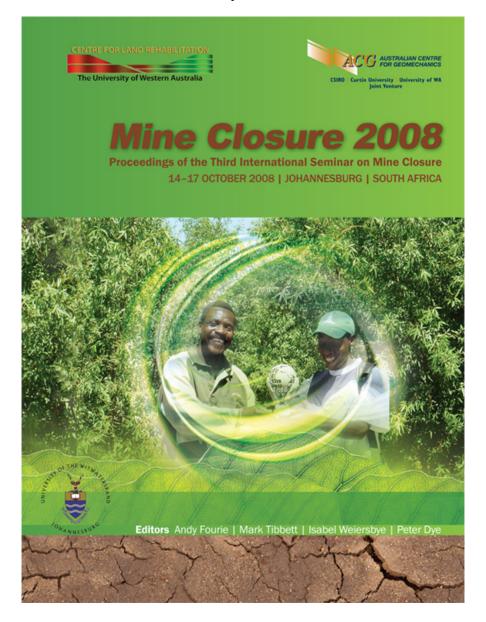


CSIRO | Curtin University | University of WA | Joint Venture



The following paper appeared in the Third International Seminar on Mine Closure 2008 proceedings published by the Australian Centre for Geomechanics.

© Copyright 2008. Australian Centre for Geomechanics (ACG), The University of Western Australia. All rights reserved. No part of any ACG publication may be reproduced, stored or transmitted in any form without the prior permission of the ACG.

Note to authors: This version of your work is owned by the ACG.

Authors of the papers and third parties must obtain written permission from the ACG to publish all or part of these papers in future works. Suitable acknowledgement to the original source of publication must be included.

This material may be used only on the following conditions:

- · Copies of the material may be saved or printed for personal use only and must not be forwarded or sold to any third party.
- Commercial exploitation of the material is prohibited.

For further information:

Ms Rebecca Hitchings Australian Centre For Geomechanics

Communications Manager PO Box 3296

NEDLANDS WA 6008

bec@acg.uwa.edu.au AUSTRALIA

Ph: +61 8 6488 3300 www.acg.uwa.edu.au

Preparation for Closure — Community Engagement and Readiness Starting with Exploration

E.M. Hoadley South Africa

D. Limpitlaw School of Mining Engineering, University of the Witwatersrand, South Africa

Abstract

Communities in Southern Africa are often poor, under-educated, disempowered, and in need of employment. They lack experience with large development projects and the knowledge of potential impacts and benefits. They have high, often unrealistic, expectations, and inadequate awareness of their own rights or the capacity to exercise these rights. These factors combine to make engagement with communities at the commencement of mining projects critical.

Public engagement is the cornerstone of social impacts assessments. Such assessments are themselves key to environmental impact assessments (EIAs) in Southern African settings. Good engagement with communities is also necessary to ensure that expectations are managed. This engagement must include awareness raising and information dissemination to the community. This limits the potential for external exploitation of the community, and enhances the potential for community buy-in into the project. It will also establish the nature of the partnership between the community and the mine if the project proceeds. The sooner such engagement commences, the greater the chances for community participation in key decisions around the project. This is essentially a way of managing sustainability risks and facilitating avoidance of costly legacies on closure.

The human resources function, for example, is an area where many of the early benefits and negative social impacts can be managed. Managing this requires high levels of buy-in and understanding of social issues by the project proponents. This paper illustrates some of the opportunities that may present themselves during the EIA process for avoiding the creation of legacies.

1 Mine-community interactions for closure

Historically mines have not planned adequately for closure. What planning has occurred has been focused on technical closure and has seldom been informed by community consultation and participation. Today many companies are bound by the strictures associated with their listing on international bourses. Financial institutions also place direct demands on companies through guidelines such as the equator principles. Principle 5 of the equator principles requires that project developers consult with affected communities in a structured and culturally appropriate way. For mining projects, and other large projects with potentially significant impacts on local communities, the environmental impact assessment (EIA) process must *ensure free, prior and informed consultation* of the affected communities and *facilitate their informed participation* as a means to establish whether a project has adequately incorporated the concerns of affected communities. Compliance with these guidelines requires a radical departure from the way in which mines have engaged communities in the past.

Legislation to ensure public consultation and community involvement in projects varies widely in developing countries. In South Africa, for example, the requirements of legislation such as the National Environmental Management Act (NEMA – Act 107 of 1998) are rigorous. In Namibian legislation, reference to community engagement is cursory and in Zambia, while detailed regulations have been developed for environmental management, few are directly relevant to mitigating social impacts. This paper does not address public consultation as a legislated activity, but as an activity which requires more than just legislative compliance and is underpinned by a genuine interest in the welfare of people. Good practice today places a responsibility on mining operations to take the same care with the creation of benefits for communities as they do for shareholders.

Communities in Southern Africa are often poor, under-educated, disempowered, and in need of employment. They lack experience of large development projects and the knowledge of potential impacts and benefits. They have high, often unrealistic, expectations, and inadequate awareness of their own rights. Even when communities are aware of their rights, they often lack the capacity to exercise them. These factors make engagement with communities critical throughout the life of a mining project. This engagement is possibly most important when it deals with issues associated with mine closure. During that phase of the mine's life, jobs are lost and livelihoods threatened. Even when consultation occurs over extended periods of time, it is difficult to transfer sufficient knowledge from the mine to the community to prepare it for closure. Without this knowledge, it is also difficult for the community to participate fully in the design of closure provisions and processes. Consequently, community participation is essential for promoting post-closure sustainability.

The current boom in mineral resources presents opportunities for lasting, positive legacies for mining communities. Managing closure impacts on communities is a relatively new imperative and has arisen from the incorporation of the principles of sustainable development into mine management. To manage impacts on communities, engagement should commence at the onset of the exploration phase of a project. This does not always happen, especially in projects covering large geographic areas, because the probability of establishing a mine on any one of the many exploration tenements held by a company may be remote. It reportedly takes 25,000 claims staked to find 500 tenements worth diamond drilling. Of these, only one is likely to become a mine (De la Vergne, 2003). This makes companies reluctant to invest in community engagement until the economic feasibility of a site has been established.

2 Community focused closure preparation

The primary goal of closure preparation is to avoid negative legacies, and as all legacies, whether biophysical, economic or spatial, finally impact on people, preparation must be community focused and driven. Successful preparation is dependent on early, effective and on-going consultation with communities by the project proponent. This will help to ensure that communities are left better off on closure than when mining started. Consultation plays an essential part in understanding the context and setting for closure, particularly in relation to understanding perceptions of stakeholders. Sound communication also helps the proponent to manage expectations and avoid tension between the community and the company and between the company and regulatory agencies.

A social license to operate signifies community buy-in so that the project can proceed, and helps a company to access local knowledge. The community participation process establishes the legitimate key role players in the community and provides them with a mandate. Most importantly, good engagement with communities is also necessary to ensure that expectations are managed. Engagement must include awareness raising and disclosure. This limits the potential for external exploitation of the community and enhances community participation in identifying post-project options and ultimately taking ownership of post-closure initiatives. It also establishes the nature of the partnership between the community and the mine if the project proceeds. The sooner such engagement commences, the greater the chances for community participation in key decisions around the project. This is essentially a way of managing sustainability risks and facilitating avoidance of costly legacies on closure.

Successful closure is difficult to achieve even with community and government agreement on process and objectives. Without such concurrence it is not possible. Legitimate stakeholders must play a key role in identifying and selecting options for closure. There needs to be broad support for the planned end-use by those stakeholders who will have to live with the legacy. Furthermore, while maintaining appropriate flexibility to respond to future changes, there should be agreement on, and commitment to, the roles and responsibilities of different parties, including the company, the community, government authorities and any other stakeholders. This can only be achieved through an effective consultation process.

3 Implementation

Project implementers, whether they are consulting engineers, funders or site personnel, require a comprehensive understanding of the environmental and social context of the project. In particular, they need to recognize local sensitivities and understand community dynamics. It is time-consuming and difficult to gain in-depth knowledge of a structure as complicated as a community, but even the process of trying to do

so will help to facilitate the identification of areas of significant or critical risk. Knowledge of these risk areas will promote the development of a closure strategy, and avoidance of the potential impacts will be an important aspect of a successful one.

In developing a closure strategy, the company must engage early and transparently. A baseline must be established to facilitate stakeholder mapping and identify various groups within, or relevant to, the community. The social/community component of sustainable development (SD) is premised on both interand intra-generational equity. The constraints on comprehensive engagement in most communities are legion: cultural taboos could constrain engagement with women, political structures could limit consultation to a few agents of vested interests and the imposed stigmas of poverty and illiteracy make people reluctant to engage. It is often these groups that most need the benefits of development projects, and frequently, particularly with regard to women, they bear the brunt of poorly planned social closure. A comprehensive baseline at an early stage of the development project will ensure that all the sectors of a community are represented in the engagement process, and will direct the extra effort that is required to include them.

Public participation is usually conducted along formulaic lines. Stakeholder mapping identifies a range of stakeholder groups (often applying the same groups template for every project) and attempts to engage with representatives from each group. This mechanistic approach does not encourage serendipitous input from stakeholders. By contrast, early and continuous engagement designed specifically for a project results in a deeper knowledge of the relevant community. This familiarizes the community with the proponent and puts it at ease. From such a relationship a wealth of knowledge becomes available to the proponent. The local knowledge which can provide input for closure includes biophysical knowledge of climate, fauna and flora and historical land-use patterns.

A two-way flow of information and knowledge-sharing optimizes the negotiating process and the implementation of practical and feasible steps to mitigate and rehabilitate impacts and promote the sustainability of the project's benefits. Prior and informed consent by the community is the ideal, but the full benefit of such empowerment of the community will only be felt if the company has also taken steps to empower itself with an in-depth understanding of the community's structures, beliefs, fears and aspirations. This knowledge must inform any closure strategies.

It is frequently not feasible to employ a full-time staff member to engage with a community. However, a person who is qualified to do so must be on the staff. Qualification in this instance implies acceptance by the community, and knowledge of community dynamics and structures. The first contact the community has with the company is frequently through a geologist or a site engineer. Such persons may or may not be qualified, but at the exploration stage their priorities will be the potential orebody and the economic imperative for fast-forwarding this phase of the project.

The balance of power lies with a company during first encounters with a community. This is especially true when the community has no experience of large development projects. The people on site know what they are doing, why they are doing it and what the possible outcomes could be, while the community does not. They are simply aware that there are strangers in their area or on their land. Unless engagement and information transfer is undertaken immediately, the results are likely to be a hostile community with unmanaged and unrealistic expectations.

Community perceptions and levels of knowledge of the project proponent can also radically affect the nature and outcomes of the engagement process. Recently two mining EIAs commenced in the same community. One of the EIAs was for a long-established company that has an integrated process of community involvement and disclosure. The other EIA was for a new company whose community consultation commenced with the assessment process. In the first instance, the community was aware of the company's plans and procedures. The public meeting for this company concerned mine expansion plans. Questions from the audience related largely to technical issues with social implications – the height of the stack and a new tailings facility, the monitoring of emissions, the capacity of existing energy and water resources. This meeting contributed materially to the assessment of impacts and to the environmental and social management plans. In the case of the new mine, little was known about the company and questions related almost exclusively to job opportunities with a few focused on issues of community health. While the socio-economic profile of the community was clarified, little was contributed to other aspects of project development. This first company benefited more from its public meetings than the second company.

4 Timing

It has almost become a cliché that closure planning must commence with the first phase of exploration. This is also true for community consultation: the community must be contacted well before mobilization for exploration. This engagement is flexible and dynamic and must reflect the development of the project. The community must be informed of each major change in the project design and the engagement process must be re-thought to accommodate any such changes. It must also be adapted to changes in the community, such as a change in political leadership or an inward migration of work seekers.

Comprehensive community engagement at exploration and feasibility stages is still the exception as developers commonly focus on engagement with regulators. It is not unusual to find that community engagement begins once the consultants carrying out the EIA start that process. Ideally, at this stage, the community will already have been consulted, have sufficient knowledge of the project, and the proponent will have a "face" in the community. Issues raised by community members should then be based on a more accurate understanding of the project, and on more realistic expectations, and this will shape an accurate EIA and a feasible environmental management plan (EMP). Accurate and comprehensive scoping and planning for social closure under these conditions will shape a process that improves chances of sustainability of post-closure communities. If such early engagement has not taken place, potential risks arise: the community identifies the EIA consultant with the proponent, and the independence of the EIA process can be compromised; the community becomes dependent on the consultant to solve all the problems it has with the company; the commencement of the EIA is viewed by the community as an indication that the project is a fait accompli and that their views and concerns will have little impact on the way development proceeds.

Recruitment is one of these problem areas, and is also one of the first and most important interfaces between the community and the project. It has to be particularly sensitively handled, ensuring the maximum use of local labor and taking cognizance of the fact that many unskilled workers will be expecting to find employment on the mine. The unrealistic expectations of communities cannot be overemphasized, nor can the difficulty of managing their expectations. During the public engagement for the recent Trekkopje Uranium Project (refer to Turgis, 2008, for details of the public participation process), meeting after meeting was held in packed town halls where most participants were job seekers. Each of these unemployed and largely unskilled people believed firmly that they would get one of the hundred or so largely skilled jobs initially envisaged by the project proponent.

Engagement continues throughout life of mine into the closure phase. During the post-closure phase, the mine no longer has the capacity for engagement and post-closure development must be taken up by NGOs, regulators, community leaders. If engagement has been comprehensive throughout the life of the project, little skilling will be needed at closure to ensure that the structures and capacity for ongoing development are in place.

5 Communities and land-use

Potential impacts on local communities are frequently enhanced by remoteness of the community, lack of education and skills and an undeveloped local economy. Mines often occur in remote rural settings. In Southern Africa, such settings are commonly characterized by poorly developed infrastructure and lack of economic opportunities. Communities in these settings are impoverished and the coming of a mine may result in an unequal distribution of impacts and benefits.

One of the most critical issues for early discussion is post-mining land-use. Very often mineral exploitation will rob communities of actual or potential livelihood opportunities. Low level agricultural jobs may be lost by community members who are unable to get one of the new jobs created by the mine as these require a higher level of skill. Livelihoods lost are thus seldom directly replaced though mine employment. This problem becomes particularly critical where there can be no post-mining land-use, and alternative and compensatory measures must be found.

Post-mining regeneration priorities for countries in Southern Africa have been previously described (Cooke and Limpitlaw, 2003). The priorities reflect the developmental status of these countries and in addition to biophysical objectives such as restoration of land surface of sufficient quality to support pre-mining land-use potential, and restoration of the ecological function of mined land, they include developmental objectives

such as efficient alternative use of mine infrastructure, job creation through education and stimulation of economic activity and development projects to enable equitable participation in post mining economies by all members of the community, especially marginalized groups.

Because land-use is a decision to be made by society, it can be changed, society can decide to change the land-use on a rehabilitated mine site from crops to housing or industrial estates, but mines have an obligation to ensure that no net loss in land capability occurs¹. This must be the primary objective in rehabilitating mined land (Limpitlaw et al., 2005). Where land capability is not preserved, society is deprived of choice. Degraded lands can potentially support fewer land-uses – no crops, for instance. Some argue that agreements with communities regarding land-use can be made prior to rehabilitation, whereby a lower quality of rehabilitation is acceptable. This may occur, for example, if the pre-mining land capability is arable, but the community are satisfied with grazing as a post-mining land capability. Such decisions, even when based on community preferences, do not promote sustainability. Soil formation takes thousands of years and, by only restoring a fraction of the original land capability, future generations are deprived of the choices that are available to this generation. This view of land-use selection may require significant levels of engagement with communities and regulators. In Southern Africa, increasing expenditure on rehabilitation to meet land capability requirements (rather than just land-use objectives) can be even more difficult when the state is a co-owner of the project.

Engagement cannot cease once the rehabilitation strategy and objectives are agreed on. A serious post-mining problem experienced at collieries in South Africa is the misuse of rehabilitated land by the new owner or lease holder (Limpitlaw et al., 2005). Farmers have, in some instances, heavily overgrazed land and then blamed the mine in an attempt to access government compensation. This type of misuse is commonly associated with rehabilitated land that is leased out. Farmers frequently see such mining land as inferior and attempt to extract benefit from it unsustainably – a typical case of the tragedy of the commons. To combat this, careful post closure land-use guidelines need to be agreed with government departments, land-users and mining rehabilitation practitioners. This process should be as inclusive as possible.

6 The //Gaingu Conservancy and the Trekkopje Uranium Project in Namibia

The Spitzkoppe community lies within the //Gaingu Conservancy,² within which the Trekkopje Uranium Project is situated. This conservancy was registered in March 2004, and covers an area of 7677 km², making it one of the largest conservancies in Namibia. It has 750 registered members and 2800 rural people fall within its area of operation. As a registered conservancy, the //Gaingu Conservancy acquired the right to conditional ownership and use of game, including for trophy hunting, local consumption, hunting for meat sales or capture for live sales. It also has opportunities for establishing community-based tourism enterprises and entering into joint venture agreements with private sector entrepreneurs (Turgis, 2008).

These potential benefits of a conservancy have already been limited by the considerable mining and quarrying activities that are being carried out within the boundaries of the Conservancy.

Community consultation commenced with the EIA process. The Spitzkoppe community had little or no experience of mining operations, and it was necessary to introduce them to the type of interaction they could expect from a mining company and, in particular, the nature of community development projects that mining companies undertake. It was also necessary, from the onset, to manage expectations, and this objective was emphasized throughout the participation process.

The community is poor, remote and has limited economic opportunities. Infrastructure is inadequate, both for the development of formal commercial or industrial activities and for household and community purposes

.

¹ In intensive mining operations, this objective may be impossible when considering the site in isolation. Recourse must then be made to offsets.

² "In 1996, the Government of Namibia introduced legislation giving communities the power to create their own conservancies. The legislation allowed local communities to create conservancies that managed and benefited from wildlife on communal land while allowing the local community to work with private companies to create and manage their own tourism market.... The members are responsible for protecting their own resources sustainably, particularly the wildlife populations for game hunting and ecotourism revenues." (Wikipedia, 2008).

(Turgis, 2008). Tourism, in particular eco-tourism, affords the greatest potential for people to improve their income and living conditions.

The unemployment rate is extremely high. Community members make a living from a few goats and cattle, selling low-value gemstones and curios, and more recently from the community-run Spitzkoppe Community Camp. The area is not suitable for permanent pasture, and a lack of rain means that there is very little growth in some years. The cultivation of crops is not possible. When the EIA process commenced in 2006, the //Gaingu Conservancy had not created any employment or other benefits for its members (Turgis, 2008). The potential of the Conservancy for tourism and other income-generating activities had not been exploited, a management plan had not been drawn up, and towards the end of 2007 this had still not been done, and poaching was rife and unchecked. A number of circumstances contributed to this state of affairs: lack of leadership, power struggles within the community and the lack of skills, expertise and resources in the Conservancy Committee.

The Trekkopje Uranium Project will deprive community members of seasonal grazing rights on the mine footprint area, access rights and future use of this land for agricultural purposes. In addition, the potential for the use of mined land for future eco-tourism, and thus for the generation of livelihoods, will be limited.

A key challenge for the mining operation is to provide benefits to the community while preserving long-term prospects for eco-tourism in areas adjacent to the mine. This requires the initial engagement to be built on throughout the mine life, transferring wildlife management skills and facilitating the emergence of sustainable business models for eco-tourism. In addition, compensation for the loss of potential land-use will need to be agreed on. Given the poverty of the community, the vested interests and the lack of cohesion, this will be a difficult task, and will require wide consultation with the community, traditional leaders, development agencies and government. It is only in this way that the mining company can ensure that any compensatory measures agreed upon will optimize the sustainable development of the community. The Spitzkoppe community arguably presents one of the most difficult development challenges that a mining company can face, but it also presents remarkable opportunities for leaving the community better-off than it was before the mining project commenced.

7 Conclusion

In communities which are characterized by widespread poverty the notion of sustainable development, particularly intra-generational equity, with its medium-long term horizons, does not resonate. The proponent, in partnership with the more privileged members of the community and the regulators, has to ensure that the interests of both current and future generations are not compromised. Land-use is particularly important in this respect. While the community may benefit during the life-time of the project, future generations may well have their livelihood opportunities, and their quality of life, reduced by a lack of post-closure land-use planning. Post-closure land-use, with its implications for socio-economic and environmental sustainability, is possibly the most important component of planning in rural communities. These communities are reliant on land for their livelihoods, and often have been so for a very long time. Land provides opportunities for food security, albeit it often subsistence farming, for seasonal grazing for livestock, for small-scale mining, for tourist activities and for access to forest foods and water. It is also of the utmost importance that project proponents recognize and accommodate the close ties, spiritual, cultural and traditional, that many societies have with the land. Failure to do so can destroy the fabric of a community as well as its livelihood opportunities.

It is critical that the broader group of stakeholders is consulted in the design options for final land-use and the rehabilitation strategy to achieve these. The historical practice of leaving this decision to the mine operator and regulators has seldom resulted in sustainable post-mining socio-economic and biophysical landscapes.

The risks associated with poor stakeholder relations – and the opportunities provided by constructive ones, are now better understood by the mining sector and financial investors alike. Companies that have incorporated community relations into their business plans, and have proactive strategies in place to develop and sustain enduring relationships are finding that they have taken positive steps toward improved risk management and improved results. Companies that have grasped the importance of actively developing and sustaining relationships with affected communities and other stakeholders throughout the life of their project,

and not simply during the initial feasibility and assessment phase, are reaping the benefits of improved risk management during the life of the mine and are better positioned for closure.

As approaches to consultation and disclosure change from a short-term means of meeting regulatory and lender requirements, to a longer-term, more strategic channel for relationship-building, risk mitigation, and new business identification, new approaches to, and forms of, engagement are evolving.

References

- Cooke, J. and Limpitlaw, D. (2003) Post-Mining Site Regeneration: Review of Good Practice in Southern Africa, a report commissioned by the Eden Project and English Nature in support of the Post Mining Alliance at the Eden Project, Cornwall, 37 p., plus appendices.
- De la Vergne, J. (2003) The Hard Rock Miner's Handbook, 3rd Edition, McIntosh Engineering, Ontario, Canada, 330 p. Limpitlaw, D., Aken, M., Lodewijks, H. and Viljoen, J. (2005) Post-mining rehabilitation, land-use and pollution at collieries in South Africa, Presented at the Colloquium: Sustainable Development in the Life of Coal Mining, South African Institute of Mining and Metallurgy, Boksburg, 13 July, 10 p.
- Turgis (2008) Report of the Environmental and Social Impact Assessment: Trekkopje Uranium Project, Erongo Region, Namibia, Final Draft, Turgis Consultants, Johannesburg, 462 p., plus appendices.
- Wikipedia (2008) Communal Wildlife Conservancies in Namibia. Accessed July 2008. http://en.wikipedia.org/wiki/Communal_Wildlife_Conservancies_in_Namibia.