

**Using Socio-Economic Impact Assessment to Plan for Mine  
Closure: De Beers Namaqualand Mines Proposed Closure  
in Ten Years Time (AD 2002)**

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**Research Report submitted in partial fulfilment of the requirements of the degree  
of Master of Philosophy in Environmental Science**

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## EXECUTIVE SUMMARY

### 1. INTRODUCTION

This research report presents the results of a socio-economic impact assessment of the proposed closure of De Beers Namaqualand Mines' (DBNM) operations in ten years time (AD 2002). From the results of this assessment, recommendations are also made as to the way in which DBNM should plan for the closure.

#### 1.1 Background to the Study

The Environmental Evaluation Unit of the University of Cape Town was commissioned by the management of DBNM to investigate the social and economic impacts of closure. This would complement the work already in progress on the rehabilitation of mine-dumps.

The project was also used as an appropriate vehicle for the 1991 Environmental Science Masters students to complete their academic requirements by working on this as a group project.

#### 1.2 Study Approach

The study consisted of two phases: an information gathering phase which ended in the production of a Baseline Information Report (April 1992 : EEU Report No. 5\92\87). The second phase documents the identification and assessment of potential impacts and makes suggestions as to how DBNM should plan with regard to the forthcoming closure.

A number of methods were used in the study, including a questionnaire survey of DBNM employees, a survey of businesses in Namaqualand and meetings with interested and affected communities. The study had an open and participatory approach.

## 2. FINDINGS OF THE ASSESSMENT

The findings of the assessment are summarised in tables S.1 and S.2 on the following two pages. Impacts were divided up in two ways. Firstly by identifying whether they are likely to occur **before** or **after** closure. This category is particularly important as mine closure is a process that starts with the decision to close - it does not begin with the cessation of mining. Secondly, by categorising them into impact types i.e impacts on *values, attitudes, beliefs and perceptions*; *economic impacts*; impacts on *public sector revenues, costs and service provision*; impacts on *community structure and social organisation* and a default category of "other".

Each impact identified was rated as having **NO**, **MINOR** or **MAJOR** significance. As the project results are to be used for future planning, a degree of confidence in prediction of either *high* or *low* was also given for each impact. The combination of the significance and degree of confidence gives an indication of how much priority DBNM should give the potential impact in their planning.

### 2.1 Impacts before Closure

The potential impacts before closure were found mainly in the values, attitudes, beliefs and perceptions category. The potential for conflict is high over issues like the ownership of the land DBNM occupies and the form of the retrenchment package. Negative attitudes towards DBNM are likely to develop even further in the future. The links between the impacts before closure are shown in figure S.1.

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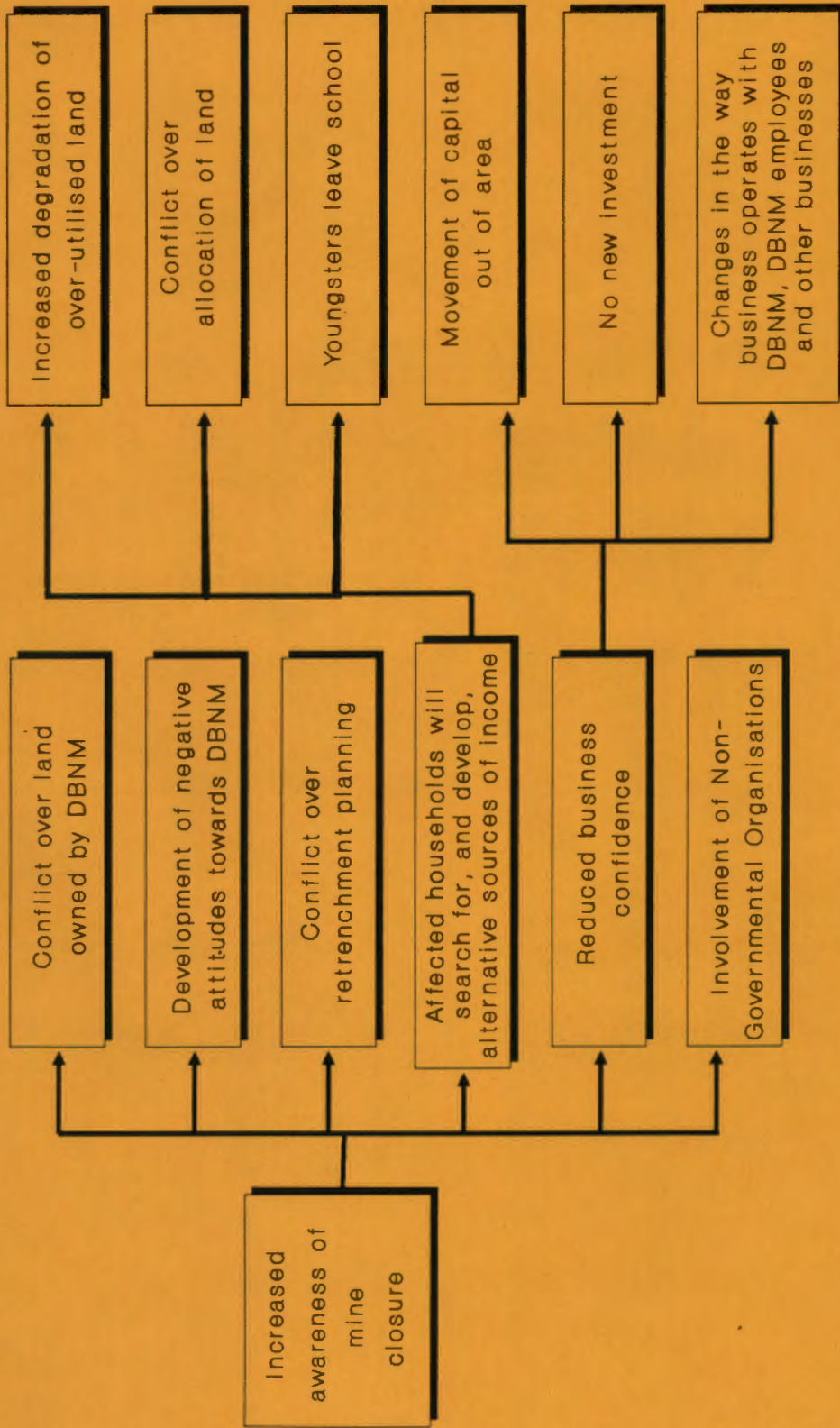
**TABLE S.1: SIGNIFICANCE AND DEGREE OF CONFIDENCE IN PREDICTION OF IMPACTS OCCURRING *BEFORE* CLOSURE**

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	<b>SIGNIFICANCE</b>	<b>DEGREE OF CONFIDENCE IN PREDICTION</b>
<b>IMPACTS ON ATTITUDES, VALUES, BELIEFS AND PERCEPTIONS</b>		
Increasing awareness of DBNM's intention to stop mining	MAJOR	HIGH
Conflict over land owned by DBNM	MAJOR	HIGH
Development of negative attitudes towards DBNM	MAJOR	HIGH
Conflict over retrenchment planning	MAJOR	HIGH
<b>ECONOMIC IMPACTS</b>		
Reduced business confidence	MAJOR	LOW
<b>IMPACTS ON COMMUNITY STRUCTURE AND SOCIAL ORGANISATION</b>		
Affected households will search for, and develop, alternative sources of income	MAJOR	HIGH
<b>OTHER</b>		
Involvement of Non-Governmental Organisations	MINOR	HIGH

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**FIGURE S. 1: LINKAGES BETWEEN IMPACTS LIKELY TO OCCUR BEFORE CLOSURE**



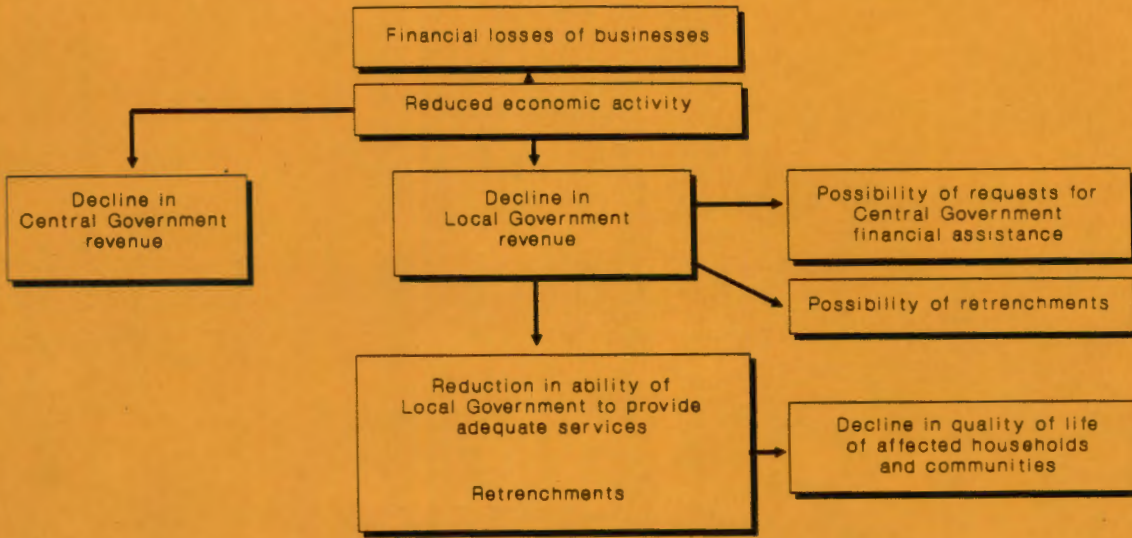
## 2.2 Impacts after Closure

The impacts after closure are linked to the retrenchment of DBNM employees (see figure S.2) and the financial losses of businesses (See Figure S.3) as a result of the loss of DBNM's business and the reduced spending power of its employees. Important impacts here are the decline in local government revenue, the reduction in the ability of local government to provide adequate services, the migration of people out of affected communities and the decline in the quality of life for both affected households and communities.

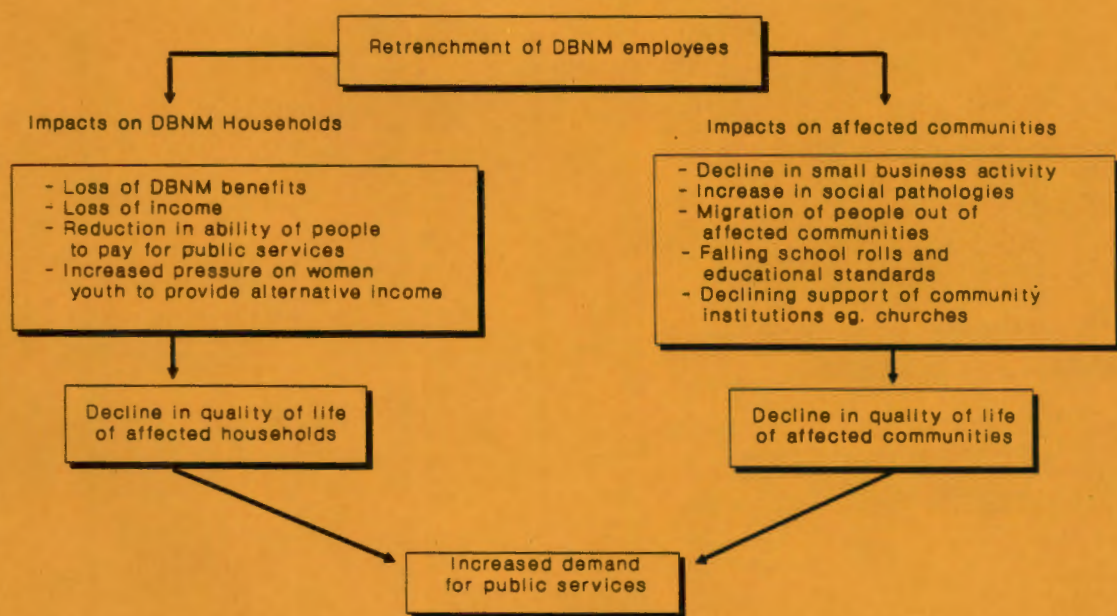
**TABLE S.2: SIGNIFICANCE OF IMPACTS AND DEGREE OF CONFIDENCE IN PREDICTION OCCURRING AFTER CLOSURE**

	SIGNIFICANCE	DEGREE OF CONFIDENCE IN PREDICTION
<b>ECONOMIC IMPACTS</b>		
Increase in the number of unemployed	MAJOR	LOW
Financial losses of business	MAJOR	HIGH
<b>IMPACTS ON PUBLIC SECTOR REVENUES, COSTS AND SERVICE PROVISION</b>		
Decline in central government revenue	NO	HIGH
Decline in local government revenue	MAJOR	LOW
Reduction in ability of local government to provide adequate services	MAJOR	LOW
<b>IMPACTS ON COMMUNITY STRUCTURE</b>		
Movement of people out of communities	MAJOR	HIGH
Declining educational standards	MAJOR	HIGH
Decline in the quality of life of affected households and communities	MAJOR	HIGH

**FIGURE S. 3: IMPACTS AFTER CLOSURE LINKED TO FINANCIAL LOSSES OF BUSINESSES**



**FIGURE S. 2: IMPACTS AFTER CLOSURE LINKED TO THE RETRENCHMENT OF DBNM EMPLOYEES**



### **3. CONCLUSIONS AND RECOMMENDATIONS FOR PLANNING**

The potential impacts of closure can only be addressed by planning that acknowledges that the problems require regional level initiatives, as well as intervention at the household and community level.

#### **3.1 A Regional Initiative**

It is clear that the closure of DBNM will result in significant economic and social impacts. The severity of these impacts is a result of the region's dependency on mining in general and DBNM in particular, and also the region's declining economy. The problem is a developmental one and requires intervention. It is recommended that DBNM intervene by setting up and promoting an independent Regional Development Trust. Its brief would be to guide the Namaqualand economy on to a more sustainable and secure development path.

#### **3.2 Other Potential Elements of DBNM's Planning for Mine Closure**

From the mitigating measures identified, DBNM's planning for closure should include the following elements (as well as the regional initiative mentioned above):

- a recognition that DBNM has a commitment to particular communities because of its history and its employees e.g. Komaggas and Steinkopf in Namaqualand and the Herschel District in the Transkei;
- a focus on the training of DBNM employees and their dependents aimed at developing skills that will aid them in their search for work;
- the support of key community institutions e.g. schools and clinics;

- a planning process that includes employees and affected communities in a participatory manner, rather than one of consultation;
- employees should be given the opportunity to transfer to other De Beers Consolidated Mines' operations so that they remain employed and therefore maintain the value of their pensions;
- DBNM must build up its institutional capacity for managing the process and providing the necessary skills and advice for closure;
- DBNM should ensure that people are kept informed of the situation with regard to closure and the planning process;
- a recognition of key uncertainties that must be monitored during planning, including the potential closures of any other mining operations in the Namaqualand area; and,
- a reassessment of DBNM's draft policy is needed in response to this study.

## ACKNOWLEDGEMENTS

There are a number of people I would to thank with regard to this research report:

- Professor Richard Fuggle and Richard Hill for giving me the opportunity to join the group project;
- Dr. Neil Dewar for supervising me while under considerable pressure;
- Rachael, Greg, Andy, Lee, Paul, Judy and Melanie for welcoming me into the group;
- All the other people who I have hounded for help during the write-up including Nicky Robins, Alison Burger, Heather Campbell, Belinda Dodson, Kevin Greenbank and Michelle Ridgard; and,
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## CHAPTER 1

### INTRODUCTION

#### 1.1 PURPOSE OF THIS RESEARCH REPORT

This research report presents the results of a socio-economic impact assessment of the proposed closure of De Beers Namaqualand Mines' (DBNM) operations in ten years time (AD 2002). Stemming from the results of this assessment, recommendations are also made as to how DBNM should plan for this closure.

The report also fulfills an academic requirement for the M.Phil degree in Environmental Science.

#### 1.2 BACKGROUND TO THE STUDY

In response to suggestions made by the Environmental Evaluation Unit (EEU) of the University of Cape Town, the management of DBNM commissioned an investigation into the social and economic impacts of closure, to complement the work already in progress on the rehabilitation of mine-dumps.

The EEU and the Department of Environmental and Geographical Science considered that, by undertaking it as a group project, this would be an appropriate vehicle for the Environmental Science Masters students of 1991 to complete their academic requirements.

The project comprised two distinct phases: an information gathering phase, completed as a joint venture by the entire group, which ended in the writing of the Baseline Information Report (EEU, 1992). The second phase, of which this report is the product, involved each member of the Masters Group submitting an assessment of the impacts of mine closure, and recommendations for an appropriate planning strategy for DBNM. It was agreed that no further

data collection would be undertaken during this second phase and that the research report would be derived from information contained in the Baseline Information Report (BIR).

### **1.3 TARGET READERSHIP**

The report is directed towards two separate readerships: as an academic exercise it has to show a sufficiently high standard of scholarship and academic writing. As an impact assessment report, commissioned by a client, it also has to take into account the needs and requirements of DBNM.

A consequence of this dual role is that the report contains more explanation and justification than might usually be expected of a professional assessment, where the emphasis is on the pragmatic communication of results. Conversely, as a professional report for a client, it is necessary that it communicates information both economically and effectively

This tension, though difficult, has positive implications: it requires that the report is rigorous, clear and concise in its analysis. This is regarded as an important criterion for reviewers to consider when evaluating impact assessment reports (EEU, 1992), and stems from a criticism of the lack of academic rigour that existed in early impact assessment reports (Bisset, 1988).

### **1.4 ASSUMPTIONS**

A number of assumptions made during the assessment need to be identified and explained:

- mine closure will occur in AD 2002; this means that there will be no consideration of options that involve extending the life of the mine beyond this date;
- DBNM will maintain ownership and control of the land they currently hold; the report makes no assessment of

impacts that might result from a change in land ownership; and,

- This assessment has been produced at the outset of planning for mine closure; this means that a long-term view of planning for mine closure can be taken.

### **1.5 LIMITATIONS TO THE STUDY**

There were several limitations to the study:

- four months were allocated for the information gathering phase;
- ten weeks were allowed for the assessment, and the writing of this research report;
- no further research was permitted during the assessment stage.
- researchers were unable to carry out certain investigations e.g. convene a public meeting in Springbok, which restricted the effectiveness of the information gathering phase;
- the group was not allowed to make certain information public due to DBNM's concerns regarding confidentiality; and,
- certain sources of information were not available to the group e.g. the predicted life-span of other mining operations in the area.

### **1.6 STRUCTURE OF THE REPORT**

The report is structured as follows:

**Chapter 2** presents the results of the impact assessment. The approach adopted for the assessment of impacts is described and the results presented.

**Chapter 3** identifies potential mitigation measures for the impacts.

**Chapter 4** briefly suggests possible future action for DBNM directed towards mine closure. A planning approach is suggested and key uncertainties that must be investigated in any future planning are identified.

#### **1.6.1 Notes to Readers**

Readers should remain aware of the following points while reading this report:

- frequent cross-referencing to the Baseline Information Report is necessary since it constitutes the primary information source for this research report. This is done using the format: (BIR, pg 27). This indicates clearly that the Baseline Information Report is being referred to and on what page of the report the information can be found - in this example page 27.
- no locality maps are included in this report as they are contained in the BIR. A map of the Namaqualand Magisterial District can be found in BIR, page 15. The location of Namaqualand and Development Region A can be found in BIR, page 107, while maps of the Herschel District, Transkei and its position in Southern Africa, are on pages 18 and 19 of Appendix C.

## CHAPTER 2

### ASSESSMENT OF IMPACTS

#### 2.1 INTRODUCTION

This chapter assesses the impacts of the proposed mine closure. It has two sections:

- the first describes the approach taken to the identification and assessment of impacts ; and,
- the second contains the results of the assessment.

#### 2.2 APPROACH

The approach taken to assessing the impacts has the following elements:

- identification of impacts; and,
- quantitative and qualitative assessment of the impacts identified. This involves the synthesis and analysis of all the relevant information in the Baseline Information Report (BIR) regarding a particular impact, and an evaluation of that impact's significance.

##### 2.2.1 Identification of Potential Impacts

Identification of impacts occurred at two stages in this project: initially during the information gathering phase, which led to the production of the BIR, and later during the assessment process documented in this report. Different methods were used to identify impacts during these two distinct phases.

During the information gathering stage the following methodologies were used:

- input-output analysis;
- a survey of selected businesses in the Namaqualand region using personal interviews;
- a public participation programme which involved meetings with selected communities in the Namaqualand region and contact with a broad range of interested and affected parties, including local government, business and non-governmental organisations; and,
- a questionnaire survey of De Beers Namaqualand Mines' (DBNM) employees and interviews with DBNM management.

During the assessment process the following methodologies were used:

- a review of relevant literature;
- the use of checklists (Burdge, 1987; Burdge, 1989; Burdge, 1991 and World Bank, 1991), including that produced by the Environmental Evaluation Unit (EEU) as part of their recommendations for the implementation of Integrated Environmental Management (EEU, 1992); and,
- the identification of linkage ramifications to aid in the identification of secondary impacts.

The impacts identified then became the subjects of analysis in the assessment stage.

### **2.2.2 Assessment of Identified Impacts**

Each of the impacts identified was then assessed. This involved the synthesis and analysis of all the available information regarding a potential impact and an evaluation of the impact's significance. The way in which the results of this assessment process are presented is a reflection of the way in which the process was carried out in practice.

### 2.2.2.1 Presentation of Results

The format of the presentation of the results is based on the recommendations made by the EEU on the content and format of impact assessment reports (EEU, 1992). The format is as follows:

a) **Impact Statement** : this is a brief statement of the impact.

b) **Impact Description** : this shows the results of the synthesis and analysis of all the available information. Key elements that need to be included here are:

- whether a particular impact is adjudged to be positive or negative;
- how the impact was identified;
- whether the impact is a primary, secondary or higher-order impact;
- when it is likely to occur;
- its magnitude;
- its location and sphere of influence;
- whether it is short-term or long-term;
- whether it is controversial;
- whether it can lead to secondary and higher-order impacts;
- whether it is reversible or irreversible; and,
- who are the interested and affected parties associated with the impact.

- c) **Impact Significance** : the significance of each impact is identified using criteria which are described later on in this section.
- d) **Degree of Confidence in Prediction**: the degree of confidence in each prediction of likely impacts will be indicated. An analysis of whether the impact will occur at all, and whether it will occur in the form described is important as this project is an exercise in projecting into the future. The factors considered here are:
- the degree of incomplete knowledge;
  - the verification of information using triangulation (Grady et al, 1987). The methods of triangulation are the use of a variety of data sources and the use of several different methods; and,
  - the unpredictability of future events (Lee and Wood, 1980).

After consideration of these factors an impact is given a rating of *high* or *low* to reflect the degree of confidence in its prediction.

- e) **Further Information Needs** : as this assessment has being undertaken at the beginning of the planning process, it is important that areas where further information is needed be identified. This is particularly important where there is uncertainty concerning a particular impact. This information may be needed not only in the context of this study (e.g. more quantitative information on a particular impact) but also during the period up to and beyond closure (e.g. the economic trends in the region).

#### 2.2.2.2 *Criteria for the Evaluation of Significance*

A number of criteria have been used in this assessment to evaluate the significance of the impacts identified. The criteria have been selected through a review of the

theoretical literature (ERL, 1981; Thompson, 1990; Westman, 1985), other impact assessment reports (EEU, 1990; EEU, 1991) and an analysis of what DBNM should be aiming for in planning for mine closure.

With respect to each impact these criteria are:

**Compatibility with DBNM's Draft Policy and Planning Objectives for Mine Closure:**

DBNM's draft policy for mine closure (see table 2.1, pg 10) explicitly recognises its responsibilities to Namaqualand, and sets out its goals during mine closure. Impacts which are not compatible with these objectives are, therefore, important and must be addressed in any planning. Equally important are positive impacts which are compatible. These must be identified, assessed and if possible enhanced.

**Ability to Produce Secondary and Higher-Order Impacts:**

The ability of an impact to lead to secondary and higher-order impacts is an important indicator of the priority that it should be given, and possibly of the resources that should be allocated to it in mine closure planning. By mitigating a negative impact that can lead to other negative impacts is obviously an efficient allocation of resources. Putting more effort into positive impacts that do the same is similarly efficient. The use of this criterion allows planners to adopt an approach that addresses the causes of problems rather than their symptoms.

**Potential to be Controversial and lead to Conflict:**

Any impact that has the potential to be controversial can lead to conflict and, therefore, has the potential to compromise any planning initiatives. Identifying this potential for conflict also serves to establish the strength of the attitudes and perceptions relating to the impact.

**Compatibility with Future Political and Legislative Environments:**

Changing political and legislative environments will mean that DBNM will have to adopt new strategies and responsibilities in the future. Although difficult to predict, these need to be considered in light of the long-term view being considered in this planning.

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**TABLE 2.1 OUTLINE OF DBNM'S DRAFT POLICY ON MINE CLOSURE**


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**Purpose:**

To guide the mine closure process in such a way that:

- mine productivity and morale is maintained until final shutdown;
- the closure is done in a socially responsible manner which aims to assist in the generation of alternative employment opportunities and minimise negative effects on local regional economies and infrastructure;
- appropriate alternative land use options and employment opportunities are timeously identified, thereby allowing a smooth transition from mining to other sources of local and regional income;
- damage to the environment (social and natural) is minimised;
- future generations will not be prejudiced in terms of the existing range of land use options;
- optimal sustainable use is made of local resources and opportunities which may arise after mine closure.

**Planning Objectives:**

- minimise the disruption to existing social systems that will be caused by the gradual closure of the DBNM diamond mining activities;
- optimise the residual social and environmental conditions (after mining has ceased) for De Beers and local communities by managing the transition from a mining operation to alternative sustainable land uses, employment opportunities and business practices;
- take the necessary steps to determine the most appropriate land use and business options and means by which mined land can be rehabilitated to the degree required for the identified land uses;
- take into account the concerns of parties affected by the envisaged changes and give such parties the opportunity to suggest ways in which their concerns may be addressed;
- invite the affected parties to participate in the planning process at specific stages of the process;
- remain in compliance with all applicable legislation;
- promote an environmentally responsible ethic through the actions of the organisations and its contractors.

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(Source: EEU, 1991a)

**Whether and to what Degree the Impact is Reversible:**

This criterion gives direct consideration to the unavailability (or otherwise) of the impact, and its potential for mitigation.

**Potential for Optimisation:**

This refers to positive impacts and focuses on their ability to be enhanced. This again gives more direction to any planning initiatives by showing how resources can be committed for greater benefit.

**Potential for Cumulative Impacts:**

Cumulative impacts can occur when:

- impacts on the environment take place so frequently in time or so densely in space that the effects cannot be assimilated by the environment; or,
- impacts from one activity combine with those of another to produce a greater impact or a different impact (Peterson et al, 1987).

The ability to recognise and mitigate cumulative impacts is an important one and needs to be considered in any assessment.

**Intensity:**

Factors which should be considered when examining an impact's significance in terms of intensity include:

- the change from background levels as a result of the impact; and,
- whether the impact is concentrated in particular locations, business sectors and/or vulnerable social groups e.g. children, women and/or the aged.

**Who is being Affected?:**

This criterion involves a consideration of those to whom DBNM have particular responsibilities i.e. DBNM workers, their families and communities.

**Whether the Impact is Long-Term or Short-Term:**

The timing of the impact and its duration are important considerations in terms of the resources that should be allocated to them in planning.

**Sphere of Influence of Impacts:**

In the case of this project impacts that are felt in Namaqualand and the Herschel District at a local and regional scale are, in terms of this criterion, more significant than those felt at the level of Development Region A, nationally and internationally. The reasons for this is that there are areas to which DBNM has a particular responsibility.

Using these criteria the impacts are then rated, as being of NO, MINOR or MAJOR significance. The assigning of one of these classifications depends on the emphasis that should be given to the impact in DBNM's planning. No significance means that DBNM should not consider this impact in their planning. Minor significance means that the impact should receive a low priority in any future planning. Major significance indicates that DBNM should allocate significant resources to address this impact.

The assigning of significance to a particular impact depends on the criterion or criteria relevant to that impact and, if several are relevant, their relationship to one another. Further guidance on this for each of the ratings is given below:

- NO SIGNIFICANCE : the important criterion here is who the impact is affecting. If DBNM had no responsibilities to the affected parties then the impact would receive a no significance rating.

- MINOR SIGNIFICANCE : important criteria here would be the intensity of the impact. If the impact was a secondary or higher-order impact of a low intensity it would be considered of minor significance even though, for example, DBNM employees were affected.

- **MAJOR SIGNIFICANCE** : the important criteria here are whether or not the impacts are compatible with the draft policy, their potential to be controversial and whether they lead to secondary and higher-order impacts.

## **2.3 RESULTS OF THE ASSESSMENT OF IMPACTS**

Readers should refer to the summary tables of impacts in the executive summary as an overview of this section.

### **2.3.1 Introduction**

The results of the assessment of impacts are divided into two sections. The first deals with the impacts of the proposed mine closure **before** the mining operations finish i.e. before AD 2002. The second deals with the impacts that will occur **after** mining finishes.

This distinction is important for a number of reasons. Firstly, mine closure does not merely involve the cessation of mining activities. It includes the **entire decommissioning process** from the moment the decision is taken to close down the mine. This includes the research and public involvement process which led up to the production of this report. Secondly, the distinction indicates clearly that the planning responses to mine closure have to consider two particular time frames (i.e. before and after mine closure) and that the impacts will occur from the present to AD 2002 and beyond.

The impacts in the following sections are categorised in two ways. Firstly, in terms of the time period they refer to (i.e before or after closure) and secondly, according to the type of impact. Several categories are used here:

- **Impacts on Values, Attitudes, Beliefs and Perceptions** : often referred to as socio-psychological impacts (Albrecht and Thompson, 1988), these types of impacts occupy a central place in the new generation of social impact assessment methodologies. They are particularly important as such impacts can lead to conflict.

- **Economic Impacts** : this category particularly refers to impacts on e.g. businesses, money flows and the regional economy.
- **Impacts on Public Sector Revenues, Costs and Service Provision** : this category includes elements of fiscal impact assessment (Halstead et al, 1991), as well as an understanding of what can happen to the provision and distribution of services.
- **Impacts on Community Structure and Social Organisation** : this category includes impacts on household and family structure, community institutions and ways of life.
- **Other** : this default category is used for impacts that do not fall into any of the above.

### 2.3.2 Impacts before Closure

#### 2.3.2.1 *Impacts on Attitudes, Values, Beliefs and Perceptions*

a) <b>Impact Statement</b> : Increasing Awareness of DBNM's Intention to Stop Mining.
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#### Impact Description

As a direct result of the study, and particularly the public involvement process, there will be an increasing awareness in the region of the fact that DBNM will be closing. This impact can be seen as either positive or negative. Positive in that it allows people to consider what the impacts will be, how it will affect them and, most importantly, how they should respond to it. It can also be viewed negatively, in that it could lead to feelings of anxiety and uncertainty. It is also likely to lead to secondary impacts that are described later in this section.

Another positive aspect of this impact is that it addresses the general disbelief that surrounds closure. This disbelief

is reflected in a number of results. A question in the employee survey particularly asked whether employees believed that DBNM would close in 11 years time. The results showed that only 27 per cent of the total sample believed that it would (BIR, pg 76). Forty eight per cent answered no, while the remaining 25 per cent said that they did not know. Uncertainty about the reality of mine closure was also expressed at meeting with the Komaggas\Buffelsrivier community meeting (BIR, pg 89), in the responses to the business survey (BIR, Appendix H) and during interviews with key informants (e.g. Stone, Pers.Comm.; Becker, Pers.Comm).

This impact was felt as soon as the study began and is long-term, in that it will continue for the period up to the actual cessation of mining.

#### Impact Significance

This impact is considered to be of **MAJOR** significance. It has the potential to lead to secondary impacts, has great potential for optimisation and is highly compatible with achieving the objectives of DBNM's policy for mine closure including its commitment to an open process.

#### Degree of Confidence in Prediction

There is a *high* degree of confidence in this prediction. The results of surveys undertaken clearly show this. The fact that DBNM will be continually informing people about closure in the future indicates that it will continue.

#### Further Information Requirements

There is a need for the further information on the most effective ways to communicate with people. This means that the way that information is distributed throughout Namaqualand should be investigated e.g. what newspapers are available and who their readers are; what is the role of radio in the region.

b) Impact Statement : Conflict over Land Owned by DBNM

Impact Description

The Namaqualand communities that were consulted during the public involvement programme (i.e Steinkopf, Buffelsrivier and Komaggas) have a perception that the land currently owned by DBNM belongs to them and should be returned once mining has stopped (BIR, pgs 89, 91 and 95). There is also a belief that DBNM obtained the land in an unfair manner (BIR, pgs 89 and 91). DBNM have clearly stated that they will maintain ownership after closure and intend to farm the land. The potential for conflict is clear and is a secondary impact of the awareness that DBNM are going to close down operations.

Impact Significance

This impact is considered to be of MAJOR significance. The impact is obviously highly controversial and has the potential to lead to major conflict between DBNM and the communities involved. There is also a problem in terms of future political and legislative developments.

In the future there will be a reassessment throughout South Africa of the land rights of communities that claim to have had their land taken away from them. These affected communities are likely to want their claims investigated and settled. As mine closure approaches this potential for conflict will increase. The involvement of Non-Governmental Organisations (NGOs) will also mean that the issue will be a focus in the near future. The Surplus People Project (SPP), for example, has recently advertised for a researcher to investigate land claims in Namaqualand on a one-year contract (Weekly Mail, 1992).

Degree of Confidence in Prediction

There is a high degree of confidence in this prediction. This is indicated by the similarity of responses from the three communities consulted (BIR, pgs 89, 91 and 95). This agreement was evident between different sections of the community that might have been expected to have conflicting viewpoints, i.e the community organisations and the

management boards. Uncertainty exists around the areas that are actually claimed by the different communities.

#### Further Information Requirements

There is a need for further investigation into land claims with regard to the particular communities identified, concentrating particularly on the area that DBNM owns and intends to keep. Other communities that lay claim to these areas need to be identified.

DBNM must also have precise knowledge of the history of land ownership, so that their position can be evaluated.

c) Impact Statement: Development of Negative Attitudes Towards DBNM.

#### Impact Description

The research for this assessment has exposed a number of critical and negative attitudes towards DBNM which will continue to be expressed as closure approaches.

Comments that arose consistently in meetings in Namaqualand (BIR, pgs 88-95) included such sentiments as:

- DBNM has shown a lack of financial commitment to the Namaqualand region as evidenced by the fact that profits generated have not been retained in the region;
- DBNM's motive in commissioning an impact assessment is questionable; and
- The real reason behind DBNM's closure is the fear of nationalisation.

Negative attitudes towards DBNM were also expressed in the business survey (BIR, Appendix H pgs 3-4).

Employees' disputes with DBNM are also likely to be articulated more as the closure date approaches. Responses given to the "any further comments" of the employee survey reflect this. General complaints about DBNM made up 15 per cent of the responses (BIR, pg 82).

### Impact Significance

This impact is considered to be of MAJOR significance. It is incompatible with DBNM's policy, particularly in terms of its effects on employee morale. The effect will be long-term.

### Degree of Confidence in Prediction

The confidence level with respect to this impact is high. This is indicated by the similarity of collective responses in community meetings and the specific responses of individual workers.

### Further Information Requirements

More information is needed on the reasons for these attitudes and their development.

d) Impact Statement : Conflict Over Retrenchment Planning
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### Impact Description

Issues relating to employee retrenchment and the form of the retrenchment package were brought up frequently during the employee survey. The issues raised were varied. They included:

- concern over loss of benefits such as medical aid and pension (BIR, pg 75);
- concern that DBNM would not pay compensation for retrenchment (BIR, pg 75);
- concerns over what would happen to employees when the mine closes. In response to the open question on mine closure 30 per cent brought up this issue (BIR, pg 80), and a further 21 per cent asked questions regarding compensation and mitigation (BIR, pg 80).
- in the general complaints category of the "any comments on mine closure?" question, the issues of irregularly paid pensions and that the number of years' service has been reduced recently on pay-slips were raised.

The form of the retrenchment packages was also raised at the meeting with the Komaggas\Buffelsrivier community (BIR, pg 88) and the Steinkopf community (BIR, pg 95).

This is a controversial impact that could lead to conflict. It is also a long-term impact that will become of more immediate concern as mine closure approaches.

#### Impact Significance

This impact is of MAJOR significance. It has the potential to lead to conflict which may lead to a lowering of morale in the workforce before closure. This would mean that it contradicts the intentions of DBNM's draft policy.

#### Degree of Confidence in Prediction

There is a *high* degree of confidence surrounding this prediction. The impact was identified by a number of interested and affected parties and is one that has lead to conflict elsewhere (Argus, 1992).

#### Further Information Requirements

There is a need to substantiate the problem areas raised by the employees. There is also a need to evaluate what problem areas have lead to conflict in other retrenchment situations.

#### *2.3.2.2 Economic Impacts*

a) Impact Statement : Reduced Business Confidence .
---

#### Impact Description

Knowledge of the closure and the resultant uncertainty will probably lead to reduced business confidence in the area as DBNM is considered to be one of the mainstays of the Namaqualand economy (BIR, Appendix H). This impact will be enhanced by the implication that other mines (such as

Alexcor) will close as well in the near future (BIR, Appendix H).

This impact can lead to secondary impacts such as the movement of capital out of Namaqualand, as the area is seen as a poor investment (BIR, Appendix H). Moreover it serves to diminish the probability of new companies moving into the region. It therefore has the capability to lead to cumulative impacts.

This reduced confidence is also likely to change the way that some businesses interrelate with DBNM, DBNM employees and other businesses. The form of these changes depends on the nature of the businesses in question. For example, those that provide credit to DBNM workers may reduce credit limits and make greater provision for bad debts.

#### Impact Significance

This impact is of MAJOR significance. It is incompatible with DBNM's objective of minimising negative effects on the regional economy. It also has the ability to lead to secondary and cumulative impacts e.g. in terms of reducing the region's economic activity even further.

#### Degree of Confidence in Prediction

There is a low degree of confidence regarding this impact. Answers from the open questions in the business survey allude to this impact (BIR, Appendix H), but there is no conclusive proof. The unpredictability of future events, e.g. the price of copper and therefore the potential for mining expansion in the region also increases the level of uncertainty.

#### Further Information Requirements

It would reduce the amount of uncertainty surrounding the impact if a survey of businesses in Namaqualand was carried out to assess the level of business confidence in the region. Identifying the key variables for influencing this confidence would be useful for future planning.

A clearer understanding of how businesses will respond to the knowledge of closure would be useful. When the survey

was carried out businesses had no forewarning and had obviously not clearly thought through the consequences.

### 2.3.2.3 *Impacts on Community Structure and Social Organization*

<p>a) Impact Statement : Affected Households will Look for and Develop Alternative Incomes</p>
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#### Impact Description

The knowledge of the proposed closure is likely to mean that the households of DBNM employees, and those households that perceive that they will be affected by closure e.g. employees of businesses that supply DBNM, will of necessity have to look for alternative sources of income.

This impact has the capacity to lead to secondary impacts. For example 81 per cent of DBNM employees from the Transkei own livestock (BIR, Appendix A pg 11). As 89 per cent also stated that it would be difficult to find alternative employment, it seems likely that livestock-farming will be developed as an alternative source of income. Most of these workers come from the Herschel district, an area where grazing lands are severely strained and in short supply (BIR, Appendix C pg 7). This could, therefore, lead to further environmental degradation and conflict in the community over land allocation. A similar scenario is likely to occur in Namaqualand, although on a smaller scale, as only 28 per cent of the Namaqualand sample of the worker survey own livestock.

The onus for finding alternative sources of income will fall on the wives. This is especially true of the Transkei group, of whom 100 per cent are male (BIR, pg 63) and 100 per cent are married (BIR, pg 66). Comparative figures for the Mine group are 62 per cent and 82 per cent. For the Namaqualand group these figures are 92 per cent and 46 per cent respectively. This imperative is likely to mean that women's work loads will increase (an issue of particular concern to women in Komaggas (BIR, pg 92)). Children will also play a

role in this initiative, which may mean that they have to stop going to school. This impact will gather momentum as the time for closure draws closer.

#### Impact Significance

This impact is considered to be of **MAJOR** significance. This is because it has a strong potential to lead to negative secondary impacts. The main burden of this impact will fall on women and children leading to a decline in their quality of life. More importantly this impact is particularly directed at DBNM households.

#### Degree of Confidence in Prediction

There is a *high* degree of confidence regarding this impact. Responses from the community meetings (BIR, pgs 88 and 92) and the employee survey (BIR, pg 74) give a strong indication that people will look for alternative incomes

#### Further Information Requirements

None.

#### 2.3.2.4 Other Impacts

<p>a) Impact Statement : Involvement of Non-Governmental Organisations (NGOs).</p>
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#### Impact Description

NGOs are likely to get involved in the issue through requests by community organisations. The Surplus People Project (SPP) and the Development Action Group (DAG) have a history of involvement in Namaqualand that is likely to continue with this project.

### Impact Significance

This impact is of MINOR significance. The only criterion here is that there is the potential for optimisation, by involving these organisations in planning.

### Degree of Confidence in Prediction

There is a high level of confidence attached to this impact, due to the fact that NGOs have been active in Namaqualand for a number of years (e.g. see SPP, 1991) and there are indications that this involvement is to be increased. For instance, SPP have advertised posts for work in Namaqualand and DAG are to begin regional planning research in the area (BIR, Appendix E pg 5). In the Herschel area the Environmental and Development Agency (EDA) has been working in the area for a number of years and has begun a more active involvement in the area (BIR, Appendix C pg 8).

### Further Information Requirements

More information is needed with respect to the roles that these organisations see themselves fulfilling in the Namaqualand and Herschel areas. Their capacity to help in the planning for mine closure also needs to be investigated.

## **2.3.3 Impacts After Closure**

### *2.3.3.1 Economic Impacts*

a) Impact Statement : Increase in the Number of Unemployed
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### Impact Description

Unemployment will result from the retrenchment of workers by DBNM and functionally-linked businesses in Namaqualand. Approximately 2 500 of DBNM's workers claim Namaqualand as their place of abode. All of these will be retrenched except for the 100 or so workers that will be kept for DBNM's post-closure farming operation. There are approximately 700

workers who come from the Herschel District of Transkei. This includes those workers that are currently on leave, and are taken off the records until they return and renew their contracts (BIR, pg 59). Approximately 35 per cent of these at the time of closure will be over the age of 60 and on a pension. These workers (approximately 245) will have been replaced by people from Namaqualand due to DBNM's decision to discontinue the migrant worker system. So, at closure the number of DBNM workers from Namaqualand who find themselves unemployed will be approximately 2 645 i.e 2 500 minus 100 plus 245. The Herschel District will experience an increase in the number of unemployed of approximately 450 as a result of the closure.

Retrenchment will also occur in other businesses in Namaqualand which do business with DBNM and/or its employees. In response to the business survey, 30 per cent of the businesses interviewed said they would retrench workers (BIR, pg 131). Out of the 5 325 workers employed in businesses (not including the other mines) in Namaqualand, 253 would be retrenched according to the survey results (BIR, pg 135). It is assumed that DBNM's closure will not affect the operations of the other mines (see comment by the Okiep Copper Company for confirmation (BIR, Appendix D pg 4)). The total number of people that are likely to be made unemployed in Namaqualand by the DBNM closure is therefore approximately 3 000. This is in the region of 5 per cent of the population of Namaqualand which in 1991 stood at 60 084 (BIR, pg 10).

#### Impact Significance

This impact is considered to be of **MAJOR** significance. Unemployment can lead to a number of secondary impacts, for example increases in social pathology. It is also incompatible with DBNM's policy objectives. This impact is also likely to be incompatible with future political and legislative developments. This will be due to the strength of organised labour in the future of the country, one of whose concerns will be large-scale retrenchments (as it is at the moment). This impact is also irreversible as the mines' reserves will be exhausted.

### Degree of Confidence in Prediction

The degree of confidence concerning this impact is low. This is due to the uncertainty regarding the figures for Namaqualand. Businesses were not warned in advance of our survey and could, therefore, not evaluate its implications accurately. The figures for DBNM's retrenchment are based on the assumption that similar numbers of workers will be employed in AD 2002. A limitation of the analysis was that no quantification was made of the errors involved. For the Transkei the prediction is much more reliable due to DBNM's policy on migrant labour. The only variable here is the decision on what the pensionable age will be.

### Further Information Requirements

More work is necessary to quantify the numbers of unemployed as a result of this retrenchment, especially in the industries linked to DBNM.

b) Impact statement : Financial Losses of Businesses due to DBNM's Closure.

### Impact Description

The losses experienced by businesses will be due to DBNM no longer buying directly from businesses and the reduced incomes of DBNM employees. The effects of this will be felt in Namaqualand, in Development Region A, nationally and internationally.

Springbok businesses receive R75,3 million through business transactions with DBNM directly and from its employees indirectly. This is approximately 16 per cent of the turnover of Springbok (BIR, pg 137). The rest of Namaqualand (including Komaggas and Steinkopf) is dependent on DBNM and its employees for 22 per cent of its turnover (BIR, pg 137), which amounts to approximately R31 million per annum. Particular areas are more severely affected than others. In Komaggas and Steinkopf 36 per cent and 40 per cent of the turnover respectively is derived from the employees of DBNM. In total DBNM-generated expenditure accounts for 17 per cent of Namaqualand business turnover (BIR, pg 127).

The results of the input-output analysis show that the rest of South Africa, i.e everything except for Development Region A, would suffer the greatest financial loss from the mine closure in 1995 (BIR, pg 116). The amount is approximately R91 million. Region A would lose approximately R14 million and internationally the loss would be of the order of R11 million (BIR, pg 116). The Development Region A service sector will suffer the greatest percentage loss due to DBNM's closure. 7,63 per cent and 6,77 per cent for closure in 1985 and 1995 respectively (BIR, pg 115). It will also experience the greatest loss in terms of money (R9,05 million and R9,19 million for closures in 1985 and 1995 respectively (BIR, pg 115).

#### Impact Significance

This impact is considered to be of **MAJOR** significance. The impact is irreversible, and the losses are concentrated in particular locations e.g., Komaggas and Steinkopf and in specific economic sectors e.g. the service sector. It also has the potential to lead to secondary impacts, for example, retrenchments.

#### Degree of Confidence in Prediction

There is a *high* degree of confidence with regard to this impact. A number of different sources have shown the same trend (e.g. from the businesses themselves), as have different methodologies (e.g. input-output analysis and the business survey). There are doubts about the values provided by businesses, as there were cases of over-reporting when values of transactions were given by businesses dealing directly with DBNM were checked with DBNM's own figures.

#### Further Information Requirements

There is a need to analyse in detail a number of businesses that deal directly with DBNM and to follow the effects of the loss of DBNM's business through to their suppliers, to achieve a greater understanding of the linkages involved.

### 2.3.3.2 Impacts on Public Sector Revenue, Costs and Service Provision

<p>a) Impact Statement : Decline in Central Government Revenue.</p>
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#### Impact description

Central government accrues revenue from DBNM in the form of taxes on the mining operation and income tax paid by employees. It is impossible to ascertain what proportion the Namaqualand operation contributed to the R79 million paid in taxes by De Beers Consolidated Mining Ltd (DBCM, 1991), as the figures given in the annual report are a composite of the different mining holdings that constitute the company. DBNM employees paid approximately R12 million in income tax during the 1991\92 tax year (BIR, pg 34). When DBNM closes these payments will stop.

#### Impact Significance

This impact is of NO significance. Central government tax revenues are not the responsibility of DBNM. The loss is likely to be compensated for by the commissioning of the Venetia mine in the Northern Transvaal and the growing activities of DBNM's offshore mining activities (DBCM, 1991).

#### Degree of Confidence in Prediction

There is a *high* degree of confidence with regard to this impact due to the information coming from DBNM itself. The only uncertainty lies with the amount of tax paid by DBNM on its own.

#### Further Information Requirements

None.

b) Impact Statement ; Decline in Local Government Revenue
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Impact Description

DBNM pays fees to the Namaqualand Regional Services Council (RSC) as do most of the businesses that are linked to DBNM. With the closure of DBNM and the reduced turnovers and staff numbers (fees are paid in relation to turnover and payroll; see BIR, pg 25) and in businesses dependent on it, there will be a drop in RSC income. The total fees paid by DBNM accounted for 29,6 per cent of the total fees received by the RSC. Combined with the fees paid by dependent businesses, the final figure would probably exceed one third of the RSC's total fees.

Municipalities in the region e.g. Garies and Hondeklipbaai will also feel an effect as financial flows in their areas are reduced.

Impact Significance

This impact is considered to be of **MAJOR** significance, as there is a potential for secondary and cumulative impacts. Closure will mean a greater demand on RSC services such as clinics while its income is declining. This will severely constrain its ability to provide important social and physical infrastructure.

Degree of Confidence in Prediction

The degree of confidence in this case is *low*. The reason for this is incomplete information on, e.g. how the municipalities in the area raise money, and also inconsistent information provided by the RSC. Page 37 of the BIR shows that figures provided by the RSC's accounting department indicated that DBNM provided 29,6 per cent of the total fees received by the RSC. The figure given for this was R735 673. The Chairperson of the RSC (Stone, Pers.Comm.) informed us that R9 million was generated from within the region. If so DBNM's contribution to the RSC's budget is approximately 8 per cent.

### Further Information Requirements

The sources of income for the RSC need to be elucidated clearly, as does its budget. The actual contribution of DBNM to this budget needs to be calculated accurately so the implications for the RSC can be clearly seen.

<p>c) Impact Statement : Reduced Ability of Local Government to Provide Adequate Services</p>
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#### Impact Description

This impact is likely to occur as a result of the reduced incomes of the RSC, municipalities and management boards, the inability of unemployed residents to pay for services and the greater demand placed on the services. The increase in demand will be due in part to the loss of DBNM benefits, e.g medical benefits. The decline in health services was particularly mentioned by the Steinkopf community (BIR, pg 94). This will be a particular problem for those communities with a high proportion of DBNM employees, i.e Komaggas, Steinkopf, Buffelsrivier and Hondeklipbaai (BIR, pg 56). The impact is likely to be a long-term one that starts developing soon after the money from the retrenchment packages runs out. It could also lead to secondary impacts such as declining health standards.

#### Impact Significance

This impact is considered to be of **MAJOR** significance. It is incompatible with the objectives of DBNM's policy. In terms of intensity, it is also focused on particular communities.

#### Degree of Confidence in Prediction

The confidence level surrounding this impact is *low*. This is due to the fact that insufficient work was done on the way local government operates in the Namaqualand region and how it finances itself. The extent to which these public services are supported by DBNM was also not investigated.

### Further Information Requirements

Further work needs to be done on the system of local government in Namaqualand and the way it is financed, and on DBNM employees' support of local services.

#### 2.3.3.3. *Impacts on Community Structure and Social Organization*

<p>a) Impact Statement : Movement of People Out of Communities</p>
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#### Impact Description

If, after closure, people do not find employment, then they are likely to move to other areas to find work. This is more likely to involve men, young people and educated people. This movement of people is likely to have serious implications for the social fabric of the community. The movement of men away from their homes is likely to lead to the breakdown of family structure, as has occurred with migrant labour (Wilson and Ramphela, 1989). Greater responsibilities would fall on women, especially in terms of providing for their children. Another important consequence of this impact, particularly of educated people, is that the community becomes impoverished in terms of potential leaders.

The impact is likely to be long-term and is located in communities where DBNM workers are a significant proportion of the breadwinners in the community.

#### Impact Significance

This impact is of MAJOR significance. It is incompatible with the social provisions of DBNM's draft policy and is concentrated at particular locations. It is also likely to lead to higher-order impacts e.g. families moving out of the area will lead to falling school enrolment.

### Degree of Confidence in Prediction

There is a *high* degree of confidence regarding this impact. The employee survey shows that 86 per cent of the DBNM employees from Namaqualand (BIR, pg 74) would look for alternative employment. As the opportunities for employment in Namaqualand are limited, this will necessitate people moving away from the region to find work.

### Further Information Requirements

None.

b) Impact Statement : Declining Educational Standards
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### Impact Description

The likelihood of declining educational standards is of great concern to the communities consulted (BIR, pgs 88, 93). This impact is likely to be a product of a number of factors. Dependents of retrenched workers not able to continue their schooling, as they are not able to pay school fees and are no longer receiving DBNM bursaries, will mean that schools lose important sources of income. Combined with less state support due to a decline in the number of pupils, exacerbated by the movement of families out of communities in search of work, and the result is declining standards in education.

DBNM has also been described as the most important supporter of technical training in the region (BIR, pg 93). This support would end with closure.

### Impact Significance

This is an impact of **MAJOR** significance. It was raised by all the communities consulted in the area and has the potential for cumulative impacts. In the long-term this impact could lead to deepening social decline in the area. Secondary impacts such as increased illiteracy rates could possibly occur.

Degree of Confidence in Prediction

There is a *high* degree of confidence in this prediction, as all the communities and their respective management boards raised it.

Further Information Requirements

There is a need for further information on the finances of schools in Namaqualand and the Herschel District, and what exactly the role of DBNM employees in supporting them is.

c) Impact Statement : Decline in the Quality of Life of Affected Households and Communities

Impact Description

The combination of a number of negative impacts due to mine closure is likely to lead to a decline in quality of life for both affected households and communities.

For communities, the combination of the lowering in educational standards, the decline in support for important community institutions such as churches, the reduction in public services and the increase in social pathologies is likely to lead to this impact.

For affected households the combination of dependents having to leave school, women having to find alternative sources of income and the movement of people away from their homes could lead to a similar decline. This impact would only materialise after a number of years when all the other impacts have materialised. Once such a decline has occurred, it is difficult to reverse.

Impact Significance

This impact is of **MAJOR** significance. It is long-term and is incompatible with the objectives of DBNM's draft policy.

Degree of Confidence in Impact

The degree of confidence in this impact is *high*, as it is the product of impacts that are likely to happen.

Further Information Requirements

None.

## CHAPTER 3

### POTENTIAL MITIGATION MEASURES

#### 3.1 INTRODUCTION

Mitigation refers to efforts to **minimise** the economic and social impacts that are viewed as undesirable and to **optimise** those changes which are considered to be beneficial (Leistritz and Murdoch, 1981). This approach is one that tends to address the symptoms of problems rather than the problem itself. This section will suggest mitigatory measures for individual impacts but will also take a more complete perspective of the problem and use that to suggest measures that will be more efficient than a simple addressing of each impact. The first step involves defining the exact nature of the problem.

##### 3.1.1 Defining the Problem

The problem results from the fact that DBNM's viable ore reserves are running out and will be depleted by the year 2002 leading to the closure of the mine. The serious implications of this closure on the region of Namaqualand and its communities are, however, a product of two factors: the dependency of the region on mining in general (BIR, pg 25); and De Beers Namaqualand Mines (DBNM) in particular, and the region's declining economy (BIR, pg 21). Dependency on non-renewable resources, such as diamonds, can become a serious developmental problem. If mining has not served to "kick-start" other forms of development, as was the case on the Witwatersrand, the area will decline economically as the reserves terminate. Many mineral-rich areas in the world (Bradbury, 1983) have experienced this problem and the "Boom-Bust" cycles that have also been a feature of the Namaqualand economy (BIR, pg 22). The impact of DBNM's closure is therefore largely a function of the vulnerability of the region's economy.

What this suggests is that the region needs to be placed on a more secure and sustainable path which would provide for the long-term prosperity of the area. The question is, does DBNM have a role to play in such an initiative?

### **3.1.2 Should DBNM Play a Developmental Role in the Region?**

This question is one that DBNM has to address as a company before it starts planning for mine closure. The issue is whether DBNM should adopt a broader view of its responsibilities to Namaqualand as a region, as opposed to merely its employees, their families and immediate communities. The draft policy on mine closure (see table 2.1, pg 10) indicates that there should be an appreciation of the regional implications of mine closure, and a socially responsible response to them, but this document is only an advisory one at the moment.

A more powerful argument for such an approach comes from an analysis of the impacts themselves. The major causes of the social and economic impacts that are likely to result from closure are unemployment and the loss of DBNM's contribution to the regional economy. In general, the foci of developmental initiatives are to create jobs and generate economic activity. A positive response by DBNM in this respect would also, by implication, offset the negative effects of any secondary impacts. An understanding of the ramifications of linkages suggests that there is a more efficient way of mitigating impacts than merely addressing them in isolation of one another and their causes. Another powerful argument for intervention is that DBNM can take a long-term view of planning for mine closure, as it has undertaken this planning initiative ten years before the actual event. If closure or retrenchment was, for example, a month or two away then a narrower approach would have to be taken.

### **3.1.3 A Development Trust for the Namaqualand Region**

There is no suggestion that DBNM should create jobs to compensate for those lost through closure. It could however

stimulate development in the region by taking the initiative to set up a Development Trust in the Namaqualand region. This would involve all potentially interested parties in Namaqualand including organised labour, businesses and the public sector. Its brief would be the identification and promotion of development opportunities in the region and the addressing of particular developmental problems. A regional and consensual perspective is needed to guide Namaqualand's future development and it needs to be initiated as soon as possible. The Namaqualand region is peripheral to the South African core regions (BIR, pg 21). Local initiative is therefore important. A financial contribution to a newly constituted Development Trust, combined with strong moral support may prove, in the long run, to be the most effective way of mitigating the impacts of closure.

Though the rationale for such a Trust may be convincing, the practicalities of it make it a difficult option to pursue. There are however indications that such an initiative may work in the Namaqualand region:

- throughout the country there is a move towards forums which bring parties together to achieve common goals. An example of this is the Economic Forum currently being set up by government, business and organised labour which will eventually lead to joint decision making on ways to stimulate the economy (Cape Times, 1992b);
- Namaqualand already has its own fledgling political forum which is bringing together the different political groups at work in the region (Stone, Pers. Comm.);
- there are already a number of development initiatives in the area which, if successful, will move the regional economy away from its dependence on mining. These include the proposed West Coast National Park and the diversification of Alexcor's operations (BIR, pg 31). A Trust could provide support for such initiatives;
- there is also a growing awareness of the dependency of the regional economy on mining;
- an economic development strategy for Region A is being researched by the Regional Development Advisory Committee

for Region A. This provides an opportunity for help in development planning in the region; and,

- there is an example of such a structure in the country. The experiences of the Independent Development Trust could provide valuable insights into the way such an organisation should operate.

If DBNM took the initiative on this, there would be support for it from business and state structures in the region, and it would also help address some of the negative perceptions that exist towards DBNM.

### 3.2 APPROACHES TO SPECIFIC IMPACTS

Whatever the success of such a structure DBNM will still have to deal with some residual impacts for a number of reasons:

- it is unlikely that all the jobs lost in the region could be replaced by new jobs by the date of closure; and,

- it is also unlikely that all DBNM employees retrenched would find work even if there were strong growth in the region. There will inevitably be a time-lag as workers find jobs, and businesses develop different opportunities.

This means that DBNM's approach to mitigation must also contain measures for specific impacts, as well as the promotion of regional development.

The assessment in Chapter 2 indicates whether impacts should be given high priority in planning or not. This gives an indication of the resources that should be committed to mitigating particular impacts. What DBNM must develop is an adaptive planning process that will anticipate and respond to the changes that will occur in the future. This means that there will have to be a continual evaluation process to ensure that the best use of resources is made. It also means that DBNM will have to commit staff to this purpose for a period after the mine has closed down.

The following two sections suggest possible mitigatory measures for each of the impacts identified.

### **3.3 Potential Mitigating Measures for Impacts Occurring Before Closure**

#### *3.3.1 Impact : Increasing Awareness of DBNM's Intention to Close in AD 2002*

This impact has potential for optimisation in terms of making as many people as possible aware of the prospect of closure. This will mean that people are able to anticipate any impacts on, for example, their businesses and plan for them. This could be done by continually informing communities, particularly those most affected like Steinkopf through appropriate newspapers (e.g. Namaqua News) and public meetings. Constant briefings of DBNM employees will ensure that they are kept up to date with plans for closure. Businesses that deal directly with DBNM should be forewarned about developments in the closure process.

#### *3.3.2 Impact : Conflict Over Land Owned by DBNM*

DBNM require more information about the land-claims of communities on their land. Resolving this sensitive issue is difficult and will probably involve a process of independent arbitration. If DBNM consider, after investigating the issue, that the communities do have valid cause, then an option might be to buy other land in the area to be exchanged for the land occupied by DBNM. This would be expensive, but the return of land would have other negative impacts for DBNM e.g. the occurrence of illegal diamond mining as an alternative income for unemployed people would compromise DBNM's business interests. It might also impact negatively on the rehabilitation programme. This purchase of land for communities might also be used to mitigate other impacts e.g. the further over-grazing of land, as a result

of people looking to small-stock farming as an alternative income.

DBNM should also help those non-governmental organisations researching this issue e.g. the Surplus People Project, to help resolve the uncertainty surrounding it.

### *3.3.3 Impact : Development of Negative Attitudes towards DBNM*

The only way to ensure that this impact is successfully mitigated, is by informing people continually about the plans for closure and ensuring that these plans are executed. People who should be kept informed are those that have particularly requested it e.g. employees (BIR, pg 82). Any information programme must ensure that people who have expressed an interest are kept continually informed to prevent rumours from spreading. Mitigating this impact successfully will be one of the ways of ensuring that the measures DBNM decides to undertake will be received positively.

### *3.3.4 Impact : Conflict Over Retrenchment Planning*

During the employee survey it was requested particularly that workers and their unions should be involved in the planning process for closure. Acceding to this will ensure that employee concerns are identified and dealt with quickly. The setting up of a specific process to deal with disputes around retrenchment is likely to help with any potential conflict.

### *3.3.5 Impact : Reduced Business Confidence*

The establishment of a Development Trust and its operation would ensure that business confidence is maintained or that the reduction is not so severe. Once again, ensuring that

information about the closure and the planning for it, is available regularly and in an accessible form, is important.

*3.3.6 Impact : Affected Households will search for, and develop, Alternative Sources of Income*

This impact concerns the uncertainty and insecurity people may have about the future. The ability to assuage these feelings will ensure that the impact is mitigated successfully. Various methods can be employed to increase the possibility that there will be opportunities for work after retrenchment:

- by providing opportunities for training during the period up to closure in e.g. small business skills and/or literacy;
- by also providing for the training of DBNM dependents through the setting up of training projects in affected communities;
- by helping develop other job opportunities through the proposed Regional Development Trust; and,
- giving people the option of transferring to other DBNM operations after closure.

*3.3.7 Impact : Involvement of Non-Governmental Organisations*

This impact has opportunities for optimisation. NGOs are increasingly being seen as one of the most efficient and cost-effective ways of ensuring that development initiatives proceed successfully (Chambers, 1983). DBNM should therefore use this opportunity to work with and/or through NGOs, to increase the chances of success of any initiatives they decide to implement. In the Herschel District, Transkei, the Environment and Development Agency (EDA) has started an integrated development programme (BIR, Appendix C pg 8). Supporting this initiative financially presents a valuable opportunity to make a long-term contribution to an area that has provided labour for DBNM for many years. The focus of

the training programme for workers from the Herschel area could be on skills that would help this initiative e.g. in agriculture (the DBNM farm provides a valuable opportunity for doing this).

### **3.4 Potential Mitigating Measures for Impacts after Closure**

#### **3.4.1 Impact : Increase in the Number of Unemployed**

The success of a Regional Development Trust would greatly mitigate this impact. However there are other potential measures e.g. the transfer of workers to other DBNM operations or the phased closure of the plant which would allow a growing job market to absorb unemployment more easily.

#### **3.4.2 Impact : Financial Losses of Businesses**

Again the only potentially effective mitigatory action is the Regional Development Trust. Keeping businesses informed of what is happening with regard to closure is also important as it will allow them to make informed decisions.

#### **3.4.3 Impact : Decline in Central Government Revenue**

This impact is of no significance to DBNM and should not be a concern in DBNM's planning. Keeping central government informed of the situation through the Development Trust would, however, help them in their contingency planning.

#### **3.4.4 Impact : Decline in Local Government Revenue**

A possible mitigating measure for this impact is that DBNM arrange for De Beers Marine (Proprietary) Ltd to pay fees to

the Namaqualand Regional Services Council. The De Beers Marine operation is in a growth phase and could provide a significant input to the RSC's revenue after closure. This source could also be used to mitigate the impacts on municipal and management committee finances. The fact that De Beers Marine could possibly use Kleinsee as a supply point for their operations could be linked to this.

#### *3.4.5 Impact : Reduced Ability of Local Government to Provide Adequate Services*

The reduction in the ability of local government to provide adequate services is a function of lowered thresholds because of reduced income and higher demand. The mitigation of reduced income has been discussed above (see 3.4.4). The higher demand is a function of less income coming into households and the cessation of benefits on retrenchment. This demand could be reduced by having a period where former employees are able to claim benefits after retrenchment or until they find another job.

#### *3.4.6 Impact : Movement of People out of Communities*

The only effective way of ensuring that people do not move out of their home communities is to provide work for them in the vicinity. This should constitute a major goal of the Regional Development Trust.

#### *3.4.7 Impact : Declining Educational Standards*

DBNM can play a major role in the mitigation of this impact. The Anglo-American and De Beers Chairman's Fund does provide funds for scholarships and bursaries. Dependents of former employees should be given priority in the allocation of these. Particular schools should be targeted for upgrading in the region and trust funds set up for them which allow for their continued maintenance. Upgrading a school which

does not have the funds to maintain its infrastructure is not economically rational.

#### *3.4.8 Impact : Decline in the Quality of Life of Affected Households and Communities*

The decline in the quality of life of the affected households is the cumulative effect of a number of impacts. Addressing these impacts individually will therefore mitigate this impact.

For affected households one of the major factors will be the size of the retrenchment package. A larger severance payment will give the households buffer period in which to find alternative means. Of particular concern is the pensions issue. The loss of DBNM's contribution is a major long-term concern of households. This contribution should not be lost to the employee. The employee should be given the choice to take it out as a cash payment or continue to participate in De Beers pension scheme until their theoretical retirement date. The retention of DBNM's contribution means that it becomes part of the pension fund surplus. The loss of pension benefits will mean that households experience long-term negative impacts.

The state of the community is by extension directly related to the state of the household. Ameliorating household impacts will remove the internal causes of the decline in the quality of life of the community. The financial support of key community facilities like clinics and schools, and of infrastructural improvements such as the provision of affordable electricity, water supply and sanitation would also make a valuable contribution.

### **3.5 Financial Resources Available for the Different Initiatives**

For any planning initiative to be practical, there has to be an indication of how it will be funded. In terms of the two approaches suggested, the funding will have to be obtained

from different sources. The funding of each of these approaches will be dealt with in turn.

### *3.5.1 Funding the Regional Development Trust*

This initiative will have to be funded from a number of sources. To initiate it, DBNM would most likely have to make an initial contribution. There are several other potential funding sources:

- the Diamond Fund could be used to support this initiative and would be able to provide continuing support to it;
- central government could be encouraged to support it, as its success would mean that the negative impacts on its revenue would be reduced due to a widening tax base;
- other operations in the region which will eventually experience the same problem as DBNM e.g. Alexcor and OCC;
- If De Beers Marine were to be registered as operating in Namaqualand and paying fees to the RSC, the RSC should contribute this amount to the Trust for a period; and,
- the De Beers Pension Fund is potentially a very important source of funds. Due to the very conservative nature of the pension funds, surpluses exist because of the anticipated demands for their funds not occurring. This surplus could be used to fund such development initiatives.

### *3.5.2 Funding Discrete Mitigatory Measures*

The funding of discrete mitigatory measures must come from DBNM and/or its parent company, De Beers Consolidated (DBCM). Funds that could be taken out of DBNM's operating budget would have to be negotiated with DBCM but considering the R845 million rand that DBCM made before tax in 1991 (DBCM, 1991) there must be scope for expenditure on mitigatory actions.

Another source of funding could be the Anglo-American and De Beers Chairman's Fund. In 1991 this had an expenditure of R62 million (DBCM, 1991). An insignificant amount of this was spent on rural development work in Namaqualand. The nature of these projects is unclear. In 1990 and 1991 the Community Services section of DBNM spent nothing in the region, though R70 000 rand was spent in Sterksrpuut in 1990. The fund should provide some support for the mitigatory measures to be carried out and should perhaps reappraise where it allocates funds. It should redirect its resources away from areas where it has no commitments in favour of supporting its employees.

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## CHAPTER 4

### RECOMMENDATIONS AND CONCLUSIONS

#### 4.1 INTRODUCTION

The assessment indicates that there are likely to be significant social and economic impacts as a result of DBNM's closure in ten years time (AD 2002). The impacts will be felt not only by DBNM's employees and their households and communities, but also by other businesses and their employees. Certain communities are likely to be more affected by the closure than others e.g. Komaggas and Steinkopf, and the impacts will not be confined to Namaqualand. The Herschel District of the Transkei will be affected, as DBNM's migrant workers have historically been recruited from this area.

The purpose of this final section is to give general recommendations on planning for closure, drawing on the results of the assessment and the identification of potential mitigatory measures.

#### 4.2 REASSESSING DBNM'S POLICY FOR CLOSURE

DBNM's policy is at present only an advisory one. This assessment provides a valuable opportunity to reassess the policy in the light of its findings. The policy should be a public statement and must address the concerns raised by the interested and affected parties directly. It should also be written in a way that is more accessible to the people and communities involved. The final content and format of the policy should be the result of a process involving the workforce and affected communities.

It is recommended that DBNM support the following features in a new policy:

- it must clearly state that planning for closure will be a joint initiative between management, employees and affected communities. The change from the original document is a focus on participation, rather than just consultation;

- there must be a clearer indication of where DBNM sees its responsibilities in terms of location. This mean that it should include a statement that identifies the Namaqualand region and Herschel as areas that DBNM is particularly committed to. These areas will therefore be focused on in planning; and,

- that DBNM will play an active and long-term role in the development of the Namaqualand region, as this is the area which will experience the greatest impact.

#### **4.3 THE RETRENCHMENT PACKAGE FOR EMPLOYEES**

One of the major concerns of DBNM's employees is the form of the retrenchment package. This will obviously be a result of negotiations between employer and employees, but the assessment indicates that the following features would help reduce the potential for conflict:

- measures to ensure that employees maintain their pension benefits, including the company's contribution;

- a period of maintenance of DBNM's benefits to workers after retrenchment (e.g. health and educational benefits) if the former employee remains unemployed;

- the appointment of advisors on financial planning for workers in anticipation of closure;

- opportunities for employees to be employed on other De Beers Consolidated Mines' operations;

- specific measures for the training of employees; and,

- specific proposals for community interventions.

In the past retrenchment packages have tended to focus on financial aspects e.g. the amount of severance pay. This is

changing. For example recent negotiations between the National Union of Metalworkers of South Africa and metal industry employers led to a R1,3 million contribution to set up a trust to finance the retraining of employees (Argus, 1992).

#### **4.4 BUILDING DBNM'S INSTITUTIONAL CAPABILITIES FOR CLOSURE PLANNING**

DBNM needs to re-assess its own capabilities for coping with closure. This, of course, needs to be done as soon as possible, as the assessment has shown that the impacts have already begun as a consequence of this study. There needs to be a clear division of who is actually responsible for mine closure planning. The responsibilities at present appear to be divided between the public relations and industrial relations departments. It is recommended that a separate section is set up to deal with mine closure planning. This section would take over and direct the community services and training departments. The section would also draw on the expertise of the public relations and industrial relations departments at appropriate times.

It is recommended that DBNM develop their own expertise in this area rather than relying on consultancies. The phenomenon of "retrenchment consultancies" appeared in the United Kingdom in the late 1980s (Greenbank, Pers.Comm.). They gave advice to workers with regard to training, financial planning and job finding. Their success was indicated by the fact that some unions requested that their services be acquired as part of the retrenchment package. DBNM workers have raised similar concerns (BIR, pgs 82, 83). Though there appear to be no such consultancies here - it is obviously an untapped market. DBCM will have a need for such services in many of its operations, as its business is non-renewable resource extraction.

The situation in South Africa is obviously different to that in the United Kingdom. The impacts of DBNM's closure show that there will be a need for development skills, particularly in the area of rural development. Dr. Mamphela Ramphele, a development expert from the University of Cape

Town was recently appointed as a non-executive director of Anglo American (Cape Times, 1992). A similar appointment at De Beers Consolidated Mines is recommended.

#### **4.5 IDENTIFYING KEY UNCERTAINTIES**

There are a number of key uncertainties that need to be addressed during any future planning.

The future of other mines (e.g. Alexcor) in the Namaqualand region is a key uncertainty for any future planning. The closure of more mines would have a cumulative effect on the Namaqualand economy, which would have implications for DBNM's allocation of resources. One of the roles of a Regional Development Trust would be the monitoring of this possibility.

An assessment of the costs of the different ways that production could be halted is important, so that they can be evaluated in relation to each other. A process which did not involve mass retrenchment would obviously be better for the affected communities and businesses as the intensity of the impacts would be smaller. However, if the cost of a gradual release of workers was to prove more expensive, then it might be more efficient to use the cost benefits for mitigation. This needs to be evaluated. This evaluation should involve DBNM employees at all stages. If workers see that a gradual closure is better for them then it is likely that some very practical suggestions for how it might be done will be forthcoming.

#### **4.6 CONCLUDING STATEMENT ON THE PROCESS OF PLANNING**

The initiative that DBNM have taken in commissioning this study is an innovative one. The whole process that they have started can, however, be compromised by the culture of limited access to information that is a part of the diamond-mining industry. An open and participatory approach is essential for the success of any planning initiatives. As a matter of urgency DBNM must assess what is and is not

confidential and why. The reason for this is that any reluctance to release information will further enhance the poor image DBNM appears to have.

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