

# Public finances, service delivery, and mine closure in Koffiefontein (Free State, South Africa): from stepping stone to stumbling block<sup>1</sup>

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## Abstract

This article examines the interrelationship between mining activities, the local municipality, and public finance in Koffiefontein (Letsemeng Local Municipality). The international literature suggests that, all over the world, mine closure has had a severe negative influence on municipal and public finances. Furthermore, addressing the influence of mine closure requires the involvement of all spheres of government. After being historically dependent on the mining industry, the beginning of the 1990s saw a major downscaling of this industry. The existing symbiosis benefits the municipality to a large degree; but in view of possible mine closure, a high level of dependence has been created in Koffiefontein. It is argued in the article that mine closure will influence negatively municipal revenue and service delivery and will increase the number of indigent households. In order to address these problems, specific planning should be conducted for mine closure. The contribution of various spheres of government is also needed, since such planning cannot be managed by the Local Municipality alone.

## STAATSFINSIES, DIENSLEWERING EN MYNSLUITING IN KOFFIEFONTEIN (VRYSTAAT, SUID-AFRIKA): VAN GELEENTHEID TOT STRUIKELBLOK

Hierdie artikel ondersoek die onderlinge verband tussen mynbouaktiwiteite, die plaaslike munisipaliteit en openbare finansiering in Koffiefontein (Letsemeng Plaaslike Munisipaliteit). Die internasionale literatuur suggereer dat die sluit van myne wêreldwyd 'n ernstige negatiewe impak op munisipale en openbare finansies het. Verder is dit nodig dat alle sferes van die regering betrokke is wanneer die impak van mynsluiting aangespreek word. Suid-Afrika is histories van die mynbou-industrie afhanklik, maar het sedert die 1990's 'n groot afskaling in hierdie industrie beleef. Die bestaande simbiose bevoordeel Koffiefontein se munisipaliteit tot 'n groot mate. Die moontlike sluiting van die myn het egter onthul dat Koffiefontein té afhanklik van die mynbou geword het. Hierdie artikel argumenteer dat die sluiting van die myn negatief op die munisipale inkomste en dienslewering sal inwerk en die aantal nooddrufte huishoudings sal vermeerder. Ten einde hierdie probleme aan te spreek, behoort die sluiting van die myn spesifiek beplan te word. Die insette van verskillende vlakke van die regering word ook benodig aangesien sodanige beplanning nie alleen deur die plaaslike munisipaliteit gedoen kan word nie.

## 1. INTRODUCTION

Since the mid-1800s, South Africa has been primarily dependent on mineral and energy production and export (Nel 2002). With the drop of the gold price, increased mechanization, and the exhaustion of mineral resources in certain areas, the mining industry has experienced a decline in the number of operating mines. For example, in the coal-mining sector, "the number of operating coal mines ... has declined by more than half, from 112 in 1986, to 53 at the end of 2000" (Limpitlaw 2004:1). This has had a severe affect on the socio-economic structure of areas reliant on the mining industry. Towns that depend on mining as a mono-industry are hit the hardest because, upon the closure of the mine, the economic bases of such towns are erased (Laurence 2002). Thus, the decline of this industry, mainly as a result of resource depletion and, recently, also as a result of an unfavourable rand/dollar exchange rate, has created challenges of economic diversification in many mining environments of South Africa. Economic diversification has been effectuated fairly easily in Gauteng, but is far more difficult to achieve in other areas.

Internationally, mine closures and post-mining economic challenges have received a fair amount of attention (Keyes 1992; Acquah & Boateng 2000; Cronje 2000; Strongman 2000; Jackson 2002; Laurence 2002; World Bank 2002; Haney & Shkaratan 2003). Although there has been a specific increase in research in the South African context, the amount of academically related work that has been carried out in this regard remains small. Specific examples include research conducted in the Free State Goldfields (Seidman 1993; Binns & Nel 2001), and research related to the decline of the coal-mining industry in Kwazulu-Natal (Binns & Nel 2003; Nel *et al.* 2003).

<sup>1</sup> Since this article was accepted for publication, De Beers Consolidated Mines indicated that the Koffiefontein Mine will close permanently in 2006.

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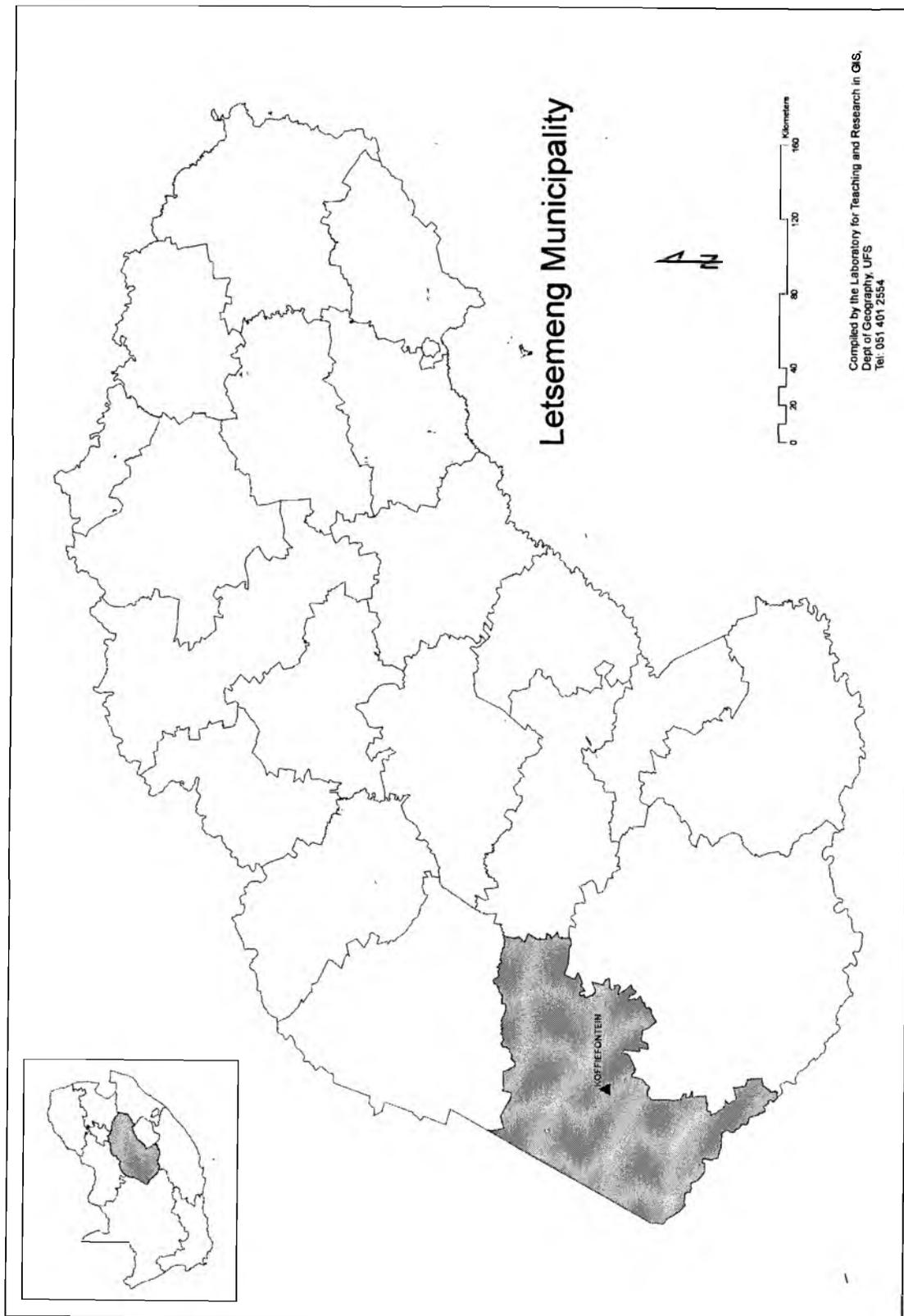


Figure 1: Location of Koffiefontein and Letsemeng in the Free State, 2005

## **MATLOLE A SECHABA, PHANO YA DITSHEBELETSO LE HO KWALWA HA MERAFO HO LA KOFFIFONTEIN (FREE STATE, SOUTH AFRICA): HO TLOHA NTLHENG YA TSWELOPELE HO YA HO TSHITA**

Tokomane ena e hlahloba dikamano tse kopaneng pakeng tsa diketsahalo tsa maeneng, puso ya lehae hammoho le matlole a sechaba ho la Koffiefontein (Letsemeng local Municipality). Dingolwa tsa mafatsheng a kantle, di sisinya hore ho kwala ha dimaene ho bile le kgatlamelo e sa lokang Masepaleng hammoho le matlole a sechaba lefatsheng ka bophara. Ho feta moo, tharollo kgatlamelong ya ho kwalwa ha dimaene ho hloka boiketlasetso le tshebedisano mmoho ya karolo tsohle tsa mmuso. Ka mora ho e tshetleha haholo kgwebong ya tsa merafo, ho ile ha bonahala ho theoha ho hoholo kgwebong qalong ya dilemo tsa bo 1990. Tshebedisano mmoho e teng ha jwale e bontsha bo masepala ba una molemo o moholo, empa ho kwala ha dimaene ho tliša boitshetleho bo boholo masepaleng wa Koffiefontein. Tokomane ena e bontsha haholo hore ho kwala ha dimaene ho tliša kgatlamelo e mpe lekenong la tsa ditjhelete tsa masepala le phanong ya ditshebeletso mme e itla eketsa bofuma bo boholo. Hore ho tlo lokiswe mathata ana, metjha e lokileng e flameha hore e latele ho e tsa meralo ya ho kwalwa ha dimaene. Dihlahiso le ditshitsinyo tsa mafapha le meralo e fapaneng ya mmuso e ya hloka hahala, hobane lekgotla la metse ha le kgone ho iketsetsa meralo e napahetseng.

One particular aspect of mine closure that has received limited attention is the reciprocal relationship between municipal/public sector finance and service delivery, on the one hand, and mining activities, on the other hand. Following from this, the affect of mine closure (or the decline of a single dominant economic sector) on public sector finance and services has also not received adequate attention. This influence is usually closely linked to the ability of the area to develop a diversified economy in a post-mining era. However, this need to diversify the economy of an area is even more problematic in small towns (that dominates the Free State settlement landscape) where declining economic functions, declining agricultural output in the surrounding areas, an outflow of skilled people, along with an overall increase in the number of people (usually unskilled) characterize the environment (Meth 1994; Dewar 1997; Krige 1997). To a large degree, many small-town economies are driven by government social grants that are paid out to people, as well as by the surrounding agricultural activities (although declining) (Krige, Roos, Lazenby, Barker & Mmoko 1994). With this in mind, Krige (1995) states that "the majority of small towns are in crisis and the future development scenarios are rather bleak". By nature, the possible development options of small towns are thus not positive.

It is against this background that the paper analyses the possible affect of future mine closure on municipal and public sector finance and service delivery in Koffiefontein

[more specifically the Letsemeng Local Municipality (Letsemeng) and the Xhariep District Municipality] in the south-western Free State<sup>7</sup> (see Figure 1). It mainly draws on the findings of a social influence assessment conducted for De Beers Koffiefontein Mine as part of the mine's application for a new mining right (CDS 2004). Essentially, the article argues that, in the case of Koffiefontein, a symbiosis developed between the Koffiefontein (De Beers-owned) diamond mine and Letsemeng. The purpose is to provide a conceptual perspective on the influence of the downscaling of the mining industry on a small Free State town. In order to address this impact, Letsemeng, the Xhariep District Municipality, and the provincial and national governments all have certain responsibilities. The article starts off with an overview of the possible affects of mine closure on municipal/public sector finance and development. This is followed by a brief overview of the declining mining industry in the Free State. Thirdly, the mining operations at Koffiefontein Mine are contextualized. In the fourth place, the current state of finances and development initiatives of the local and district municipality will be

7 Under current mine production, the diamond resources at Koffiefontein Mine will in all likelihood be depleted by 2007. De Beers Consolidated Mines' vision, however, states that the aim is to extend the mine's life beyond 2007, and management is currently exploring several alternatives to mine closure that are aimed at prolonging the life of the mine. However, since the submission of the article, De Beers Consolidated Mines indicated that the Koffiefontein Mine will close permanently, and that negotiations with labour unions are to commence!

analysed, together with the possible influences in the event of mine closure. Finally, a number of concluding comments are made.

## **2. MINE CLOSURE AND MUNICIPAL/PUBLIC SECTOR FINANCE: AN OVERVIEW OF AN INTERTWINED RELATIONSHIP**

### **2.1 BACKGROUND INFORMATION**

Mine closure is a phenomenon that has affected both the developed and the developing world. With the Industrial Revolution, coal mining became one of the main economic activities in the western world. In the 1960s, however, resource depletion, poor scale-economies, increasing labour costs and conflict, price fluctuations, the use of alternative fuel sources, and the increasing necessity of importing cheaper coal from Third-World producers led to a decrease in mining with job losses amounting to over one million in the western world between 1955 and 1968 (Nel, Hill, Aitchinson, & Buthelezi 2003).

Not only the coal mining industry, but also other mining industries were affected by this trend. With the decline of mining in the western world, mining activities dramatically increased in developing countries with a surge in mining investments in the 1960s, 1970s, and 1980s. Many of these mines are now approaching the end of their feasible existence. The World Bank predicts that a minimum of 25 large mines in developing countries will close within the next ten years. This will have large-scale influences on the local and national economies of the affected countries (World Bank 2002:5).

### **2.2 JOB LOSSES, BUSINESS SUSTAINABILITY, AND THE IMPACT ON MUNICIPAL REVENUE**

The most direct affect that mine closure has on the community is the loss of jobs. Lack of employment is "one of the most serious and long-lasting consequences of mine closure, even five or more years after the downsizing of the local mining workforce" (Haney & Shkaratan 2003:ii). Additionally, a large proportion of the specialized skills of mineworkers are restricted to mining operations – a factor which renders re-employment in other sectors difficult (Harichunder 2000:6).

The example of Virginia, in the Free State Goldfields, demonstrates that businesses in general suffer from mine downscaling to such an extent

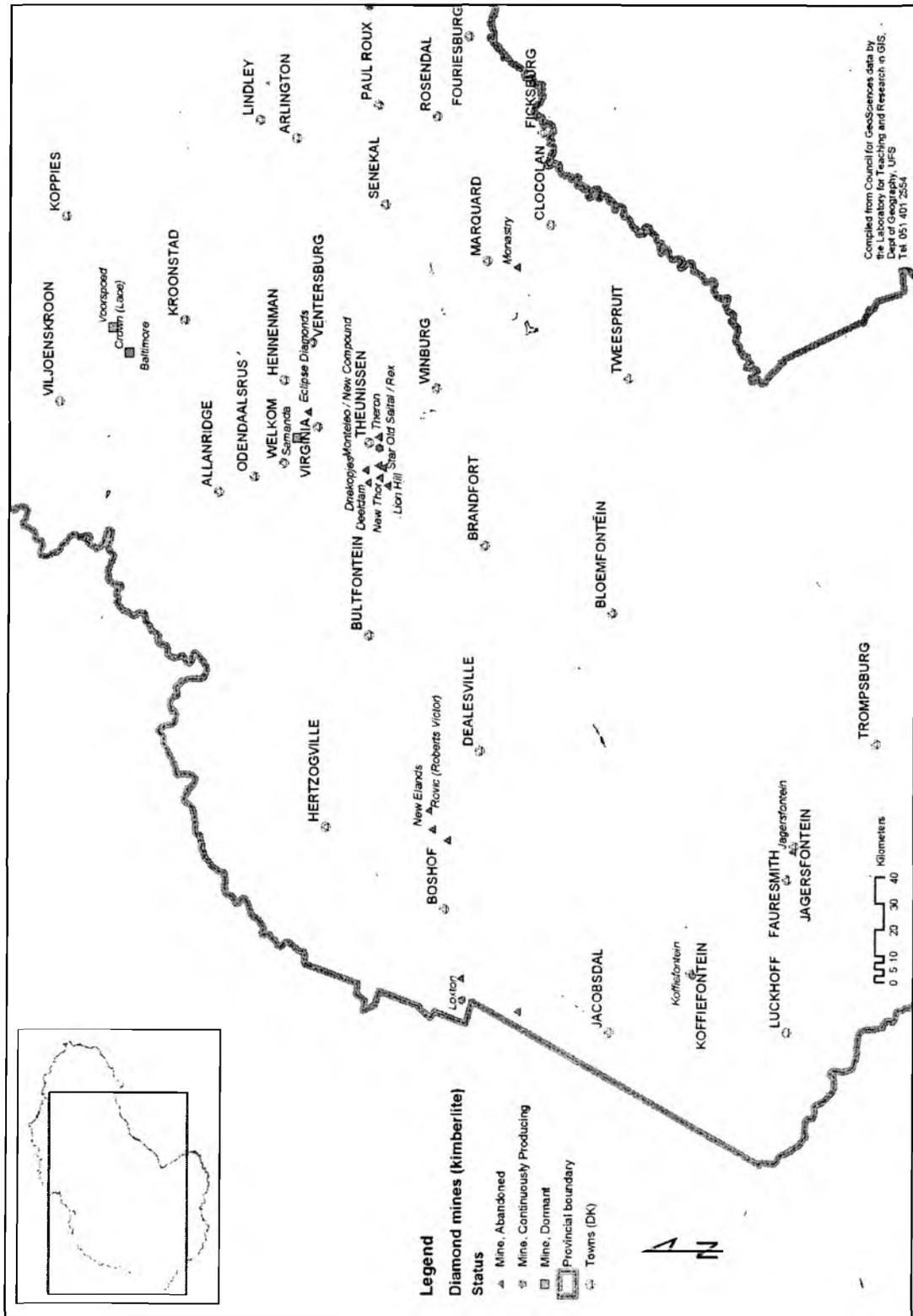


Figure 2: Diamond mining in the Free State

that they are rendered unsustainable (Seidman 1993). Industries and their dependants (such as taxi transport) that provide services to mineworkers collapse completely (Thompson 2003:14). Taxi operators, hawkers, spaza shops, and small and micro-enterprises are negatively affected by mine closure, the reason being that out-migration and the loss of a fixed income entail the eradication of the consumer base, as well as a decrease in the purchasing power of the community. In general, very few places have managed to replace the mine-related jobs in other sectors.

The job losses and the affect on existing businesses hold serious consequences for municipal revenue. Mine closure implies that municipalities suffer a dual blow. On the one hand, a local government is usually severely affected by the loss of the local tax base when the mine and other businesses close (Nel *et al.* 2003:376). Municipal revenue can also be affected negatively when a large number of higher-income earners leave the area after mine closure. The possible decline of property values and the consequent decrease in land tax revenue also play a role (CDS 2004). On the other hand, the sudden unemployment of large parts of the community could lead to a dramatic increase in the number of poor people who need local government support.

The case of the Ermelo mine closure, for instance, demonstrated that employees who are unemployed were not able to pay for water and electricity (Sadler 1997:11). This implies a dual affect on local government: not only will the income and revenue base of the municipality decrease, but, simultaneously, the service demands on and expenditure obligations of the municipality will increase (Strongman 2000:14; Haney & Shkaratan 2003:iii).

In addition to the above, the downsizing of communities is highly problematic as various systems and facilities would have to be modified to accommodate the reduced number of inhabitants. For example, water and sanitation systems would have to be modified to serve only a pre-selected area. Similarly, schools might have to be consolidated into smaller units. Provincial support is essential for the successful completion of these tasks (Wolfe 1992:197).

## 2.3 INFLUENCE ON OTHER LEVELS OF GOVERNMENT

The potential influence of mine closure on provincial government should not be overlooked. Jackson (2002:33) demonstrates that in Papua New Guinea, mining revenue flows into provincial budgets. As in the case of the local government, this could result in a double affect on provincial government: on the one hand, it might lose income generated through the mine, and, on the other, it might be obliged to invest in the area affected by mine closure. As municipalities face the double blow of having to maintain infrastructure and having to deal with the increased number of indigents, while simultaneously losing large parts of their revenue, provincial assistance becomes imperative (Wolfe 1992:197).

## 2.4 BREAKDOWN OF INFRASTRUCTURE

Mines usually provide a whole array of infrastructure including buildings and roads, and, in some cases, a symbiosis develops between the mine and the local municipality with regards to infrastructure provision. The example of Ghana shows that after the closure of a mine, communities continue to utilise mine-related infrastructure. However, owing to lack of maintenance, these facilities, such as the provision of potable water, could eventually break down (Acquah & Boateng 2000:27). Local government would then have to take over the operation and maintenance of these facilities to ensure adequate service standards.

Experience has shown that various types of infrastructure exist, which need to be planned for after mine closure (Jackson 2002:22-24). The following list, although not exhaustive, gives an indication of the challenges for planners and managers in this regard:

- *Physical buildings on the mine, houses for mineworkers and recreational facilities:* These buildings could be used for business, LED, or tourism purposes.
- *Power-generating equipment:* Such equipment becomes redundant after the closure of the mine, since it is unlikely to be of any use to the community. In one town in Papua New Guinea, however, locals are hoping to take over

the power-generating equipment, in order to sell power to the national energy grid.

- *Roads:* These are a major post-closure infrastructural problem, owing to the high costs of road maintenance.
- *Health facilities:* Staff shortages, under-funded medical provision and infrastructure maintenance are challenges that local government would have to face once mines have closed. Examples in the Ukraine, Russia, and Romania have demonstrated that, although the health infrastructure is still utilised, it is in the process of falling apart (Haney & Shkaratan 2003:29).
- *Other infrastructure, which has been built up by private individuals:* Such infrastructure may include, for example, banks, private stores, offices, and houses. Closure of the mine could lead, as mentioned above, to the eventual closure of these businesses and this would greatly impede the development of any possible alternative form of cash economy.
- *Infrastructure that was built by the mine for government purposes:* This would include, inter alia, government offices and/or police stations, which would have to be maintained by local government and would remain, in most cases, useful assets.

Research conducted by the World Bank demonstrates that simply handing over mining infrastructure to local governments rarely brings about the desired results, since local governments are often not geared towards maintaining the assets (World Bank 2002:11).

The simplest type of infrastructure take-over occurs when a local government is strong and the infrastructure left behind by the mine is minimal. Conversely, the most complex cases of infrastructure take-over are found in instances where a local government is weak and the infrastructure left behind is extensive (Jackson 2002:25). In contrast, communities might tend to welcome

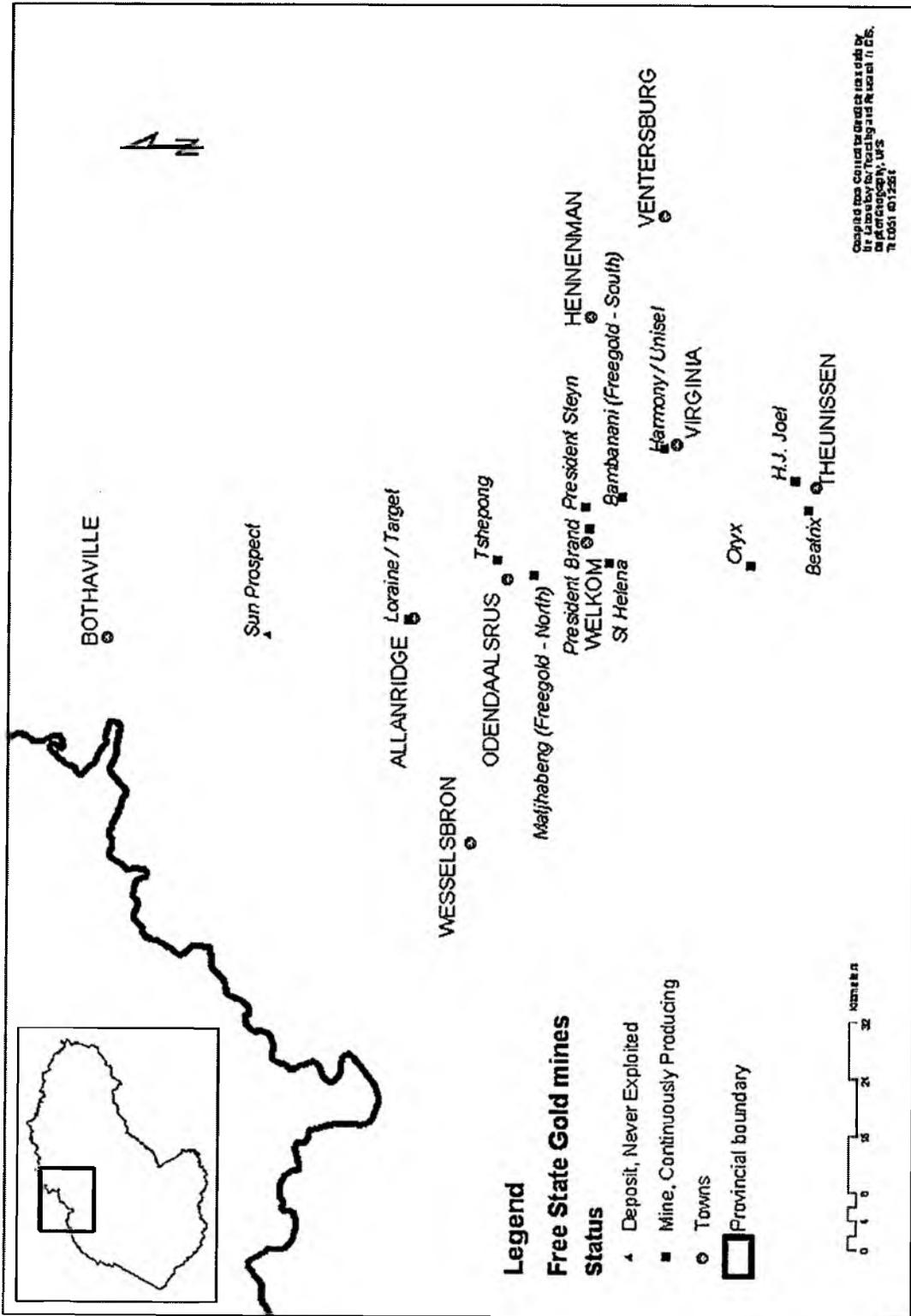


Figure 3: Gold mining in the Free State

extensive infrastructure rather than minimal infrastructure, as they may feel that an extensive infrastructure would be more beneficial in terms of their own development purposes. However, extensive infrastructure could also place more pressure on a local community to maintain it (worst case) or make productive use of it (best case). It could easily change from a potential asset to a liability.

## 2.5 POSITIVE INFLUENCES

In many cases, the whole economy of a town relies on a mine. Although it remains difficult to determine the positive affects of the closure of such a mine on the town, there are some positive aspects. Firstly, Nel *et al.* (2003) mention that municipalities are forced to live up to their mandate of developmental local government and they become more proactive in the development of the town. Secondly, mine closure might result in a decrease in some of the infrastructure requirements, such as water provision.

Against the background of the above exposition of the possible affects of mine closure on the municipal environment, the focus will now shift to mining in the Free State and, specifically, at Koffiefontein.

## 3. THE DISTRESSED STATE OF MINING IN THE FREE STATE

Historically, mining in the Free State was strongly associated with the Free State Goldfields – although it should be noted that some diamond mining operations have been ongoing in this area as well (see Figures 2 & 3). The period after World War II saw the discovery not only of rich gold deposits in the Free State, but also of the start of a very lucrative gold industry in the province that brought development, prosperity, and wealth to many.

In recent times, however, the once abundant gold deposits in the Goldfields have become increasingly depleted as a result of intensive and extensive mining operations. In fact, problems experienced by the Free State Goldfields mirror those of the mining industry in the rest of South Africa. Sustained increases in production costs, resource depletion, and, of course, the unfavourable rand/dollar exchange rate all have interlocked to ravage the mining industry in recent years – including the diamond mining industry.

Since 2002, the strong Rand in particular has resulted in lower income for many mines, causing a large number of mines to operate at a loss and to retrench thousands of workers. Mining employment opportunities in the Free State, for example, declined from approximately 120 000 in 1996 to about 58 000 in 2002 (Urban-Econ 2004). As a result of the problems experienced in the industry, the mining sector's proportionate contribution to the gross domestic product in South Africa has declined from 7,2% in 1999 to 6,6% in 2004. Similarly, the mining industry's proportionate contribution to the total gross geographic product (GGP) in the Free State dropped from 13,6% in 1998 to 8,5% in 2003 – a decline of almost 38% (Pelsler & Redelinghuys 2005).

The declining mining industry has had a detrimental affect on the rest of the Free State's economy as well. During the period 1998-2003, the average annual economic growth rate for the Free State was -0,5%, compared with 1,9% for South Africa as a whole. In fact, during this time, the Free State was the only province in South Africa with a negative economic growth rate – a situation driven mainly by the declining mining sector (Pelsler, Marais, Botes, Redelinghuys, & Benseler 2005).

Research by Binns and Nel (2001) highlighted the implications of down-scaling in mining in the Free State goldfields and the difficulty of creating a post-mining economy. For the past few years, De Beers Koffiefontein Mine has been plagued by the same problems that the rest of the mining industry in the province and country is facing<sup>8</sup>. This is elaborated upon in the section below.

8 Small, rural mining towns have always been more adversely affected by mine closure than is the case with larger towns closer to metropolitan areas. The reason for this is the fact that the economic base of a small mining town is quite often linked to a single resource (i.e. the resource that is extracted), and little, if any, economic diversification takes place. In the case of mine closures in larger urban centres, a secondary service sector – such as a well developed financial and/or service sector – usually assists to alleviate the impacts of mine closure.

## 4. A BRIEF HISTORY OF MINING AT KOFFIEFONTEIN

Koffiefontein Mine is situated in the Xhariep District Municipality in the Free State, approximately 135 km southwest of Bloemfontein and 100 km southeast of Kimberley. The first diamonds in the area were discovered in 1870 on a farm that would later become the town of Koffiefontein. In 1880, the Koffiefontein kimberlite pipe was discovered and the farm was bought by the London and Orange Free State Exploration Company. This entailed the development of the town around the mining activities. De Beers gained full control over the mine after 1 243 claims were ceded to the company in 1911, after which mining operations continued until the depression in 1932. During the period 1932 to 1950, the mine was not in use and it was only in 1971 that the mine became fully operational again. The mine closed again in 1982, causing 1 200 employees to become retrenched.

The influence of the Koffiefontein Mine closure in 1982 caused great pessimism (Kotzee 1982:41). A week after the sudden mine closure of 2 June 1982, the prediction was that the town would lose half of its white population and also its black purchasing power on which many of the businesses depended. At first glance, initial predictions and fears of a population outflow – and also of an erosion of the purchasing power in the town – thus seemed to be confirmed. Three years after closure, Koffiefontein had lost almost one-third of its pre-closure population of 1980 (see Table 1).

There were fears of a large population loss at the time of closure and it was anticipated that at least half of the businesses would have to close. Those that remained would have to downscale the numbers of their employees. This trend was also expected to affect the municipality. The town clerk predicted that service delivery would have to decrease, owing to an anticipated loss of revenue of approximately R200 000 to R300 000 per year. Therefore, the municipality had to delay the implementation of projects that it had planned (Kotzee 1982:41). In terms of its commitments to the then Koffiefontein municipality, De Beers continued to fulfil all its financial obligations to the municipality in full, as if the mine were still open.

Table 1: Pre- and post-closure population levels at Koffiefontein (1980 and 1985)

Total population 1980	1982	Total population 1985	Population change 1980-1985
6 046	Mine closure	4 247	-29,75%

Source: Statistics South Africa (2004)

The mine was re-opened in 1987. The re-opening of the mine saw an increase of more than 105% in the total population of Koffiefontein – from the pre-opening total of 4 247 (1985) to 8 722 in 1991 (Statistics South Africa 2004). Currently, the Koffiefontein Mine is the largest operating diamond mine in the Free State. According to recent indications, the Koffiefontein Mine will have to prepare for permanent closure somewhere between 2007 and 2012, owing to the depletion of all current underground resources, and also as a result of the affect of the Rand/Dollar exchange rate.

## 5. THE INFLUENCE OF POSSIBLE MINE CLOSURE IN KOFFIEFONTEIN ON THE LETSEMENG LOCAL MUNICIPALITY AND THE XHARIEP DISTRICT MUNICIPALITY

### 5.1 CURRENT FINANCIAL STATUS OF THE LOCAL MUNICIPALITY

With the transformation of local government structures, local municipalities in smaller towns usually consist of a number of small towns as well as the agricultural land

between these towns.

The Letsemeng Local Municipality consists of the urban areas of Luckhoff, Jacobsdal, Petrusburg, Koffiefontein, and Oppermansgronde.

The current financial affairs of Letsemeng seem to be fairly healthy. It is one of the few municipalities with investments and with limited debt. The municipality has a budget of R34 million (excluding capital investment grants from other tiers of government) (see *Table 2* & *Table 3*).

Having considered the income side of Letsemeng's budget, it is necessary to reflect on the relationship between the mine and the municipal income reflected above. The rates and taxes for the 254 houses owned by De Beers at Koffiefontein are paid in advance each month. The amount totals approximately R4,3 million per annum, of which 43% is generated by land tax, while 57% is for services delivered. In respect of land tax alone, De Beers contributes over 60% to Letsemeng's total income: from land tax. In addition to this, Letsemeng sells approximately R650

000 worth of purified water to the Koffiefontein Mine per annum. Furthermore, approximately 30% of the income from rates and taxes for Letsemeng is generated in Koffiefontein (CDS 2004). The fact that the rates and taxes for the houses owned by De Beers are paid in advance limits the risk of non-payment and reduces the income risks to the municipality to a considerable extent. The possibility that these housing units might not be occupied in the future implies a potential loss of income for Letsemeng. Following this exposition of the income side of Letsemeng's budget, the expenditure side is reflected in *Table 3*.

The fairly low percentage of the budget allocated to the salary component should be noted. This reduces the possibility that a sudden decrease in revenue may lead to municipal officials losing their jobs. It also makes the budget fairly flexible, as extensive staff retrenchment procedures would not impact on shifting budget priorities. In contrast to the average municipality, Letsemeng has actually managed to build up some reserves during the past three years. The current reserves total approximately R7 million (CDS 2004). This provides a fairly good buffer, should the mine close. The low percentage of the budget being spent on service loans is also a positive aspect. In fact, it seems that all loans might be fully paid off within the next four years.

### 5.2 A DECREASE IN THE REVENUE OF THE LOCAL MUNICIPALITY

Against the above background, the important question is what affect the closing of the mine would have on the local municipality. In the first place, it might result in a decline in revenue from land tax. De Beers will remain liable to pay the land tax on their properties if the housing units are not sold. Although there seems to be a fairly high demand for the housing units, it is unlikely that, considering the possible mine closure, a large percentage of people will actually buy the units. Furthermore, it should also be noted that only 20% of the higher-income bands have shown any interest in buying some of the housing units owned by De Beers (CDS 2004). Therefore, the possible decline in land tax revenue will only become a reality should De Beers sell the housing units or transfer the land to

Table 2: An overview of the Letsemeng Local Municipality's income (2003/2004)

Item	R	%
Land tax	2 890 000	8,5
Services/water/sewage/waste management	18 360 000	54,0
Subsidies: Equitable share clinic	11 050 000	32,5
Other	1 700 000	5,0
Total	34 000 000	100,0

Source: CDS (2004)

Table 3: An overview of the expenditure of Letsemeng (2003/2004)

Item	R	%
Salaries	10 880 000	32,0
General costs	10 880 000	32,0
Maintenance fees	1 700 000	5,0
Capital	1 938 000	5,7
Contribution funds	7 820 000	23,0
Contribution to loans	782 000	2,3
Total	34 000 000	100,0

Source: CDS (2004)

Letsemeng. If these units are sold to individuals, it would increase the income risk related to non-payment – a factor that is at present not problematic as De Beers currently pays these fees in advance. Transfer of the land to Letsemeng would result in an immediate loss of land tax revenue. However, it was interesting to note during interviews with officials of Letsemeng that they were quite willing to have the land transferred to the municipality. From a mining-asset point of view, it would probably make sense to transfer the land to Letsemeng. However, in our opinion, the transfer of land and housing units to Letsemeng would be more of a liability than an asset. The appointment of a joint working group between Letsemeng and De Beers to assist De Beers to privatise the housing units might be more appropriate.

Secondly, the income from services and the sale of purified water to De Beers will decline. If the housing units were standing empty, at current rates, this would result in a decline in income of R3 million per annum. This amount constitutes approximately 8.8% of the total income of Letsemeng's budget. In terms of income generated by Letsemeng itself (excluding inter-government grants), this might amount to as much as 15%. If these housing units were to be sold, the income risk of non-payment would probably increase, as there is a likelihood that the lower-income earners would occupy these units and the benefit of a single advance payment from De Beers would be lost. The declining scale of service provision would also limit the potential to cross-subsidise the water supply and would increase the financial burden on the municipality.

Thirdly, the indirect impact of the closing of the mine on Letsemeng's finances should be considered. Mine closure and the inevitable laying-off of the workforce, together with the subsequent decline in business activities and the loss of jobs in businesses, would probably increase the level of non-payment for services.

All these factors will most certainly impact negatively on the delivery of services, which, in turn, will have an impact on the inhabitants' levels of access to water, sanitation, and waste management. During the

survey, a large percentage of business respondents and respondents in senior management positions in Letsemeng suggested that the quality of services might decline.

The increase in income risk to the municipality will also result in increasing pressure on the cash flow of the municipality. The anticipation of increased pressure on municipal income has subsequently also increased the fear that land tax will be implemented in farming communities in order to compensate for the loss of income from the mine and to increase municipal revenue. Against this background, it is important that the municipality should ensure that its financial systems are geared to identify non-payment for services immediately, as soon as it occurs. The municipality will also need to take measures to ensure that it will be able to contend with the possible impact on its cash flow.

### 5.3 THE TERMINATION OF SERVICE AGREEMENTS (FORMAL AND INFORMAL) WITH THE KOFFIEFONTEIN MINE

As suggested by the literature, there are usually close relationships between mines and municipalities. The Koffiefontein Mine and Letsemeng have a number of informal service agreements at Koffiefontein. The following should be mentioned specifically:

From time to time, De Beers provides water to Letsemeng. This utilisation of water provided by De Beers is the result of regular maintenance of the main Kalkfontein canal by the Kalkfontein Water User Association. Moreover, there are not enough boreholes in the area to provide sufficient water to Koffiefontein. Currently, De Beers pays a water levy in order to have water diverted from the Kalkfontein Dam into the mine dam. If the municipality needs water, it pumps it from there to the municipal reservoirs. If the mine closes, obtaining water for the municipality in such circumstances will become more expensive, whereas currently, the municipality taps into the water supply of the mine during these maintenance periods.

Koffiefontein Mine also provides some technical assistance in respect of the upgrading of the water purification system, as well as with

regard to the sewage dams. The upgrading of both systems is currently in progress and has thus saved Letsemeng consultation fees. Letsemeng also uses some equipment of the Koffiefontein Mine. More specifically, large trucks for transporting heavy items, as well as earth-moving equipment, are often used. Letsemeng also uses the Koffiefontein Mine's fire-fighting vehicle. The fact that these services (and equipment) are available from the mine means that Letsemeng does not have to maintain such services. The Koffiefontein Mine's IT team has also assisted Letsemeng in setting up some of the latter's IT systems. On one occasion, the mine also assisted Letsemeng with land surveying.

It seems that the above services are provided for four reasons. The first is the fact that the municipality does not necessarily have the financial means to provide for these services itself. Secondly, the municipality does not necessarily have the required technical capacity. Thirdly, the technical expertise provided by De Beers also ensures that no external technical consultants need to be hired. Fourthly, it is to the advantage of Koffiefontein Mine to ensure that municipal services are delivered efficiently for the benefit of their employees. All of these informal service agreements will fall away when the Koffiefontein Mine is closed. This will mean that Letsemeng itself will have to provide these services, which might require extensive capital investment as well as investment in upgrading the technical capacity of Letsemeng. In view of the fact that the closing of the mine will already increase the pressure on municipal income, the ability of the municipality to provide these services will decline. The reason for this is that Letsemeng will not be able to replace these services and that the technical capacity might not be available within the municipality.

Considering the above reality, it is important that De Beers (Koffiefontein Mine) should scale down their involvement in respect of mining assistance to Letsemeng. This could be done over a period of three years. It is important that the entire influence of mine closure on the relationship between Koffiefontein Mine and Letsemeng should not be felt all at once. The mine could assist in financial planning in this regard.

For example, it is crucial to determine the monetary value of the current assistance and to phase in the practical budgetary implications of the loss of this assistance over a period of three years.

#### 5.4 AN INCREASE IN THE NUMBER OF INDIGENT HOUSEHOLDS<sup>9</sup>

The closing of mines usually goes hand in hand with large-scale retrenchments. These retrenchments often result in increased poverty. Although some of the ex-employees of mines migrate to other areas, the mining area usually has to cope with an increase in poverty rates. This increased poverty also increases the inability of the affected individuals and their households to pay for services provided by the municipality. The future closure of the mine at Koffiefontein will almost certainly increase the number of indigent households.

Current South African policy to address the problem of non-payment for services as a result of low income includes, *inter alia*, an intergovernmental grant to subsidise low-income households. In Letsemeng, all households with an income of below R1 400 per month are regarded as indigent and their service fees are being subsidised by an R8-million intergovernmental grant from the National Government. The size of this grant is determined by a national assessment of the relative levels of poverty in all local municipalities countrywide.

The 2001 census data have already indicated that, despite the fact that Koffiefontein Mine and supporting businesses employ a large number of members of the local population, the area is still characterized by poverty. In 2001, the poverty line was R1 140 per month. Census data indicate that 57% of the Koffiefontein population live below the poverty line. Compared with the Xhariep District municipal figure of 71%, Koffiefontein residents are therefore proportionately better off than the general population in Xhariep (Statistics South Africa 2001).

Approximately 3 000 households in Letsemeng are currently registered as being indigent. No specific figure was provided for Koffiefontein. The increasing unemployment (directly and indirectly related to the closing of the mine) will probably result in a sharp increase in the number of households that are indigent. Estimates by the interviewees indicated that this number could easily increase to between 3 500 and 4 000 households, should the mine close (CDS 2004).

Should the mine close before 2013, when the results of the 2011 census will be available, the current formula (based on 2001 census data) will probably not be accurate. Closing the mine will cause the number of indigent households to increase. However, the current intergovernmental grant only makes provision for the currently existing number of such households. This increase in the number of indigent households and the inability of the current formula to address such an increase will ensure further pressure on the cash flow of the municipality. This increased pressure on the cash flow might result in a deterioration of services.

#### 5.5 XHARIEP DISTRICT MUNICIPALITY

Mines usually contribute in taxes to some form of provincial government. Once the mining areas close, these second-tier governments are usually affected negatively because they lose the income. In the South African context, businesses usually pay a percentage of their salary bill to District Municipalities. This levy was introduced in the late 1980s to assist with the redistribution of funds to poorer areas. Koffiefontein Mine only pays 0,35% of its salary bill and 0,14% of its turnover to the Xhariep District Municipality. De Beers (Koffiefontein Mine) pays approximately R450 000 to the Xhariep District Municipality per annum. This is 13,6% of the latter's total income from levies. Furthermore, businesses (including the mine) in Koffiefontein contribute 22% of the total levy income in Xhariep (CDS 2004). Should the Koffiefontein Mine close down, this will have a negative influence on the functioning of the Xhariep District Municipality. In the first place, it will probably lead to retrenchments, as approximately 63% of the budget goes to salaries. Secondly, it will probably make the Xhariep District Municipality even more dependent

on financial assistance from the provincial government. The provincial government has already had to assist the Xhariep District Municipality with R5 million during the 2004/2005 financial year. However, there is no guarantee that this assistance will be repeated in the future.

#### 6. THE CLOSURE OF MINING OPERATIONS IN A SINGLE INDUSTRY TOWN: WHAT DOES IT HOLD FOR URBAN AND REGIONAL PLANNERS?

The case can be argued that a mine begins to close the day it starts operating. Preparing for mine closure entails a process that should continue throughout the life of the operation (CDS 2004). Planning for mine closure involves planning effectively for the after-mining landscape, a process that involves all activities required before, during, and after the operating life of a mine that are needed to produce an acceptable landscape, economically, and to develop stable communities. Activities related to the planning of closure often include, amongst others, the following: preparation of detailed drawings of disturbed landscape, compilation of baseline information, discussions with regulators and stakeholders on end land-use considerations, crafting of supporting research programmes, preparation of budgets and schedules, and the submission of environmental impact assessments, as well as social and labour plans (CDS 2004).

A critical element of successful closure planning is the involvement of all stakeholders. History shows, however, that, with a few exceptions, mines do a poor job of ongoing, meaningful public consultation and many mines would benefit from professional assistance. In fact, the dominant role of large multi-national mining conglomerates has meant that "traditional town development processes and institutions have been undermined by the emergence of company or closed towns", leading to single resource towns such as Koffiefontein (Tapela 2002:2). A particularly useful consultation process involves forming a local committee to provide guidance to the mine in its closure activities with the aim to establish ongoing dialogue with stakeholders and identifying the goals important to stakeholders. It is during this stage –

9 This section considers the influence for Letsemeng only. The term *indigent* refers to very poor people (the poorest of the poor). Although the term *indigent* may be derogatory for some people, the researchers used this term because it is used in official policies by South African government departments.

but, in general, also during the exploration and operation stages – that urban and regional planners can and should play an important role. In this regard, the following inputs and professional assistance from planners seem imperative:

Planning interventions in mining towns have traditionally been the preserve of corporate mining companies. The role of local government has often been limited to creating the necessary conditions for the mine to operate "efficiently". More specifically, this role was usually restricted to the provision and maintenance of physical infrastructure and social services. During the initial stages of a mining operation, town planners should insist that they become part of all planning processes and structures, particularly the Integrated Development Plan (IDP), but also of all planning and expansion initiatives of the mine. In other words, the local authority and mine management should not plan and function in isolation from each other. The critical task is to optimize local economic and community development in single-industry mining towns through pro-active planning activities.

Already during the exploration stage, i.e. before mining operations commence, town planning should be done in such a way as to ensure the optimum utilization of services. Town lay-out, as well as the planning and maintenance of services should cost the minimum (e.g. a narrower street surface). This will ensure that services are still rendered once the mining operations are terminated and the income of the municipality has declined drastically.

On mine closure, several challenges and opportunities present themselves to planners to redevelop the affected area. Although it is important that other economic driving forces in the affected area should exist to ensure sustainable economic survival – something that is often absent in a single-industry town such as Koffiefontein – planners

can make a contribution towards the redesigning and upgrading of existing infrastructure/areas in order to stimulate other economic activities, or to ensure their efficiency. This could entail, for example, converting the existing mine shaft and buildings into a tourist attraction with accommodation, retail outlets, entertainment, etc. Unfortunately, however, because of their relatively small size, narrow economic base, and the "company-town" style of their operations, mining towns often do not have a good track record in local economic diversification and pro-active development planning practice (Tapela 2002:4). The closure of a mine in such single-resource towns thus often has dire consequences for mining towns and regions as the demise of the core economic activity (mining) inevitably results in the abandonment of the town, or the so-called "ghost town" outcome where infrastructure becomes disused, support industries go bust, municipalities fail to render services, and the real estate market collapses.

The emphasis of planning in a single-resource town should strongly take into consideration the economic needs and interests of the wider region as well. In the case of Koffiefontein, for example, tourism planning as part of economic diversification should be embedded in the tourism potential of the broader regional economy and infrastructure of the Xhariep District Municipality.

## 7. CONCLUSION

This article assessed the potential impact of the possible closure of the Koffiefontein Mine on the municipal finance and some aspects of service delivery in Letsemeng. Essentially, we argued that a mutual symbiosis has developed between Koffiefontein Mine and Letsemeng. Although this symbiosis has been positive for both parties, the possible closure of the mine might result in a number of problematic areas. Letsemeng and the Xhariep District

Municipality will be left to deal with the consequences of mine closure, which will have considerable impacts on their finances, their ability to deliver services, and their ability to address the impacts of poverty. However, to make Letsemeng and the Xhariep District Municipality solely responsible for managing the consequences of mine closure would probably not be fair. National and provincial government should surely play a role. This role should entail, at least, addressing the issue of the indigent grant, but it should also entail technical and professional assistance from town and regional planners, as pointed out above. Although it is our argument that making Letsemeng solely responsible for managing the consequences of mine closure would not be appropriate, Letsemeng will nevertheless have to take some responsibility. Pro-active planning to take over some of the services provided by the mine will be important, while Letsemeng should also ensure that its credit control policies and systems are geared to address the higher risks that mine closure will bring about. Despite these conclusions and recommendations, it seems as if mine closure will inevitably have a severely negative impact on Koffiefontein and Letsemeng. It will require an extraordinary effort to assist in the diversification of the mine economy and establish a post-mining local and regional economy.

## 8. REFERENCES

- ACQUAH, P.C. & A. BOATENG. 2000. Planning for mine closure: Some case studies in Ghana. In: *Minerals and Energy* (15):23-30.
- BINNS, J.A. & E.L. NEL. 2001. Gold loses its shine – Decline and response in the South African Goldfields. In: *Geography* 86(2):255-260.
- BINNS, J.A. & E.L. NEL. 2003. The village in the game park: Community response to the demise of coal mining in Kwazulu-Natal, South Africa. In: *Economic Geography*, 79(1):41-66.
- CDS (CENTRE FOR DEVELOPMENT SUPPORT). 2004. *Social Impact Assessment for De Beers Consolidated Mines (Koffiefontein Mine)*. Scoping report. Bloemfontein: Centre for Development Support, University of the Free State.

- CRONJE, A. 2000. Mine downscaling Planning for closure. Paper presented at the United Nations Conference on Trade and Development. Cape Town, South Africa, 9 Sept. 2000.
- DEWAR, D. 1997. *Small towns in development. A South African perspective*. Midrand: Development Bank of Southern Africa.
- HANEY, M. & M. SHKARATAN. 2003. *Mine closure and its impact on the community: Five years after mine closure in Romania, Russia and Ukraine*. World Bank Policy Research Working Paper 3083. Washington: World Bank.
- HARICHUNDER, S. 2000. Mine shutdowns paralyse coal towns. *Sunday Tribune*, 22 October: 6.
- JACKSON, R.T. 2002. *Capacity building in Papua New Guinea for community maintenance during and after mine closure*. Report No. 181. Commissioned by the Mining, Minerals and Sustainable Development (MMSD) project of the International Institute for Environment and Development (IIED). London: International Institute for Environment and Development (IIED).
- KEYES, R. 1992. Mine closures in Canada: Problems, prospects and policies. In: Neil, C., M. Tykkylainen & J. Bradbury (eds.). *Coping with closure: An international comparison of mine town experiences*. London: Routledge.
- KOTZEE, A. 1982. Die Spookfonteiners. *Rapport*, 13 June:41.
- KRIGE, D.S. 1995. Demographic profile of the Free State. Urban and Regional Planning. Occasional Paper, 15. Bloemfontein: University of the Free State.
- KRIGE, D.S. 1997. Post-apartheid development challenges in small towns in the Free State. In: *South African Geographical Journal*, 79(3):101-113.
- KRIGE, S., L. ROOS, K. LAZENBY, C. BARKER & M. MMOKO. 1994. *Current development challenges of small towns in the Orange Free State*. Bloemfontein: University of the Free State.
- LAURENCE, D.C. 2002. Optimising mine closure outcomes for the community – Lessons learnt. In: *Minerals and Energy* (17):27-34.
- LIMPITLAW, D. 2004. Mine closure as a framework for sustainable development. Paper read at Conference on Sustainable Development Practices on Mine Sites: Tools and Techniques. University of the Witwatersrand, 8-10 March 2004.
- METH, P. 1994. Agricultural restructuring and the decline of small towns: The case of Paulpietersburg. Unpublished MTRP Thesis, University of Natal.
- NEL, E. 2002. South Africa's manufacturing economy: Problems and performance. In: Lemon, A. & C.M. Rogerson (eds.). *Geography and Economy on South Africa and its Neighbours*. Ashgate: Aldershot.
- NEL, E.L., T.R. HILL, K.C. AITCHINSON & S. BUTHELEZI. 2003. The closure of coal mines and local development responses in Coal-Rim cluster, northern KwaZulu-Natal, South Africa. In: *Development Southern Africa* 20(3):369-385.
- PELSER, A.J. & N. REDELINGHUYS. 2005. *Mining, migration and misery: Exploring the HIV/AIDS nexus in the Free State Goldfields of South Africa*. Bloemfontein: Centre for Health Systems Research & Development.
- PELSER, A.J., L. MARAIS, L.J.S. BOTES, N. REDELINGHUYS & A. BENSELER. 2005. *Application for a new mining right for De Beers Consolidated Mines Limited (Koffiefontein Mine): Social Impact Assessment Report*. Bloemfontein: Centre for Development Support.
- SADLER, R. 1997. Ermelo-Myne sluit na 19 j. se produksie. *Beeld*, 23 April:11.
- SEIDMAN, G.W. 1993. Shafted: The social impact of down-scaling on the Free State Goldfields. In: *South African Sociological Review*, 5(2):14-34.
- STATISTICS SOUTH AFRICA. 2001. 2001 Census data. Pretoria: Statistics South Africa. Internet: <http://www.statssa.gov.za/census2001/census2001.htm>
- STATISTICS SOUTH AFRICA. 2004. Community profiles: Super tables. Pretoria: Statistics South Africa. Internet: <http://www.statssa.gov.za/>
- STRONGMAN, J. 2000. Mine closure. An overview of the issues. Paper presented at the Government of Indonesia Mine Closure Workshop. Jakarta, Indonesia, 24 October 2000.
- TAPELA, T.S. 2002. Planning for economic diversification and sustainable communities in mining towns: Towards a development planning framework. Paper presented at the Planning Africa 2002 International Conference: Regenerating Africa through Planning'. Durban, South Africa, 18-20 September 2002.
- THOMPSON, C. 2003. If mines go 'disaster looms'. *Citizen*, 31 July:14.
- WOLFE, J.M. 1992. Schefferville: The crisis in the Quebec-Labrador iron mining region. In: Neil, C., M. Tykkylainen & J. Bradbury (eds.). *Coping with closure: an international comparison of mine town experiences*. London: Routledge.
- URBAN-ECON. 2004. *Economic profile of the Free State*. Bloemfontein: Urban-Econ.
- WORLD BANK. 2002. 'It's not over when it's over: Mine closure around the world.' World Bank Group's Mining Department. Internet: <http://www.worldbank.org/mining>