCH?

- Methods for estimating costs. ICMM has prepared a document summarizing financial concepts for mine closure: (https://www.icmm.com/website/publications/pdfs/closure/190205_icmm_financial-concepts-for-mine-closure.pdf)

  - Life of asset closure cost estimate.
  - Financial liability closure cost estimate.
  - Sudden closure cost estimate.
  - Regulator closure cost estimate (financial guarantee).

- Costs must be updated as the mine is developed and in light of changes to the closure plan.
- Rehabilitation of a mine can be very expensive.

Examples of direct costs (from ICMM Guide p.50):

- Decommissioning and demolition of structures, and clean-up of contaminated sites.
- Earthworks, including re-sloping, channel construction/expansion, placement of erosion protection material, relocating waste materials, cover construction and borrow source development.
- Implementation of rehabilitation measures, including seeding, planting, fertiliser placement, maintenance and other related activities.
- Water management, including surface and groundwater management.
- Treatment of water, including water treatment plant construction and operation.
- Liner installation or removal.
- Construction of seals on underground mine openings to surface.
- Post-closure monitoring and maintenance.
- Access control and signage.
- Disposal cost.
- Costs of funding the management of future or long-term activities related to residual risks.
- Closure planning and decommissioning investigations and studies to inform and assist in development of the closure designs.

Examples of indirect costs (from ICMM Guide p.50):

- Mobilisation/demobilisation of contractors, consultants and other support services.
- Retrenchment of staff.
- Socioeconomic programmes.
- Engineering, procurement and construction management [EPCM] costs.
- Health and safety plans, construction monitoring and QA/QC.
- Costs for management of closure activities, including management and supervision, power, water and sewage services, fuel and supplies.
- Closure planning activities.
- Interim care and maintenance costs (sometimes needed while closure designs are being finalised).
- Ongoing dam safety inspections and reviews.

6. CLOSURE COSTS: WHO PAYS?

- As a general rule, the one who profits from the mining activity should pay for the rehabilitation of the site. This is the "polluter pays" principle.
- Notion of externalities (the environmental cost of mining operations). All too often, these costs are simply ignored or transfered to the government.
- Legislation is therefore required to force companies to deal with these costs.
- Companies must be required to integrate the cost of rehabilitation in their business plans. These costs must be integrated into the commodity's price.
- However, market forces may make it difficult to do this, especially when other jurisdictions do not force the companies to rehabilitate mining sites, allowing companies to sell their commodity at a lower price.
- It is therefore important for all countries to hold companies to similar obligations: this prevents companies from "shopping" for the less costly jurisdiction.
- International collaboration is therefore key when it comes to closure obligations.

- Past experience has shown you cannot wait until the end of the operations to collect the required funds. All too often, mining companies have absconded from their responsibilities, leaving the government to pick up the tab.

- This can lead to intergenerational inequity.

- Ideally, funds should be collected and the beginning of the project and topped up during the life of the mine (it's all about cash flow).

- However, there should not necessarily be one model for financing closure obligations; sometimes it is necessary to ask for companies to pay upfront. In other instances, payment can be spread and over a longer period.

- Governments need to consider many factors when deciding on the financial guarantee to be provided by the mining company :

    - How profitable the mine is likely to be.
    - Whether several companies are competing for the license.
    - The need to encourage investment in a particular community.
    - Whether the operations are likely to cause a lot of environmental damage.
    - Whether it is a long standing company or one of uncertain origin.
    - The company's track record: how has it behaved elsewhere.
    - Whether the company has several ongoing projects in the country or only one.

But in all instances, the legislation and government must be vigilant about schemes used by companies to avoid liability including:

- Use of shell companies with no assets.
- Use of complex corporate structures and contractual arrangements to avoid liability.

- Several types of financial guarantees can be used to ensure the execution of the closure plan, ranging from cash (for poor credit risks) to bonds (see s.115 to 119 of the Quebec regulation for examples).

- But these funds should not fall into the general coffers of the government because the temptation is too great for the government to use these funds for other purposes.

- The funds must therefore be protected, placed in trust, if they are paid up front.

- This take a disciplined approach because the funds may be set aside for several decades.

7. THE SOCIAL AND ECONOMIC REPERCUSSIONS OF A MINE CLOSING

- Can have devastating effect on a community and on public finances if not properly planned and managed.
- Social and economic transition should start well before closure (for example, training programs geared at post closure activities). Expenditures for transition should therefore start during the operation of mine.
- Social and economic transition should be incorporated in the closure plan and its cost should be included in overall closure cost estimate (for example, The Anglo American mine in Landau Colliery, South Africa, ICMM Guide, p.46).
- At closure, the social and economic transition should ideally be well underway.
- Importance of diversifying the economy (Dutch disease) and the tax base. This is also a challenge for wealthy countries such as Canada. For example, the Canadian province of Alberta, the economy of which is highly dependent on the oil and gas industries, has set up an economic diversification fund: https://www.alberta.ca/assets/documents/CARES-program-guidelines.pdf such programs can also exist on a local scale (for example, the Thompson (Manitoba) Economic Diversification Working Group, ICMM Guide, p.45)

- Government should resist spending all the revenues in the short term: a public trust fund should be created (sovereign wealth funds). This presents a bigger challenge in developing countries because sources of revenue are more limited and the pressure to spend immediately is more pressing.

8. EXAMPLES OF SUCCESSFUL AND FAILED MINE CLOSURES

Failed mine closures:

- List of abandoned mines in Quebec, Canada.
https://mern.gouv.qc.ca/wp-content/uploads/Liste_sites_miniers_abandonnés_31mars2017.pdf

- Alberta Canada's 155,000 abandoned oil wells.
https://www.fraserinstitute.org/article/albertas-abandoned-wells-need-tending

- Canada's National Orphaned/ Abandoned Mines Initiative.
https://www.abandoned-mines.org/en/document/publication/

Successful mine closures:

- Wieliczka salt mine in Poland (as a tourist attraction).
  https://www.wieliczka-saltmine.com/

- Creation of a forest and a botanical garden in Southeast Minahasa, Indonesia (ICMM Guide, p.23).

- Creation of a fishing lake in Puy de l'Age, France (ICMM Guide, p.24).

9. CLOSURE RULES IN THE CANADIAN PROVINCE OF QUEBEC

- Legislation dealing with closure obligations came into force in 1995 and has been updated many times.
- Before this legislation, mining companies most often abandoned mining sites of the end of operations and left the government to deal with the problem.
- One of the guiding principle of Quebec's environmental legislation is the "polluter pays" principle. This principle is now expressed in section 6 (o) of the *Sustainable Development Act*: "Those who generate pollution or whose actions otherwise degrade the environment must bear their share of the cost of measures to prevent, reduce, control and mitigate environmental damage".

- This Act also contains several of the other principles we have been discussing:

  - s.6 (b): intergenerational equity.
  - s.6 (e): community participation (inclusive development).
  - s.6 (h): cooperation between governments.
  - s.6 (p): internalization of costs (externalities).

6. In order to better integrate the pursuit of sustainable development into its areas of intervention, the Administration is to take the following set of principles into account when framing its actions:

(b) "social equity and solidarity": Development must be undertaken in a spirit of intra and inter-generational equity and social ethics and solidarity;
(e) "Participation and commitment": The participation and commitment of citizens and citizens' groups are needed to define a concerted vision of development and to ensure its environmental, social and economic sustainability;
(h) "*Inter-governmental partnership and cooperation*": Governments must collaborate to ensure that development is sustainable from an environmental, social and economic standpoint. The external impact of actions in a given territory must be taken into consideration;
(p) "Internalization of costs": The value of goods and services must reflect all the costs they generate for society during their whole life cycle, from their design to their final consumption and their disposal.

- s.8: community consultation and participation.

s.8: The Minister of Sustainable Development, Environment and Parks, in collaboration with the other ministers concerned, is to ensure that the strategy is developed in a way that reflects the range of concerns of citizens and communities and all living conditions in Québec, so that the differences between the rural and urban areas and the situation of Native communities are taken into account.

In collaboration with the other ministers concerned, the Minister may take any measure to consult the public and bring the public to take part in the development of any project or any review of the strategy, in order to promote discussion and enrich the content of the strategy, make it known and promote its implementation.

In addition, the strategy and any review of the strategy must be submitted to public consultation in the form of parliamentary committee hearings.

- Although this Act only applies to the Government, it also indirectly applies to companies because they must conform themselves to the sustainable development plans which government agencies must adopt.

- Closure obligations are dealt with sections 231 to 233.1 of the *Mining Act*. The mains provisions are the following **(my summary, not the actual text).**

s.232.1: everyone who engages in "exploration work" or "mining operations" must submit a rehabilitation plan to the government and must carry out the work provided in the plan until the work is completed.

- "exploration work" is defined in s. 108 of the Regulation.
- "mining operations" are defined in s.109 of the Regulation.

s.232.2: the restoration plan must be approved by the government before mining activities begin.

s. 232.3: content of the restoration plan.

1. Description of the work.
2. If progressive restoration is possible, the phases for completion of work.
3. Phases of work in the case of the final cessation of mining activities.
4. Detailed estimate of costs.
5. Backfill feasibility study.

Guidelines further define the content.

s.232.4: the mining company must furnish a guarantee covering all of the anticipated costs.

- s.112 Regulation: guarantee must be provided before beginning of exploration.
- s.113 Regulation: guarantee must be paid in 3 yearly installments.
- s.115 Regulation: outlines the types of guarantee to be provided.
- s.123 Regulation: guarantee must be kept in force until government issues certificate of release.

s.232.5: government may require up front payment of guarantee;

s.232.6: must revise restoration plan at least every 5 years (or more often if required).

s.232.7: government can subsequently increase the amount of the guarantee; may require upfront payment of guarantee.

s.232.7.1: restoration must begin within 3 years of the end of mining operations.

s.232.8: if the mining company fails to do restoration work, government may undertake the work at the company's expense or by using the guarantee.

s.232.10: government can issue certificate of release. Can also do so if a 3rd person assumes restoration obligations (ex. if sale of mine).

s.232.11: possibility of retroactive application to older sites.

s.232.12: the *Environment Quality Act* also applies: This means that even after certificate of release issued, company remains liable for rehabilitation if new problems arise. Land rehabilitation is dealt with in section 31.42 to 31.69 of *Environment Quality Act* (these provisions apply to all activities, not just mining activities).

- See Quebec government Guidelines for additionnal informations https://mern.gouv.qc.ca/english/mines/reclamation/documents/guidelines-mine-closure.pdf

- Quebec legislation :

  The Mining Act : http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/M-13.1

  Regulation respecting mineral substances other than petroleum, natural gas and brine : http://legisquebec.gouv.qc.ca/en/ShowDoc/cr/M-13.1,%20r.%202

  The Environment Quality Act : http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/Q-2

  Sustainable Development Act : http://legisquebec.gouv.qc.ca/en/ShowDoc/cs/D-8.1.1

- Other legislative model : South Africa's regulations pertaining to the financial provision for prospecting, mining or production operation. https://cer.org.za/wp-content/uploads/1999/01/Proposed-FP-Regulations.pdf