

UNIVERSITY OF CAPE TOWN
Faculty of Humanities

BACK TO THE FUTURE
Integrating retrenched mineworkers in the
agricultural economy of
O.R. Tambo District Municipality (ORTDM)

A dissertation presented in partial fulfillment
of the requirements for the Degree of
Masters of Philosophy in Educational Planning and Policy

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BACK TO THE FUTURE

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DECLARATION

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ABSTRACT

The study is focused on the identification of agricultural skills required to enable retrenched miners in OR Tambo District Municipality to engage in agriculture productively. This is set against a background of the history of mine labour being drawn significantly from this area, together with recent changes in the mining industry which have resulted in many of the workers returning to the district retrenched and impoverished.

The study reviews the changing nature of work in the context of globalization and its impact on mine workers. It reviews current notions of adult education and the emergence of notions such as lifelong learning and practices such as the recognition of prior learning and multi-skilling as a response to these changes.

There is also a review of recent policies that are meant to benefit retrenched workers in rural areas of South Africa.

A qualitative approach to research was used, and a case study method was adopted. One municipality, the OR Tambo District Municipality, was chosen for the case study. Data was collected from a wide range of stakeholders through interviews, workshops and documents. These were analysed and key emerging themes identified.

The study found that OR Tambo has a general skill shortage and its economical potential is in natural resources, including agriculture. The skills needed for agriculture overlap

with those needed for the other identified sectors, notably eco-tourism, forestry and fishing, thus making cross-sectoral skills and the portability of skills a possibility.

It also concludes that there is a need for a comprehensive skill plan that is aligned with the economic and social reality of the district. Training however needs to be located within a broader set of initiatives that addresses the needs of the district, such as land care and right-sizing of livestock.

ABBREVIATIONS

ABET	Adult Basic Education and Training
AMWU	African Mine Workers' Union
ARC	Agricultural Research Council
AU	Animal Units
BEE	Black Economic Empowerment
CBT	Competency-Based Training
CCC	Coalfields Communities Campaign
CDT	Competency Development Training
COSATU	Congress of South African Trade Unions
CSIR	Council for Scientific and Industrial Research
DBSA	Development Bank of Southern Africa
DFID	Department for International Development
DME	Department of Minerals and Energy
DoL	Department of Labour
DPLG	Department of Provincial and Local Government
DPISA	Department of Public Service and Administration
DRDA	District Rural Development Agency
DTI	Department of Trade and Industry
EU	European Union
FAO	Food and Agriculture Organization
GIS	Geographic Information System
HDSA	Historically Disadvantaged South African
HRD	Human Resource Development
ICT	Information Communication Technology
IDC	Industrial Development Corporation
IDP	Integrated Development Plan
IDT	Independent Development Trust
ISRDS	Integrated Sustainable Rural Development Strategy
IT	Information Technology
JET	Joint Education Trust
LED	Local Economic Development
LRAD	Land Redistribution for Agriculture Development
MDA	Mineworkers' Development Agency
MQA	Mining Qualification Authority

MWU	Mine Workers' Union
NAFCOC	National African Federated Chamber of Commerce
NAFU	Natural Agricultural Farmers' Union
NDA	National Development Agency
NEPI	National Education Policy Investigation
NQF	National Qualifications Framework
NSLO	Non-specialist Learning Organization
NUM	National Union of Mineworkers
OECD	Organization for Economic Cooperation and Development
ORTDM	O. R. Tambo District Municipality
PAETA	Primary Agriculture Education and Training Authority
PDLA	Provincial Department of Land and Agriculture
PIMSS	Programme Implementation and Management Support Services
PDLA	Provincial Department of Land and Agriculture
QRC	Qingqolo Research Council
RDP	Reconstruction and Development Programme
RPL	recognition of prior learning
RUTECH	rural urban technology
SADC	Southern African Development Co-operation
SAETA	Secondary Agriculture Education and Training Authority
SANDF	South African National Defence Force
SAQA	South African Qualifications Authority
SAWIMA	South African Women in Mining
SETA	Sector Education Training Authority
SLO	specialist learning organization
SMME	small, medium and micro enterprise
TEBA	The Employment Bureau for Africa
UNDP	United Nations Development Programme
Unitra	University of the Transkei
USA	Universal Services Agency
WHO	World Health Organization
WSSD	World Summit on Sustainable Development

BACK TO THE FUTURE

Integrating Retrenched Miners into the Agricultural Economy of O.R. Tambo District Municipality

CHAPTER 1: INTRODUCTION AND BACKGROUND

The study will identify the agricultural skills that are appropriate for retrenched mineworkers in O.R. Tambo District Municipality. It assumes that targeted training, which is informed by potential economic opportunities, can improve the relevance of the training offered to mineworkers who want to be farmers.

Besides training, the study recognises other relevant factors, in particular policies and initiatives by stakeholders as well as critical inputs such as infrastructure without which training would not be as relevant. While the study is focused on retrenched miners, it also looks at other critical stakeholders in O.R. Tambo's agricultural development such as women and youth.

The introductory chapter will be focusing on the history of mining in South Africa, how black workers were denied skills, careers and ownership, the retrenchment in mines during the 1980s to the 1990s and provide a profile of O.R. Tambo where the retrenched miners returned.

1.1 HISTORY OF MINING IN SOUTH AFRICA

South Africa owes its industrial development to the discovery of minerals, starting with the discovery of diamonds in 1860, and gold in 1866. There is no doubt that the development of the mining industry marked a fundamental turning point in the history of South Africa (Davies et al. 1988: 7).

As a result of these discoveries, what was otherwise a remote part of the world to colonizers changed (Wheatcroft 1985). South Africa attracted fortune seekers, miners and diggers from many parts of the world, including immigrants who wanted to position themselves above the local black population as skilled and semi-skilled workers. In addition the laws prohibited blacks from being mine owners or acquiring leases.

The demand for labour grew as the industry grew. Labour was required on a massive scale that could only be provided by Africans who had to be drawn away from their land .

The changes that were to be brought about by the formalized industry were a major change for African people, who had continued living on the land even after colonization, as the 'vast majority of South Africa's indigenous inhabitants remained in control of their means of production' (Davies et al. 1988: 7). This was lost with the advent of the mining industry, as it took significant control of the economic life of Africans in South Africa and beyond in Mozambique, Swaziland, Zimbabwe and Zambia. These countries were all at one point sources for cheap African mine labour.

1.1.1 Migrant labour system

While paying tribute to the early mine magnates, the 'Randlords', Wheatcroft points out that it was on the Rand that the whole modern economy was created, with its reliance on cheap black labour and unique caste system (Wheatcroft 1985).

Within three years of the opening of the Witwatersrand gold-fields in 1886, over 17,000 African workers were employed in the mines, together with 11,000 whites. Twenty years later the figure was 2 million black workers and 23,000 whites (Davies et al. 1988: 81). This came about as a result of a recruitment system, which worked with 'military precision' even without computers. It was a system which literally locked the men up in the tribally divided hostels (Davies et al. 1988).

For over a century, The Employment Bureau for Africa (TEBA) and its predecessors brought young men to work in the mines, sending them back when they were too old to be productive. The denial of education and exclusion from meaningful participation in the mining industry be it careers let alone ownership must have contributed to the deep disempowerment and underdevelopment of migrant workers.

That also left women in the rural areas to become seasonal widows, with the burden of sustaining the extended family. It is this legacy that current legislation and other measures are attempting to reverse: a very ambitious task indeed.

1.1.2 Exclusion of blacks in white South Africa and underdevelopment in rural areas

Successive governments neglected the 'labour-sending areas', failing even to provide basic infrastructure. The families of mineworkers were expected to consider themselves lucky to have someone earning an income. They had to apply for permission to visit their relatives in urban areas, who themselves were 'visiting' the urban areas as long as they supplied labour.

Blacks were classified as foreigners in what was regarded as 'white South Africa'. This emergent tradition of 'black foreigners' gave rise to the notion of *amagoduka* (those who must go back to ancestral home), which exists up to this day, and is heavily entrenched among blacks in general, and especially amongst mineworkers.

Black South Africans from the then Transkei and North Transvaal in particular, of all classes, still believe strongly in the notion of ancestral homes, which originates from denied and denial of urban status of black people. This shows how deep-rooted the urban-rural continuum is in South Africa. Low income workers are likely to go back to ancestral home if they lose jobs, according to the Chamber of Mines: 'At least 70% of workers from the Eastern Cape return to ancestral homes' (Chamber of Mines 2002). This view is also shared by the National Union of Mineworkers (NUM).

Aggressive recruitment to the mines and a disastrous agricultural situation in the early 1900s, which led to loss of livestock to many black farmers caused many of them to move away from agriculture and seek work in the mines in increasingly large numbers.

According to the 1913 Land Act, blacks were confined to only about 7% - 10% of the total land available in South Africa. This act caused an unprecedented shortage of land amongst black people.

While the Land Act was of immediate benefit to white farmers, Davies et al argues that “by finally destroying the economic independence of the African peasantry, it also made labour available to the mining industry.” (Davies et al: 1988: 12)

For all these reasons, the history of South Africa is closely interwoven with the mining industry. Mining has been and continues to be an important sector in the South African economy. It is all the more intriguing that a study on mining in 2003 should be about poverty in an industry, with a history of more than 100 years of wealth creation.

1.2 SKILLS AND RACIAL DIVISION OF LABOUR

Less than 20% of South Africa’s population had the full potential to contribute to the development of the country while the majority of the people were denied an opportunity to contribute to the detriment of all of society leading to underdevelopment and entrenched skills shortage. In addition to restrictions on black people (pass laws and taxation), the racial division of labour in the mines was to be entrenched through legalized job-reservation policies, which excluded black workers from skilled jobs, reserving all semi-skilled and skilled work for whites. ‘The struggle against bosses was not fought by organizing all mineworkers, but by demanding job reservation and

compelling the mine owners to reserve certain skilled and supervising categories exclusively for whites' (Davies et al. 1988: I, 10).

The 1911 Mine and Mineworkers Act legislated the colour-based worker division of labour (Davies et al. 1988:10). This Act made the mining sector the first sector to formalise worker discrimination through legislation therefore making it a trendsetter, and it can be argued that it was later to have an effect on skills formation in other sectors of the South African economy. The skills evolution in South Africa has maintained a hierarchy which was strictly based on race. Segregated and unequal education also reinforced a particular perception on what skills are, and whose skills and experience matter, making the contemporary issue of affirmative action and standards a complex debate. There is still a perception that the quality and credibility of skills that are acquired by black people are inferior, which partly comes from the above history. The capacity of blacks to attain excellence is questioned, in that extreme context. Affirmative action is seen as lowering standards not advancing representativity.

In the 1940s black mineworkers had no way to fight for their rights, other than through the courageous efforts of the African Mine Workers' Union (AMWU) of J.B. Marks, which existed briefly in the face of much hostility from white mine owners. It would be another 38 years before black mineworkers had an organization to protect and fight for their rights with the formation of the National Union of Mine Workers (NUM) in 1978. Whites still retained a whites-only labour union, the Mine Workers' Union (MWU). The MWU still exists today, and faces the challenges of change after it has lost formal power

and influence in the mining industry. It is significant that its members have not joined the NUM nor any union changed its profile. Like many other South Africans, it will have to struggle with change and in fact will need to adjust.

The determination of white mineworkers to fight any kind of black advancement goes back to 1922 when the owners tried to cut costs by using low wage black labour in semi-skilled jobs. The tension from that move led to a rebellion by white workers, which was put down with military force.

1.3 RETRENCHMENTS IN THE GOLD SECTOR

Since the 1990s there has been an unprecedented decline in jobs in the mining industry – particularly in the gold sector, which accounts for 53% of employment in the mining industry (DME 1999/2000: 10).

The gold industry has experienced cyclical volatility and downsizing due to mechanization and competition brought upon by globalization. ‘A total of 341,276 mineworkers lost their jobs over a ten year period from 1990 to 1999’ (DME 1999/2000: 8). The training envisaged for ex-miners will include both retrenched miners as well as miners who are jobless due to mine injuries. The job losses happened at a time when agricultural yields have been poor. Many of the retrenched workers of O.R. Tambo lost their jobs during that period.

The South African government never had a safety net for retrenched miners. Workers could depend only on the NUM to find ways of cushioning the harsh reality of retrenchment, and most affected workers were NUM members. The NUM formed the Mineworkers Development Agency (MDA) in 1988, specifically to deal with the plight of retrenched miners. The MDA in turn established a technology provider to equip the ex-miners with appropriate technologies for small businesses, the Rural Urban Technology (RUTECH) Unit. The work done by the MDA over the years led to the Commission on Restructuring South African Labour Market Policy Review, stating that it was 'singularly impressed by the NUM's programme which is directed at job creation in the rural areas' (Presidential Commission 1996: 118).

The job summit in 1997 recommended a 'Gold Crisis Committee' be formed to respond to the massive job losses. This committee was established in 1998 by government, labour and industry. Its purpose was to explore different programmes, which could address the problem of mass unemployment. One such proposal was the Social Plan, which is now policy. (See Social Plan: Chapter 2.) Improved cooperation between business and labour has seen the Chamber of Mines committing R10 million for the assistance of retrenched miners (TEBA, MDA and COM 2000). TEBA and MDA are partners in the implementation of the identified programmes in South Africa, Lesotho and Mozambique.

Ngonini visited Bizana Local Municipality in the ORTDM, one of the affected areas, in 2001, and observed first hand the poverty and social problems caused by these retrenchments. What he found particularly disturbing was the breakdown of families, in

addition to poverty and extreme depression among the ex-miners. Some complained about their young wives leaving them, as the women felt that they were a 'burden' (*omahlalela*) (Ngonini 2001). Many families had sold their livestock to get money for school fees for their children. The men felt that 'with the loss of their jobs, came the loss of their dignity and status in the homestead' (Ngonini 2001: 36). Some of the negative effects include children dropping out of school, which will perpetuate the cycle of poverty in the next generation within those families and communities.

It has been argued that miners undergo training while in the mines, which does not always take into account what they already know. Leger argues that the 'tacit-skills' that workers acquire through experience and peer education are not generally valued.

(Webster and Leger 1992).

Companies have in-house training colleges that have over the years developed good training programmes, especially in the coal sector according to M. Hermanus, the Chief Inspector of Mines. More of such facilities are needed. (Interviewee 33) As the recognition of prior experience is not yet widely accepted, it is important to mainstream the Recognition of Prior Learning in line with South African skills policy to encourage attaching value to various learning experiences. The Mining Qualification Authority (MQA) is paying significant attention to the provision of ABET in all mines and progress is being made. (Interviewee 15)

1.4 THE PROFILE OF O.R. TAMBO DISTRICT MUNICIPALITY

1.4.1 Location of O.R. Tambo

ORTDM is located in the Eastern Cape Province, in what used to be called the Transkei. It is a vast area, bigger than Swaziland, and has a total population of 1,740,664 (ORTDM 2002b). It is a new district municipality, consisting of both previously established and newly demarcated municipalities, following the demarcation since the 1999 municipal elections. It is divided into seven municipalities: King Sabata, Nyandeni, Port St Johns, Mhlonto, Ntabankulu, Bizana and Qawukeni.

These are areas from which mineworkers have been drawn for the last 100 years and more, especially between 1906 and the end of the 1980s when the decline began. Only 18% of potentially economically active persons in ORTDM were employed at the time of writing, of whom 7.8% are informally employed. Urbanization trends and HIV/Aids are expected to lead to negative population growth (Statistics SA 2000); 44% of the population of ORTDM is younger than fourteen years old, and 49% is under sixty-five (ORTDM 2002b).

For almost a century this community has depended on the remittances of mineworkers. When land was lost and agriculture no longer viable, working in the mines was the ambition of every young man, and for decades was the only way to escape the poverty and harsh life of rural Transkei. To become a 'breadwinner' and support the family, and bring back the 'benefits of the city life', was an achievement.

Notwithstanding the meagre wages of mineworkers, they often support extended family members, which makes the retrenchment of unskilled workers much more devastating than that of white- and blue-collar workers, who are unlikely to take care of their extended families.

1.4.2 Education, skills and employment profile of O.R. Tambo

- only 5% of ORTDM's population has post-matric qualifications
- 19% have no formal education
- functional literacy is 45.5%
- 4% have senior management skills
- 18% have technical and craft skills

(ORTDM 2002b)

Any training and job-creation initiatives would need to take these figures into account.

1.4.3 Infrastructure

The district has the biggest infrastructure backlog in the country in terms of roads, energy, water and sanitation. Only 30% of the population of ORTDM has access to energy. Despite rapid roll-out of both energy infrastructure and fixed telephone lines since 1994, the backlog is still high. Roads, water and sanitation have even bigger backlogs. The poor-quality roads limit the movement of people, goods and services and inhibit the economic life of O.R. Tambo District. Household access to telephones is only

2%, while 12% of the community has access to public phones; there has been a phenomenal growth in the use of mobile telephones – which is the first introduction to digital technology for most people according to (ORTDM 2000a).

1.4.4 Agriculture

In the integrated development plan (IDP) of the district, one important objective is to increase agricultural development by 50% within the next five years. The area, however, has potential for commercial agriculture, according to the Department of Agriculture in the province, though the land is in a poor state due to years of neglect, overgrazing and natural disasters.

Subtropical fruits such as bananas, paw-paws, pineapples and guavas can be produced along the coast. In the interior, wool production and cattle farming perform better, while maize has potential in areas such as Lusikisiki, Bizana and Flagstaff, and high-value crops, e.g. hemp, tea, sugarcane and ground nuts in high-rainfall areas (Eastern Cape Dept of Agriculture 2002).

In a study done by Agricultural Research Council (ARC) which is presented digitally and is posted on the ARC website, more than five hundred crops are identified as suitable for cultivation in O.R. Tambo both food and cash crops. (See Appendix 7).

1.4.5 Tourism

The district has a huge potential for eco-tourism, as well as cultural and community-based tourism. Its natural beauty, sensitive ecosystem and the traditional lifestyle of the people make it attractive to the upper segments of the tourism market.

Tourist attractions, facilities and infrastructure exist along the coast, such as in the Port St Johns, Coffee Bay and Hole in the Wall areas (Interviewee 24)

1.5 CONCLUSION

This chapter addresses a situation in which for more than a century the mining industry has contributed to – and continues to build – the economy of South Africa while at the same time it has led to the underdevelopment of the areas, such as O.R. Tambo, where it recruited its labour.

These dense labour-sending areas were classified as ‘homelands’ by apartheid governments, which further compromised their development, leading to endemic poverty. Women and children who remain in the rural areas just manage to survive on subsistence farming and remittances from workers in the urban areas.

Black mineworkers from these impoverished areas were unable to formally develop recognized skills or enhance their careers in the mines because the racial division of

labour made skills acquisition by blacks illegal; when they are retrenched, even after many years in the mines, they are still classified as 'unskilled' workers.

The large-scale retrenchments of these largely 'unskilled' mineworkers in the gold sector between 1989 and 1999 only worsened the economic situation of these men, who then have to go back to poor, dense, labour-sending areas, without having built careers, confidence and the economic security that comes with them.

The profile of O.R. Tambo has further highlighted the contemporary challenges these workers meet in an area like this, where they come 'Back to the future' where they spend the rest of their lives.

BACK TO THE FUTURE

CHAPTER 2: LITERATURE AND POLICY REVIEW

Only 5 % of the people of O.R. Tambo have post-matric qualifications (ORTDM-IDP 2000); the ex-miners and women can be expected to be amongst those with little or no education, and therefore poverty-stricken and without a meaningful economic base. Some of the families own land, which gives them a potential to engage in agriculture, which could then improve their food security even beyond subsistence level. However, their limited skills pose a serious obstacle, as does the brain-drain into urban areas.

This study aims to isolate the exact skills that will be needed if retrenched miners are to become productive farmers, contribute to their development and overcome absolute poverty. The question is: 'what skills?'. In general, ex-miners would be adults, and that already determines that adult education would be an appropriate teaching approach.

Changes in the world of work make it unlikely that they will easily find work again in the formal sector; after retrenchment, when they go back to their ancestral homes, they are *Back To The Future*, and need life skills that can launch them into sustainable livelihood – with agriculture being one option.

2.1 THE CHANGING NATURE OF WORK AND GLOBALISATION

Globally the nature of work is changing due to the rapid development of new technologies. Mineworkers are part of the labour market that is suffering the consequences of these changes as they lack the skills required to adapt to a new economy in which workers are divided between those who are 'winners and those who will be losers' (Brown et al. 2000: 165). 'South Africa's integration into the global economy will most likely involve dislocation and exclusion from the formal economy of the country's least skilled and most vulnerable workers' (Heyster et al. 2001: 91).

It is argued that only about 30% of the world's population has skills that are adaptable, portable and easy to upgrade. Alec Erwin, the South African Minister of Trade and Industry, notes that although many jobs are advertised in South Africa through newspapers and recruitment agencies, finding suitable candidates is a big struggle.

Multi-skilling, life-long learning and learning organizations are all important interventions that must assist societies to cope better with the changing world. In a job-shedding industry such as mining, which employs large numbers of unskilled workers, re-training is important.

Work as we know it has been disappearing, along with the security and stable careers that many workers always hoped for, with blue-collar workers facing the biggest challenge (Brown et al. 2000).

Those workers who ‘lose out’ in this new dispensation become dislocated, and many face ‘social exclusion’. The annual *Human Development Report* of the UNDP (2000) highlights the ‘social-exclusion’ phenomenon that has come with the information communication technology (ICT) era and the rise of the new economy. This is despite the fact that new technologies also bring opportunities, which need to be ‘harvested’ for the poor otherwise globalization can only further impoverish marginal communities.

Castells explains a globalizing economy as ‘a new kind of economy whose core activities have the capacity to work as a unit in real time on planetary scale. This capacity is based on ‘technology, telecommunications, fast transportation and information systems’ (Castells 2000: 3). Decisions about farmers in one part of the world can have an impact on farmers in another.

Agricultural subsidies in Europe and the USA do, in real time and on a large scale, create trade barriers for farmers in poor countries – such as those in O.R. Tambo – where the state cannot afford such subsidies. Subsidized farmers can sell their produce much cheaper than those who have to reflect the full cost of production. If ex-miners in O.R. Tambo were to produce for bigger markets and beyond their food security needs, they would still need to be concerned about global pricing of agricultural products around the world.

2.1.1 ICT and changes in the workplace

Without the educational skills required in the new age, opportunities for ex-miners are reduced. 'Digital technology' is taking over almost all spheres of life – business, home and the public arena. 'This digital dominance is based on information technology which has been brought about by the information age' (Yau 2001:5). Most of the historically unserved and underserved communities are on the deprived side of the digital divide.

Castells believes that 'Information Technology is the electricity of the information age' (Castells 2000: 7), and it is generally argued that electricity had the greatest impact in the development of humankind in the twentieth century, which would mean that the sheer magnitude of the changes that the world is facing is still to be grasped by many nations, especially those who have large 'unnetworked' and 'unserved' populations.

Governments, including the South African government, now have a goal for universal access, not just to the basics services such as energy and water, but also to information technologies . This is due to the realization of the importance of ICTs for socio-economic development in the twenty-first century. The value of training envisaged for farmer trainees will have to take this into consideration.

Those who criticize the emphasis on rural information technologies state that hungry people need food in the first instance, not ICTs, but there is also a view that ICT can help poor people earn enough to eat.

Closing the digital divide – which is about access to the infrastructure of the information age, i.e. telephone networks, computer networks, computer hardware and software – has to be a matter of concern to training institutions which are responsible for rural development. One can expect that many governments find the cost of providing basic infrastructure very challenging, let alone the provision of ICT. The branded software is not only expensive, it also changes very often.

The ‘open software movement’ – which is demanding affordable or free access to unbranded software with the aim of improving access for poor communities and countries, and reducing the digital divide – is gaining momentum and is supported by the United Nations. Its success would go a long way towards reducing the digital gap.

The UNDP also argues that new technology has in many cases increased income inequality, polarization, poverty and social exclusion, and its impact on non-adjusting communities is harsh. Traditional industries such as agriculture are also vulnerable. Subsistence farmers and small commercial farmers are arguably vulnerable to these changes. New production systems, new global markets and the new institutional structure of world trade could eliminate traditional agriculture.

For rural areas to withstand the pressure and enhance benefits from globalization, women have to be part of the equation, as farming within a typical village environment is highly dependent on them. Women are responsible for 70% of the food produced in sub-Saharan

Africa (FAO 2000b: 55). Farmers also need skills for the non-agricultural economy, as natural causes such as droughts and floods can derail agriculture. This is exacerbated by climate change (Schei and McNeil 2002).

Globalization is a reality that is now upon us; it presents both a threat and an opportunity to many developing countries. Without decisive interventions on behalf of poor communities ICT and globalization is yet another set of circumstances that can marginalize the poor. It is even worse where educators and policy makers do not realize that.

2.2 LIFE-LONG LEARNING

Unskilled workers are in the centre of these wide-ranging changes, and life-long learning, as a coping mechanism, has also to be located within the context of these changes and interpreted in a complex rather than a simple manner. NEPI defines life-long learning as ‘a more comprehensive visionary concept which includes formal, and informal learning extended through the life span of an individual’ (NEPI 1993a: 9). Not only do developing countries need life-long learning for the purpose of coping with the changes, ICT has to be singled out as a desirable aspect of life-long learning.

Walters points out that there is an impression that only developed countries are concerned with life-long learning, and that developing countries do not have enough political will to pursue it (Walters 2001: 10). Rejecting this notion as a limited definition of life-long learning, Omolewa argues that there is no ‘one-size-fits-all’ definition of what passes as

life-long education. In Africa education is from cradle to grave, ‘from knowledge of seasons to that of planting, from that of first steps to that of singing, from a knowledge of herbs to that of midwifery’ (Omolewa, in Walters 2001: 10). What people tend to learn within their communities is what those communities know and regard as important. The challenge is to keep what the community regards as important in tune with the changing world and vice versa.

In rural areas with underdeveloped agrarian economies, life-long learning must include agriculture, but at best agriculture should go beyond itself and facilitate the emergence of non-agricultural jobs, for which people need continuous training. Such training must also include ICT and deliberate wealth-creation programmes. It is also claimed that ‘a culture of life long learning will become a critical driver of the wealth of a country and its citizens’ (South African Government 2002b: 11).

Life-long learning gains greater importance and recognition during economic difficulties. ‘Since the economic crisis of the mid 1970s, there has been growing interest in the development of lifelong learning opportunities amongst policy makers’ (Edwards 1997: 197). Edwards further argues that life-long learning is not just about enabling those who are being left behind by technological advances; it is also a means of fuelling competition, which widens the gap even further as the more advanced workers take greater strides.

In providing life-long learning there has to be an understanding that it is chasing a moving target, that it is not about equalizing; it also offers those who excel a chance to compete and outperform. For the high performers amongst those excluded, life-long learning could offer a chance to escape 'social exclusion' (Edwards 1997: 21).

Notwithstanding the importance of ICT, a word of caution is in order: there are many people who remain ICT illiterate, who are not 'networked', and yet continue to be very effective at work and at home, and are pillars of society in the public domain. However, it would be naïve not to acknowledge that the quality of life of most people would be better with access to electricity and ICT applications, while only a few could possibly make their best contribution without at least indirect access to these essential services, even though technology is not yet a panacea for all ills. Life-long learning needs to remain broad based, including values that build on what people know.

2.2.1 Learning organizations and learning societies

The concept of learning societies and learning organizations is underpinned by a belief that successful institutions, now and in the future, will be education and knowledge driven. Citizens and organizations have to learn to constantly adapt (Guile and Young 1998b). Walters (2001) argues that it is no coincidence that developed countries have developed policies on life-long learning; this is related to continuously adapting to their changing world. Their policies, it is argued, are intimately connected to the development of knowledgeable economies and 'learning societies'. It has to be added that they also have the resources to do so.

Organizations, like people, also have to learn and adapt continuously. The concept of learning organizations and learning societies has a role to play in the evolution of society and knowledge.

Peter Senge, in his highly publicized book *The Fifth Discipline* (1990) on 'learning organizations', makes the point that we must continuously reinvent ourselves and our organizations, both as teams and as individuals, in order to adapt to rapid change and to be ahead of competition. Learning organizations and societies emphasize the advantages of collective learning and finding solutions in groups. Rather than individuals learning alone, learning in groups means not only learning from the educator but from one's peers as well. The reclusive worker who develops overreliance on ICT could lose out on the advantages of teamwork, and in particular of human dynamics.

According to Guile and Young (1998b), learning organizations can be defined or categorized as specialist learning organizations (SLOs) and non-specialist learning organizations (NSLOs). SLOs are those whose core mandate is education and learning, e.g. schools and universities, and NSLOs are those who are not in the field of learning and education.

As indicated earlier, the challenge of adapting to change faces all organizations whatever they are: SLOs or NSLOs. Developing countries face the biggest challenges in adapting between 'local and international' contexts, as 'local' knowledge can be unfairly

dismissed as 'primitive' and not always relevant to the demands of the new world environment (Omelewa, in Walters 2001: 17).

Teaching organizations or SLOs in developing countries therefore have to make considerable adjustments to ensure foreign materials have relevance as well as positioning delivery of valuable locally generated information, especially if we have to build on what people know. There is also a need for educators to teach people on the margins of society or the socially excluded, using appropriate methods that will make the learning experience worthwhile. People who live in the margins of society 'will not learn best through conventional approaches' (Mokwunye 2002). The challenge of 'appropriate learning methods' is just as heavy on the educators, who have to reinvent themselves as 'appropriate educators' as it is on students who are trying to adapt to an unfamiliar and fast-changing world. Educators have to 'cross a line' out of the comfort zone of the mainstream world of learning and teaching to the relatively unknown.

2.2.2 Multi-skilling

If the changes that the world economy has been experiencing are understood to be equivalent to changes brought about by electricity in the history of the development of humanity, then the adjustments required from workers and managers alike are indeed very significant and diverse (ILO 1999b: 20).

Brown et al. put the changes taking place in the workplace which makes being multi-skilled so important 'on a scale comparable only to the industrial revolution' (Brown et al. 2000: 165)

In a stable work environment, multi-skilling takes different forms. 'It can happen *horizontally* which provides depth and diverse skills at a similar level. Cross-skilling provides skills at the same level but beyond the boundaries of the employees' traditional area of work. Vertical-skilling provides additional skills, at a higher and more complex level' (Jansen 1999: 55).

More and more engineers study MBAs; managers learn to do their own typing and operate computers, which used to be a 'secretary's job' – these are some of the common trends in multi-skilling. Some critics see the advent of the multi-skilled worker as a direct cause of the erosion of worker security. The 'flexible workforce is part of an ideological offensive which celebrates pliability and casualisation and make them seem inevitable' (Pollart, quoted in Edwards 1997: 31).

Workers who have job security are able to develop multi-skilling within the relatively secure workplace environment, unlike unemployed workers such as those in O.R. Tambo, where there is desperation. Unemployed workers are preoccupied with their fate, so they may not appreciate multi-skilling and training that is not aligned to an identified opportunity. Further, training must be aligned to solving at least some of their immediate problems to be welcomed.

The Congress of South African Trade Unions (COSATU) has argued strongly for a broad HRD policy that includes multi-skilling, which employers are bound to implement. COSATU insists that workers currently experience years of de-skilling on shop floors and in assembly-line work as an integral part of production. Hence they have argued for a policy that captures the intent of changing these conditions. In their view, multi-skilled workers can service the de-skilling nature of the assembly line (COSATU 1997).

Training has to be reviewed not only for relevance but also for value; not all training is valuable, and one way of enhancing the value is by focusing on outcomes or competencies to be gained and to allow for innovation which pushes the trainees to be creative. A competency-based training (CBT) system in the Organization for Economic Cooperation and Development (OECD) countries has emerged out of a need to equip workers with 'a broader range of skills at work, specifically, flexible and adaptable skills' (Mulcahy 2000: 218).

So an interesting addition to the CBT approach is its encouragement of innovation which forces creativity and individual initiatives – something assembly-line workers, and certainly workers in an industry such as mining, would never be able to express in a regular training context. The point about innovation as part of adult learning and multi-skilling amongst blue-collar workers and below is that it affords workers a chance to go beyond the limited skills training that is often accorded to junior employees. Innovation has no boundaries, and that is where talented workers can excel. Workers with

exceptional skills, especially innovative ideas, have a chance to demonstrate their potential and be recognized.

Multi-skilling can also be trivialized by workers who do not see relevance to their immediate work. In a work environment, it is important that company and workers sit down, define and negotiate benefits for both sides to avoid waste of resources.

2.2.3 Recognition of Prior Learning (RPL)

Retraining of ex-mine workers also needs to be based on RPL to affirm the learners and build on what they know. ‘The broad principle of RPL is that previous learning – acquired informally and non formally – can and should be recognized and given currency within formal education and training frameworks’ (Harris 2000: 1). RPL is about acknowledging ‘learning that was acquired by an individual prior to undertaking new learning activities’ (Fennel 1994: 25). The benefits of RPL include ‘deriving benefits from post learning activities, it could lead to accreditation when further education is pursued’ (Fennel 1994: 25). According to Forrester and Ward (1991), dislocated workers lose a lot of self-esteem, and experience a diminished sense of self-worth. RPL could ensure a restoration of self-confidence, much needed to move ahead. It should therefore be part of a process to reconceptualize skills.

COSATU again played an important role in the introduction and promotion of RPL in South Africa. It is now incorporated in the national skills policy, the National Qualifications Framework (NQF). COSATU argued for ‘recognition of tacit skills or

skills developed on the job' (Samson and Vally 1996). In a multi-cultural society like South Africa, with established mainstream vs. emerging cultures, experiences accumulated from the emerging cultures are likely to be unrecognized and their educational value not understood.

Studies have shown that all workers, even those who have no formal education, bring skills and experience into their jobs. They have a range of 'tacit skills' (Webster and Leger 1992: 22). Such skills should be recognized.

In the USA the importance of RPL featured strongly in the early 1970s when minority communities questioned the validity of the conventional testing models (Fennel 1994: 28). Even in South Africa there has been a debate about the culture bias of 'psychometric' tests.

The real challenge lies in achieving some standardization within a multi-cultural and class-based society. Evaluators are likely to come from a different background to that of workers, and so they might not understand the context in which some of the skills have been acquired. The same can be said about gender, as women's knowledge has long been undervalued. The task is to 'challenge the criteria through which some knowledge is legitimized in the same way as feminists and anti-racists tried to do' (Walters 1997: 151). Nkomo Mokubung has argued for radical use of RPL in South Africa to 'challenge the traditional division of knowledge, division of labour and power' (quoted in Walters 1997: 143). Nkomo's point is that the dominant class can easily legitimize their experiences.

Examples can be of something as basic as sports; the skills of boxing and those of 'stick fighting' both teach and require accuracy, coordination ability etc., but stick fighting is not a 'formal sport' yet, as it is only practised in villages, so the value of a good stick fighter is unrecognized.

SAQA has had to balance operating in the otherwise long-established educational environment while upholding the position expressed by Nkomo, which is about breaking down the walls of long-established biased learning traditions. The emphasis on transformation in South Africa offers a good chance for such groundbreaking practices.

2.2.4 Adult Education/Adult Learning

The method of teaching adults is different because adult education is not schooling, and adult learners are not 'big kids'. They have experience, multiple responsibilities and must use their time efficiently (Hiemstra and Burton 1990: 21). According to UNESCO, adult education denotes 'the entire body of organised education process whatever content, level and method whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as apprenticeships'

(NEPI 1993a: 4).

The role and contribution of the learner must be enhanced in adult education, especially as it is about finding solutions to real problems. Adults come to the learning environment with a lot of skills, experience and knowledge, which the educator has to take into

account and build on (Walters 1997). Further adults, unlike children, have ‘baggage’ which can enhance or prejudice how they perceive knowledge.

NGOs in South Africa have set the stage for adult education that is socio-cultural in its focus, influenced by the ‘humanist’ – as against ‘human capital’ – theory. The human capital theory emphasizes education for economic purposes, while humanist theory is concerned with ‘a democratic and holistic approach to people’s education and training’ (Walters 1997: 204). In my view, learners and adults need both – they need not make a choice between humanist and human capital theory.

2.3 RURAL DEVELOPMENT

2.3.1 Sustainable Integrated Development

For the purpose of this study all of the issues raised must be located in the physical environment of the targeted learners, which is rural. The integration and skills development of ex-miners is part of rural development in ORTDM.

There are many schools of thought on rural development, and there has been a shift from a top-down approach towards people-centred and decentralized approaches that are not dependent on overseas support, as used to be the case. ‘Development is not about development aid or development projects; it is about what people can do for themselves to change their lives in an irreversible manner’ (Chambers 1983). It does not reject aid, but it is not driven by aid. This is the self-reliance school of thought. There is also an

emphasis on sustainability, not only of the programmes but also the physical environment, ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (World Commission of Environment and Development 1997).

‘Sustainable development’ implies a change of lifestyle and consumption patterns, and the protection of resources and the environment from destruction. It also means development that must be irreversible in its impact, which is most appropriately articulated in the French translation of sustainable development, ‘développement durable’. Issues of sustainability have brought yet another challenge to educators who must factor it into their training of emerging farmers to avoid degradation of land.

The shift away from the old modernization paradigm also takes a ‘holistic approach to development’. It acknowledges the role of different stakeholders, and emphasizes a shift from technocratic to participatory approaches (Shepherd 1998: 11). The holistic approach also integrates service delivery, which includes human-resource development and the role of women. With 70% of the food in sub-Saharan Africa produced by women, agriculture and rural development cannot but take a stand on the situation of women (FAO 2000b).

According to Rau, for many years to come, rural development will depend on agriculture in developing countries (Rau 2001), although by itself it is not able to provide a decisive escape from poverty. Training of farmers has been identified as an important intervention to improve productivity and sustainable farming within the changing

economic environment. In that regard there is a bias towards training extension workers. The FAO, the World Bank and NGOs have taken that option (Department of Agriculture 2000).

The World Bank extension programme called 'Train and Visit' also helped make a case for the decentralization of the training of farmers to local government, NGOs and communities, rather than central government extension officers.

Among rural development practitioners there is broad agreement on poverty alleviation, mainly through farming and universal access to basic infrastructure and services such as water, sanitation, energy, health, education and, of late, ICT.

2.3.2 Multi-sectoral and integrated approach to rural development

The emphasis on a multi-sectoral or integrated approach has also gained greater currency, making rural development into a shared responsibility across sectors, with agriculture as a distinct feature in every programme (Rau 2001). Government-driven programmes tend to emphasize integration more and more. Governments command a variety of resources, but are not specialist agents. Through integration, however, government can deploy resources from different departments. Though holistic, this approach is not always easy to manage. It sometimes evokes tough battles among government service providers and between government and out-of-government service providers.

Conventional development has been part of the modernization paradigm (Shepherd 1998), which was also the neo-colonial paradigm of freed colonies becoming like their former colonizers. That approach paid no attention to overall sustainability and people-centred development. Even the World Bank in 1997 adopted a strategy which emphasizes community participation.

These changes also involve an important move away from the view of rural development as a welfare responsibility to it being seen as part of the macro-economic framework.

While development has to deal with the material needs of people in a sustainable manner, sustainability also empowers people with education, which is the best weapon against poverty in the long term: 'the single most important key to development and poverty alleviation is education' (Wolfensohn 2001).

Pro-poor goals should be as much about development as they are about creating meaningful wealth for the poor, and the eradication rather than alleviation of poverty.

2.3.3 Decentralisation of rural development

Decentralization is another important feature of the new paradigm. A growing number of countries are constructing their development plans around village- or district-based plans which contribute building towards national economies (Choudhury and Durgaprasad 1999). In South Africa there are the integrated development Plans (IDPs), which are located in district municipalities. The IDP provides information on the development

vision, goals and programmes of the district municipality. It is a plan of action with time frame and priorities (SALGA 2001).

Decentralization enables greater participation by local communities, as rural development cannot be achieved without building local capacity and self-reliance. What is also essential about decentralization is that it enables decisions to be made closest to the communities affected. Essential to decentralization is coordination and integration. It makes possible 'development of a geographically defined area with multi-sectoral activity' (Rau 2001: 47).

The vision of the South African Integrated Sustainable Rural Development Strategy (ISRDS) is based on a decentralized approach and substantially integrated development plans (IDPs) (Mbeki 2001). The most tangible evidence of success in any rural development initiative is ending poverty. Hunger is the most extreme manifestation of poverty and human deprivation (FAO 2002).

Most rural areas in the developing world and South Africa have the following characteristics: high poverty level; poor or no infrastructure; no tax base; poor skills levels; in most cases, sparse populations; and no manufacturing.

The South African government's vision of the ISRDS is 'to attain socially cohesive and stable communities with viable institutions, sustainable economies and universal access to social amenities, able to attract skilled and knowledgeable people, equipped to contribute to their own and the nations growth and development'.

The IRSDS programme is a ten-year plan that mobilizes across national government including parastatals and all spheres of government, but driven and located within district municipalities and guided by the IDPs of the district municipalities.

The focus areas of the South African rural development strategy are: infrastructure development (water, sanitation, roads, energy and ICTs); human resource development; SMME development as well as affordable and accessible social services - especially clinics and schools.

Through established programmes government departments, NGOs and the private sector are required to offer a 'basket of services' which are in line with the identified needs of the given area and overall goals of the IRSDS programmes, e.g. 'the products in the basket of services could be; immunization programmes, land care programmes if these, for example, are what is specifically needed in that node. The basket must also have some of the nations top priority areas such as HIV/Aids awareness, improved child grants, access and registration' (DPLG 2002).

2.4 RETRAINING RETRENCHED MINERS

The MDA of South Africa, founded by the NUM in 1988, has embarked on customized programmes for ex-mineworkers in South Africa, which includes training programmes. The MDA has now acquired impressive experience in retraining retrenched miners. It has pursued a training programme as far as in Mozambique and in Lesotho. TEBA has also reinvented itself as a rural development agency (DME 2002).

Both TEBA and the NUM have offices in the dense labour sending areas in most parts of the country, including O.R. Tambo. Historically, the MDA had little to do with the state, and the state hardly provided any assistance to ex-miners. Over time, the mining companies have supported the MDA, while TEBA has always been, and still is, supported primarily by them.

In business initiatives undertaken by the MDA, the issues of niche markets and high-value crops have been identified as key success factors – as well as building and harnessing the skills and knowledge that ex-miners already have, according to Kate Phillips, CEO of the MDA. It has identified agriculture as one of the key industries; Philips emphasizes the importance of value addition and clear market access strategies for the sustainability of their initiatives (Philips 1996).

Based on the experience of the MDA, Philips identifies the challenges of serving ex-miners. Skills level is a problem, but it is not insurmountable. Some of the problems which have impacted on their programmes at an operational level are as follows:

- lack of transport, poor roads, networks and access to public transport;
- availability of raw materials – even basic input such as cement;
- rural markets are depressed and people cannot afford bulk buying; and
- culture of local production has been eroded. (Philips 1996)

Established MDA projects include:

- hire, sale and servicing of production equipment;

- transport services; and
- enterprise development centres in Mhala, Mpumalanga; Maseru, Lesotho and Mount Ayliff, Eastern Cape (Philips 1996: 11).

Access to capital for the individual ‘ex-miner-turned-farmer’ will be another challenge, as access to finance for emerging entrepreneurs is always a problem. TEBA has established its own bank, Teba Cash, which has operated since 2001. This was to build on the experience of TEBA as an overall service provider to miners, including sending money home.

To support initiatives of this sort a number of institutional platforms are needed, what Cousins (2000) regards as an ‘institutional grid’ for delivering services to ex-miners. Platforms are likely to succeed or fail on the basis and quality of inputs and programmes added to them. The training in agriculture could be one such input.

2.4.1 Retrenchment in Mines: the UK experience

The UK Department for International Development (DFID) has also played a role in supporting the MDA initiatives. They share the belief in the role of agriculture in rural development. Clare Short, UK Secretary of State for International Development, was scheduled to introduce a paper outlining ‘better sustainable livelihoods for poor people’ at the WSSD in 2002 in Johannesburg. (DFID 2002). In the paper, the role of agriculture is elaborated, and also the role of governments, despite recent disappointing agricultural

performance in many developing countries. However, this still does not deal with critical issue of EU agricultural subsidies.

In the UK, 22 local authorities with coalfields formed the Coalfields Communities Campaign (CCC) in 1985, following massive downscaling in the coal-mines. The objectives of the campaign was ‘ to rebuild the local economy of the coalfields, and to provide support to the Coalfield Communities who were devastated by the job losses and the speed with which it all happened’ (NUM 1996).

In 1994, a study was done on the conditions of coalfields communities. The 1994 study found ‘that crime levels, stress levels and other social problems tended to increase in mining towns and villages following pit closures’. The study also found that it was very difficult for the ex-miners to find other jobs (NUM 1996).

2.4.2 Government policies support retrenched mines

Wilson estimates that retrenchment of mineworkers affects many more people because they have dependants, which means that for every hundred retrenchees there are many hundreds more livelihoods lost which is why the social-dimension of mining and retrenchment presents great challenges (Wilson 1996). While the government’s Social Plan is for all sectors with high job losses, a mining-specific Social Plan is also under way, which focuses on the effect of job losses on the miners and their dependants. It is being finalized as part of the mining legislation in South Africa, the New Minerals

Petroleum Resources Act of 2002 and its subsequent Broad-Based Socio-Economic Empowerment Charter.

2.4.3 The Mining Charter

The emphasis on broad-based and socio-economic empowerment in mining is a direct response to the impact of the changing nature of work in the mining industry. 'It recognises that mining has Socio-Economic consequences not only for the miners but also for communities associated with mining' (Nogxina, 2002).

The new policies are not only relevant to those who seek ownership but also to ex-miners and communities in dense labour sending areas such as O.R. Tambo. The charter is informed by the need to address the challenges of poverty in addition to economic empowerment and broadening entrance and ownership by historically disadvantaged South Africans (HDSAs) into the mining industry. It recognizes the plight of ex-miners in the dense labour-sending areas such as O.R. Tambo and makes investment in their development a licensing condition of all mine owners – to engage in, among other things, rural development and improvement of the quality of life of people affected by mining. The emphasis is not only on black economic empowerment (BEE) in the usual way, but on people empowerment, on social issues as well (DME 2002).

The Mining Charter has seven pillars, which are licensing conditions, and, in that way, the issue of resources for investment in the rural development area is a shared obligation between government and the mining industry, assuring investment in rural areas for as

long as mining companies require licences. The royalties paid to government, which would otherwise go to the Treasury, will be ring-fenced for rural development in the same way as the skills levy ring-fences the levy to be used exclusively on training. (DME 2002).

The Pillars of the charter include:

Human resource development

All mines must have training programmes that will in the first instance benefit employees, and must include scholarships, mentorships and 4000 learnerships within 5 years.

In addition all mines must achieve universal access to literacy and numeracy in five years (2003–7). The training must include multi-skilling. In that way, miners will over time have a higher skills base and retrenched mineworkers will be better prepared to cope.

Employment equity

All mines must have plans to achieve 40% representivity in junior and senior management and technical levels within the first five years (2003–7). The charter makes it compulsory for Historically Disadvantaged South Africans entering mining to participate actively and learn to run the business by taking responsibility for aspects of production. This will ensure skills transfer by deploying trained workers or trainees at managerial and technical jobs. This facilitates the upward mobility of mineworkers who would otherwise be overlooked and without career paths. Mine owners will have to invest

in the career development of mineworkers to meet their 40% target for representation in management.

Community upliftment

Together with the state, mining companies will have to invest in the development of areas affected by mining, namely: the dense labour-sending areas; the ex-mining areas; and the mining areas in which government will use royalties, as well as programmes from all other national departments and provincial and local governments for development.

Some of the MDA programmes could most certainly be worthy of support in this regard, including agricultural projects. The IDPs will play a critical role in guiding this initiative and ensure local ownership in line with government policy of locally driven rural development.

Procurement

Mining houses will have to set aside an agreed percentage of their procurement budget to buy goods and services from HDSAs.

Goods range from fresh produce, which can be produced by small farmers, to protective clothing and machinery, which could see HDSA initiatives in mergers and acquisitions in supplier companies. Ex-miners, with the assistance of MDA, have an opportunity to get business as suppliers of goods.

Housing and nutrition

Migrant labour led to the housing of mineworkers in male-only hostels for many years, away from their families. A programme to convert the remaining hostel to homes will see miners residing in urban areas permanently with their families. Government will assist through housing subsidies.

Mining companies will also be required to provide balanced nutrition to mineworkers through canteens. Improved nutrition will also assist in boosting the immune systems of the HIV-positive workers, thus reducing the early retirement because of illness of unskilled, poverty-stricken, sick miners to labour-sending areas where poverty already is at very a high level.

Beneficiation or mineral value addition

All mining companies will have to process some of their raw materials in South Africa. This will increase employment and investment in value addition in South Africa.

Some of the value addition, jewellery in particular, is intended to involve people in the rural areas, especially areas affected by mining, creating jobs through a jewellery cottage industry. Both TEBA and MDA would be key in such an initiative. Communities with high numbers of retrenched miners will be targeted.

Broadening ownership in all mines

HDSAs are eligible for acquisition of 26% in all existing mines in commercial transactions. Workers will be eligible for employees' shares from the 26%, which will provide them with shares that they can only redeem when they leave their jobs. This will hopefully provide workers with collateral to enter into new industries when they leave mining or retire (DME 2002).

2.5 THE MINING SOCIAL PLAN

The Mining Social Plan is an expansion of the generic Social Plan.

The Social Plan was drawn up following the 1998 Job Summit. It targets companies who are facing large-scale job losses, over 500 at a time. The objectives are to:

- avoid job losses and employment decline;
- ensure unavoidable retrenchments are managed humanely; and
- assist individuals and affected communities to find alternative forms of employment, acquire skills and sustainable livelihood (Department of Labour, Social Plan 2002).
- Provide counselling and access to training opportunities.

The Social Plan is located in the Department of Labour. According to the Labour Market Commission, the NUM played a major role in lobbying government to legislate the Social Plan, drawing from the German experience. It was expected that, because of migrant labour, job losses in mining more than any other sector will impact mostly on rural areas.

A mining-specific Social Plan, which at the time of writing was under consideration, has the following additions:

- All mining companies to provide multi-skilling to their employees, which must as far as possible be aligned with the opportunities and economic activities in the areas that retrenched miners are likely to retire into. The IDPs will be used to identify available economic opportunities;
- Training provided in the mines aimed at preparing miners for the possibility of retrenchment. Again government and industry resources will be co-invested. The training has to be valuable;
- Mining companies and local authorities in the dense labour-sending areas must establish and maintain contact and plan together when there are to be retrenchments; and
- The Social Plan also provides for 'future forum'. It is a forum that enables employers and employees to prepare for job losses or even to avoid job losses. (DME 2002) The future plans also need to be realistic.

2.6 ROLE OF THE SETAs

SETAs provide sector based education. They are part of the skills strategy for the country. All SETAs have to develop sector skills plans on the basis of shortage and demand identified in their sector. Training is mostly targeted to workers and unemployed

persons. Agriculture has two SETAs: primary agriculture and a secondary agriculture. (DoL, Skills Plan, 2000)

2.7 CONCLUSION

From the literature and policy review, it can be seen that credible policies are in place in South Africa. Notwithstanding the good work done by the MDA, the new TEBA and other service providers, including government, the problem is still huge. The answer does not lie in more programmes but also better use and coordination of what is already in place. This research could in a limited way contribute towards pointing where programme and policy coordination could be strengthened.

The practice and theory, as espoused in this chapter, demonstrate the challenges, complexity and the need to have a coordinated approach towards the development and empowerment of unemployed workers. There are learning theories such as the ones reviewed in this chapter that can inform training and development initiatives.

BACK TO THE FUTURE

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 QUALITATIVE RESEARCH

3.1.1 What is qualitative research?

Qualitative research is based on in depth information concerning the experiences of a particular group. It is based on the view that reality is constructed through the interaction of individuals with their world.

A significant characteristic of qualitative research is its inductive nature. The researcher has to interpret what is uncovered and give a perspective to it. (Merriam 2000) At the same time the researcher must validate his or her perspectives, and those of the respondents. In qualitative research, inputs from the respondents must be taken seriously. There should be no presumptions made as to what is important and the researcher must keep an open mind. Because there is a dependency on this open-mindedness and also because of the personal interaction with the subject, the researcher has always to be aware of and guard against subjectivity. (Merriam 2000)

In qualitative research, it is the relevance or significance of the sample rather than its numerical size that matters most. The size of the sample must however be acceptable even in qualitative research, to enhance the validity of the research.

The three most common types of qualitative research methods are ethnography, case studies and ground theory. In this study the case study method has been used.

3.1.2 Advantages and disadvantages of qualitative research

There are numerous advantages in using a qualitative approach to research. The experience of the respondent is of particular value. It enables unique insights, giving the researcher a glimpse into the world of the subject in question. It thus facilitates conclusions which include the stakeholders' views. For effective adult education, it is important to get the learners' perspective in as much detail as possible.

Qualitative research allows for multiple angles to be explored and observations to be made, and this enables interpretation of subtle information which could affect the conclusions drawn from the rest of the information.

Further, this approach allows data to be collected and analysed simultaneously and thus enables adjustments to be made in data collection methods, or in hypothesis testing.

(Merriam 2000)

A disadvantage of this method is that it draws from a numerically limited sample which could sometimes be questioned and therefore make the generalisation from the results limited.

The frequently intense and close interactions between researcher and research subject also increases subjectivity.

A further disadvantage is that while it is important to be driven by the respondents' experiences, the in depth focus on the subject can also result in an unfocused study, with too much detailed information, from which it is difficult to draw conclusions.

The close interactions and insights into what could be regarded as embarrassing or compromising information means that confidentiality has to be negotiated at every level and all concerns or fears of the respondents discussed. This could have an impact on how the data is presented and understood by the readers.

3.1.3 Suitability of qualitative research for this study

In this study, qualitative research made it possible for the voices of the adult learners to be heard. These adult learners who are also retrenched workers have complex experiences which must be understood by educators. A qualitative research approach also allowed for the research problem to be investigated from multiple angles via the perspectives of different stakeholders.

This study also sought to capture context and factors that have shaped the ex-miners in reality. The extent to which some of the issues this study will raise are 'descriptive' rather than 'measurable' makes the qualitative research method appropriate for this study.

3.2 CASE STUDY

A case study is based on a defined sample. The chosen sample has to provide the greatest relevance to the issues in question. (Merriam 2000) define a case study as an intensive description and analysis of an event or social group. It seeks to uncover the interplay of significant factors that are characteristic of such an event or group.

3.2.1 Why a case study was used

The case study method allows for in-depth analysis even if it is based on a limited sample. In this study there was no time to do a lengthy study which would have led to using a much wider sample. However, this case study provided enough of a perspective of the stakeholders who could provide a comprehensive insight into the problem. This was also a mini-thesis and by its nature also limited the research.

The identified case presented critical elements and the interplay of significant factors characteristic of the phenomenon, from which conclusions could be drawn. (Merriam 2000).

3.2.2 Rationale for selection of this Case Study

The ORTDM was selected as a case study for the following reasons: ORTDM is one of 13 poorest rural districts identified for ISRDS; it is the poorest district municipality in South Africa; it has the highest concentration of retrenched miners in the country. According to TEBA, O.R. Tambo has 22,000 ex-miners, in a population of 1,740,664 people (TEBA 2002).

If there were to be a concerted effort to intervene in the plight of ex-miners, O.R. Tambo would be an important place to start. The fact that O.R. Tambo has been associated with mining, a wealth-generating industry for almost 100 years and yet it remains an enclave of poverty, makes it a compelling case.

This research focused in particular on re-skilling in the area of agriculture. Agriculture has been identified by the ORTDM as a key industry for growth and development (ORTDM 2000). In each Integrated Development Plan (IDP) the District Council has committed itself to growing agriculture by 50% in the coming five years. The MDA also sees it as an important industry for ex-miners, as it is an industry miners can identify with. Also agriculture is critical for poverty alleviation and food security, and most of all it is labour intensive.

By definition agriculture is “a rural-based, labour intensive, single largest supplier of job opportunities in non-urban regions” (PAETA 2001).

O.R. Tambo has a critical skills’ shortage. Improving skills levels in general could assist the district by improving the skills profile. Targeted skills development could have an even greater impact, benefiting the trainees much more, and fulfilling policy objectives.

3.3 DATA COLLECTION AND ANALYSIS

The data was collected during a period of 12 months, between February 2002 and February 2003. Data collection was conducted through a combination of:

- Interviews
- Workshops
- Documentary and policy reviews

Each method of collecting data was critical to the research. Through the interviews, the researcher gathered the views of the different stakeholders – the ex-miners who were the intended trainees, as well as training providers, local and national government, community leaders and members. The workshops played an important role not only in enriching and deepening the information gathered in the interviews, but also served to corroborate and thus validate the interview data. The documentary and policy reviews provided important background and contextual information.

3.3.1 Interviews

A total of 39 interviews were conducted with participants from a wide range of institutions. They included ex-miners, training providers, government departments and agencies, public and private sector organizations, statutory skills bodies, and individuals with specific expertise. A full list of respondents is given in Appendix 2.

Interviews were conducted in O.R. Tambo, Pretoria and Johannesburg, which is where most of the stakeholders were located. All interviews were conducted orally in direct

contact with participants or by telephone. The interviews were recorded in note form, rather than transcribed.

Even though there were structured questions to guide the interviews, the interviews themselves were flexible and the researcher was able to maintain a flow of conversation. In many cases the respondents were interested to give more information than the study required.

The respondents were told the purpose of the thesis. Some of them believed that the study would inform policy at the Department of Minerals and Energy and wished to lobby on matters outside of the scope of this study. This problem was recognized and managed by the researcher. Some of the interviewees requested anonymity, and so some names are not provided on the list of interviewees.

3.3.2 Workshops

Data was also collected through workshops. The workshops had a similar spread of people to those in the interviews. Workshops helped to elaborate or fill in gaps and corroborate the information gathered through interviews.

The workshops were particularly helpful in attracting people who could speak from an informed position, as experts in the field. These participants were identified by the researcher because of their knowledge or relevance to the study and were recommended by their organizations. The researcher wrote or phoned the participants, inviting them to

the workshops. The participants were also informed about the purpose of these workshops.

It was very helpful to have in one room this cross-section of people who had the ability to validate the information collected in the interviews. Their measure of specialization on issues like agriculture and training was an effective way of gathering and validating material which could have taken much longer in the interviews only. The contributions made by these participants at the workshops were backed and substantiated by reference to statistics and policies. Some of them also provided back-up material.

There were three workshops convened for the purpose of this study. The people who accepted and attended proved to be interested in the subject matter and were keen to communicate and network with their peers. They also wanted to explore possibilities of co-operating with the Department of Minerals and Energy in the implementation of programmes targeting ex-miners.

The first workshop was held in Umtata. Mainly government representatives from district and provincial levels such as councillors and the mayor of ORTDM, officials from national government departments and provincial government departments of Agriculture, Public Works, Education, Economic Affairs and Environment and Labour attended. Representatives from parastatals such as Eskom and Telkom also attended the workshop. Participants consisted of approximately 20 people.

The second workshop was in Pretoria and was attended by representatives of national and international service providers with an interest in O.R. Tambo or rural development in general. Participating national government departments were the department of Labour, Minerals and Energy, Provincial and Local Government, Trade and Industry and Land and Agriculture, as well as service providers, namely Eskom, the Land Bank, Development Bank of Southern Africa, the NDA and the European Union. Approximately 20 people attended the second workshop.

The final workshop was in Umtata. About 110 people attended which was very useful for corroborating data already collected. Participants included the mayor of ORTDM, the principal of Tsolo Agricultural College, UNITRA, NGOs, business, small farmers. IDC Eastern Cape and the Eskom Shell all attended. The MDA-Agro-Strategy convener made presentations. The workshop made it possible for some attendees to dialogue amongst themselves and to enter into concrete plans and agreements of cooperation with O.R. Tambo, on provision of resources and services needed in the district.

Space

The researcher was largely an observer at these workshops. The workshops were recorded in note form by the researcher, assisted by two research assistants. By and large, the workshops helped to generate enough viewpoints and perspectives for the themes, elaborated on in Chapter 4, to emerge.

The list of workshop participants is given in Appendices 3,4 and 5.

Interviews and workshops covered broadly the same questions. In each case the focus was on those questions that the participants were best positioned to answer. Even though all questions were raised with all audiences, questions 1–7 were specifically targeted at people in ORTDM, who had much better knowledge of the area.

See Appendix 6 for a list of the questions covered.

3.3.3 Documentary research and policy review

Documentary research and policy review was conducted on:

- published materials;
- government policy documents, including both published and unpublished materials and legislation;
- published and unpublished materials from international institutions, in particular those of the World Bank and the UN;
- Internet-based publications.

The documentary and policy review assisted in gaining more insight into the perspectives of experts on similar or related subjects, and as a way of comparison with the statements made by participants and the observations of the researcher. Government documents, Acts of Parliament and documents from institutions such as reports, speeches, agreements, promotional materials and conference papers were also helpful to corroborate interviews.

Some issues raised by the study are contemporary, the subject not having yet been extensively researched, written about or published. Therefore, the researcher, especially in relation to government, depended a lot on unpublished sources and policy documents, Cabinet reports and legislation.

Unpublished sources that provided a wealth of information included minutes of meetings, training records, internal memoranda and communiques, reports and flip charts. The researcher worked hard to make a critical analysis and evaluation of the information.

3.4 VALIDITY OF THE STUDY

Efforts were made to deepen the validity of the data by:

- Interviewing a very wide range of different stakeholders;
- Corroborating interview data with workshop data; and
- Checking the data against background and contextual information gleaned from the documentary reviews.

The position of the researcher as a regulator and service provider in the mining sector who also has a senior position in government, with powers to affect the material interests of some of the participants, could have led to calculated responses from some of them. The participants could have had some of the following concerns, considering that the researcher was in a position of authority:

- What would the information be used for?

- Who would have access to this information?

On the other hand, being in a position of authority could also have been an advantage, as the researcher was able to get co-operation for the workshops, which enhanced the data and leverage of commitments to the ORTDM development initiatives.

The validity of the information can be compromised if the respondents give answers that they think the researcher would like to hear. Also it is compromised if the respondents give answers which advance a particular position which they hold and which is not what they know to be true.

To guard against this, the researcher in both the interviews and the workshops took steps to protect the validity. In the interviews it was easier to spend time emphasizing the importance of the respondents speaking their minds, as well as repeating the purpose of the interviews. In the workshops, the researcher was a participant-observer and kept a low profile. The facilitation of the workshop was left to the research assistant.

3.5 RESEARCH ETHICS

Integrity and reliability of research is dependent on the ethical manner in which the data is collected and processed. Researchers are sometimes given information in confidence, and that has to be respected. The researcher must also acknowledge other people's work.

'Validity' and 'reliability' of data in any study is of importance, and could be compromised by neglecting ethical questions., such as the respecting the need for

anonymity in the interviews. Reliable means the extent to which research findings, results or conclusions are accurate and consistent over a period of time.

Being ethical, especially when one is in a position of authority, also means not pushing one's political preference so much that the study becomes an endorsement of inflexible views that are political and otherwise. It has been stated that 'the development profession suffers from an entrenched superiority complex with respect to small farmers' (Chambers 1983: 75) because development workers consider their knowledge superior to that of small farmers who actually farm the land and deal with the challenges that toiling and working with nature presents. This has led to Chambers asking, quite rightly, 'whose knowledge is it anyway?' (Chambers 1983: 75). This should caution researchers to listen more.

During the workshops it was important for the researcher, because of her position, to keep a low profile and to meet at venues that did not emphasize the authority of the researcher e.g. the Minister's office.

3.6 LIMITATIONS OF THE RESEARCH

As indicated, the position of the researcher is such that there is always a possibility of bias, given that in this case, the researcher has a direct professional and political interest in the subject.

Only Tsolo College of Agriculture was orally interviewed, and only one agricultural SETA – Secondary Agricultural Education Training Authority. Fort Cox Agricultural College and Fort Hare School of Agriculture, who also train, were not directly interviewed, however, Fort Cox Agricultural College attended in Workshop 3. No specialized curriculum or standard-setting techniques were used to arrive at the type of skills required by the miners. The focus was on one industry and on particular skills, and this makes it a limited study. More in depth insight into established training courses could have shed more light and that was not done. Instead focus was on the context and external factors that could assist appropriate skills to be targeted, defined and provided.

3.7 IMPORTANCE OF THE RESEARCH

The skills problem has been identified by the Independent Development Trust (IDT) as the greatest threat to government's rural development policy, the ISRDS (IDT 2002). This study could make a modest contribution towards providing data needed to understand the HRD needs of ORTDM.

BACK TO THE FUTURE

CHAPTER 4: DATA ANALYSIS AND EMERGING THEMES

4.1 INTRODUCTION

In this chapter we will look at responses from interviews which took place between 2002-2003, and the three workshops held for the purpose of consulting targeted participants: first workshop in O.R. Tambo, on 11 June 2002; second workshop on 22 July 2002 in Pretoria; and third workshop in O.R. Tambo again, 16/17 August 2002.

The study is divided into the following themes:

- i) **The economy of O.R. Tambo:** Non-agricultural sectors presenting economic opportunities in O.R. Tambo.
- ii) **Socio-economic challenges in O.R. Tambo:** covering challenges in all the sectors.
- iii) **Agriculture in O.R. Tambo:** encompassing all aspects of O.R. Tambo's agricultural economy.

- iv) **Issues affecting training:** mostly as they arise in agriculture as well as in other sectors.
- v) **The last theme will deal with skills required for ex-miners:** to become productive and engage in agriculture.

Most interactions with participants happened during three workshops where the researcher took a participant observer role and through Interviews. The participants addressed the questions raised by the study, and in some cases engaged very intensely among themselves. On some issues they reached high-level consensus which they wanted acknowledged as such. In the following write-up issues that enjoyed the high-level consensus will be identified.

4.1.1 The economy of O.R. Tambo

O.R. Tambo's economic opportunities were identified exclusively in the natural resource sectors. As can be expected, the rural economy often relies only on what nature can provide. The Provincial Department of Economic Affairs, Tourism and Environment also confirmed these as the sectors that have economic potential (Interviewee 31).

Participants identified sectors such as agriculture, tourism, especially eco-tourism, fisheries and forestry as having economic potential – none of which have yet developed to their full potential.

4.2 NON AGRICULTURAL SECTORS PRESENTING ECONOMIC OPPORTUNITIES IN O.R. TAMBO

It is the view of the researcher that the agricultural industry in O.R. Tambo can only develop if the other sectors are also considered, they will develop a market to begin with.

It is for this reason that other sectors are also briefly reviewed; this is also to avoid conveying a single-commodity approach to rural development.

4.2.1 Tourism

Nationally, tourism and related industries such as cultural industries are regarded as growth sectors (Participant 25, IDC, Workshop 3).

Natural beauty is the Wild Coast's competitive advantage. There are twenty beaches along the Wild Coast that are kept 'wild' and natural, but basic facilities such as sanitation on the beaches for the convenience of tourists are needed (Interviewee 17, ORTDM Mayor).

The tourism industry is making an increasing contribution to the economy and according to the Mayor of O.R. Tambo, a steady rise in visitors to the district was being observed. A booster to the tourism industry in the area is the building of a detour from the N2 via Port St. Johns, which would make the Wild Coast accessible by car from Durban en route to East London. The Wild Coast and Coffee Bay, even with their modest infrastructure and poor town planning, are attracting an impressive number of tourists (Participant 41, Workshop 3).

A special arts and crafts initiative based on seashells was underway. There is also a possibility of the establishment of a comprehensive souvenirs industry that will sell to tourists visiting O.R. Tambo (Interviewee 17, ORTDM Mayor). The question is: what would they spend their money on? The souvenir and arts and crafts initiative should help clarify this.

Tourism in the Wild Coast is not like that in Durban or Cape Town. It is mostly eco-tourism, and therefore attracts a particular type of tourist in the middle to upper income levels (Interviewee 31, Dept of Economic Affairs, Tourism and Environmental, E/Cape).

The district is renowned for its unique flora and fauna, and is known to have about 30 plant species that are unique to the Wild Coast. Some of the game parks in O.R. Tambo are close to the sea, which is another competitive advantage over inland game parks (Participant 16, ECATU, Workshop 3).

Hluleka Game Reserve in O.R. Tambo has animals and stunning sea views. Hluleka uses mainly renewable energy i.e. solar energy and wind. It has the first renewable power station in South Africa, thus making it particularly attractive to eco-tourists.

Hluleka also provides energy to the adjacent community and encourages them to use power to support agricultural production and to boost community tourism. More needs to be done for community and cultural tourism so as to involve larger numbers of people in tourism (Participant 88, Shell/Eskom, Workshop 3).

The European Union has started a horse-riding tourism project that is community based and responds to some extent to the plight of the community for jobs (Participant 16, EU, Workshop 2).

It was also argued that local people do not have the capacity for product development and the management of cultural or community tourism initiatives. Government has been blamed for not taking the initiative to build this particular capacity (Participant 95, Thuthukani Women's CDT, Workshop 3).

4.2.2 Forestry

The Eastern Cape is home to many forests. Many of the plantations of South Africa are in the Eastern Cape – including in O.R. Tambo, which has, in particular, pine plantations. Forestry provides hundreds of sustainable jobs and revenue to the district (Interviewee 13, ORTDM Councilor).

No significant wood processing takes place in O.R. Tambo itself. It is hoped that the planned privatization of some of the forests could bring more wood processing to O.R. Tambo, or at least the Eastern Cape. This remains an opportunity that is worth pursuing. There are also plans for new forests that could bring about empowerment and sustainable jobs (Interviewee 17, ORTDM Mayor).

4.2.3 Fisheries and marine culture

The Wild Coast has modest fishing activities, which are mainly community based. The Wild Coast apparently once had a promising lobster industry, which included processing, that collapsed due to, among other things, problems of access to finance by local entrepreneurs (Interviewee 32, Entrepreneur).

The Wild Coast can improve on the existing community fishing industry, which could help the sustenance of the coastal communities (Participant 41, Workshop 3).

4.3 SOCIO-ECONOMIC CHALLENGES IN O.R. TAMBO

4.3.1 Resource management

The need for efficient resource management and the building of the necessary capacity in government and at community level was identified. It was pointed out that while there were good environmental policies in place, the district faced shortages of personnel, and limited posts. There are difficulties in attracting to the rural areas the skilled personnel needed to manage the progressive policies (Interviewee 35, Department of Labour).

4.3.2 The 'brain drain'

The 'brain drain' was identified as a big challenge in O.R. Tambo. It started with people going to the mines and it has subsequently been entrenched, continuing to this day (Interviewee 14, Service provider, NGO). 'Brain drain', or urban migration, is not unique to O.R. Tambo; it is a global phenomenon.

Even though people maintain active contact with their ancestral homes, those with skills are likely to end up settling in the urban areas while the unskilled and poor, e.g. mineworkers, are the ones who never really leave the rural areas; they literally live in two worlds (Interviewee 29, Dept of Public Works). Minister Sigcau started 'operation ploughback' to tap into the human resources of urban-based people who retain contact and identify with their ancestral land. Mineworkers keep contact with their villages and

remain involved in agriculture, taking their home-leave during the harvest and planting seasons (Interviewee 35, MDA).

The impact of the 'brain drain' in rural areas is recognized in the ISRDS which calls for incentivization of people with scarce skills who can be seconded to rural areas to ensure accomplishment of key tasks.

TEBA's services over the years have also assisted mineworkers to keep contact with their families in the dense labour-sending areas (Participant 6, TEBA, Workshop 2). Mineworkers go back to their home areas after losing their jobs, as they often fail to get other jobs (Interviewee 27, Chamber of Mines). The Anglo American Geographic Information System (GIS) was able to locate a significant number of their previous employees who are back in the dense labour-sending areas, and the GIS allowed for the allocation of a virtual address to each worker (Participant 4, DME, Workshop 1).

4.3.3 Land tenure in O.R. Tambo

The DTI pointed out that investors, particularly those in need of fixed property, have problems with the land-tenure system in the Transkei. These investors include those providing tourism infrastructure. They do not accept the prevailing dispensation of 'permission to occupy', as they want to own the property they build on (Interviewee 31).

An *iNkosi* (traditional leader) expressed an opinion about foreign ownership of prime land in his area, where land is the most valuable – and often the only – asset. To him,

selling that land is a difficult choice to make: ‘What if the investors use the land for something that is not in the best interest of the people? If the land is already sold we cannot even intervene’ (Interviewee 8, *iNkosi*).

The *iNkosi* was also of the view that the promised tourism jobs have not really materialized. Tourism investors prefer to use their own people brought from outside the district, rather than training locals. He also blames government for not training communities as custodians of natural resources and integrating them into the nature conservation system, thus also enabling the earning of a sustainable income (Interviewee 38).

The MEC of Economic, Tourism and Environmental Affairs in the Eastern Cape argues that the anticipated tourism boom is still to come. The tourism boom can be expected in 2004/5 when the investment made in attracting significant players has reached fruition (Interviewee 31).

4.3.4 Infrastructure

The topography and the size of the Eastern Cape and the backlog inherited by the new government makes the Eastern Cape, and O.R. Tambo in particular, the most expensive district to provide infrastructure to, especially fixed infrastructure such as telephone and electricity lines (Participant 75, PIMSS, Workshop 3).

The challenge of infrastructure was a concern of most participants in Workshop 3 - 2002. It was one of the matters on which significant common concern was noted. The ORTDM IDP also identified infrastructure as one of the main challenges in O.R. Tambo and for the agricultural industry (Participant 75, PIMSS, Workshop 3). More than half of the budget of ORTDM has been going into infrastructure development; poor or no infrastructure is one characteristic of poor rural areas as identified in Chapter 2.

An official from the Department of Provincial and Local Government pointed out that 'the rural areas are poor because they do not possess the necessary infrastructure to attract investment'. Without the economic activity that investments generate, they cannot attract private-sector funds for infrastructure, and that leaves governments as the only providers of infrastructure development and maintenance in areas like O.R. Tambo (Participant 15, DPLG, Workshop 2), and this is very true of the Eastern Cape as a whole.

In the absence of industries in O.R. Tambo, the population also has limited use for infrastructure installations, as they do not have enough telephone traffic or energy-intensive industries.

The participants identified the following as basic and essential infrastructure needed in O.R. Tambo:

Water and sanitation have been identified as by far the most urgent infrastructure for ORTDM and are regarded as an absolute minimum requirement. At the World Summit

on Sustainable Development (WSSD) the importance of water and sanitation was aptly captured in a debate attended by the researcher on water; as one speaker stated, ‘water is life and sanitation is dignity’.

It was pointed out that parts of O.R. Tambo have irrigation problems that have to be dealt with if agriculture is to prosper in the same area (Participant 13, Provincial Dept of Agriculture, Workshop 1). Tourism without water and sanitation is impossible, let alone community tourism (Interviewee 31).

Those areas that are still without water, such as Qingqolo, have their ‘development frozen’ and quality of life compromised, the participants complained. Cholera outbreaks are a deadly reminder of the absence of these basic services in ORTDM (Interviewee 13, Councillor ORTDM). During the cholera outbreak of 2002, which affected the area significantly, the researcher visited the area and representatives of mining companies made a modest donation. During that visit, women spoken to indicated that water and sanitation was the most valuable contribution that the industry and government could make; the intervention is urgently needed.

The women of Qingqolo also made reference to the long history of underdevelopment of the region, which has led to the current crisis and the fact that their ‘forefathers contributed to the wealth creation in South Africa that enables people in Gauteng to have houses with more than one toilet. While they do not have even one toilet for the family’ (Interviewee 34, Qingqolo Women).

Women in Qingqolo also made it clear that they considered better roads to be more important than access to energy.

Telephony: communication and telephones were identified as another challenge. Access to fixed lines was put at about 2% for homes. It was noted that there has been more access to public phones and a phenomenal growth of mobile telephones in the district, though there was frustration with poor-quality reception. A number of people expressed an urgent need to see to the increase in telephone penetration of both fixed lines and mobile telephones. For most participants the matter was primarily about telephones as against ICTs.

The Telkom representative, however, highlighted the importance of the utilization of ICTs. The representatives of O.R. Tambo were urged to take note of the potential and value of ICTs. Government has a policy of installing telecentres to provide access to ICTs in poor communities (Participant 92, Telkom, Workshop 3).

Emphasizing the importance and the role of ICTs, a representative of the Department of Provincial and Local Government (DPLG) also explained that the ISRDS was not to be equated with agrarian reforms, and that the dependency on agriculture must not be at all costs or looked at uncritically. In some cases growing one's own food could indeed be more costly. The idea was to pursue a mixed economy at all levels. Cabinet had specifically emphasized the need to 'leapfrog' rural areas and usher them into the twenty-

first century rather than taking an evolutionary path similar to developed countries (Participant 15, DPLG, Workshop 2).

Illustrative examples were made by the ICT experts on how ICTs could bridge the gap of service delivery, doing it faster and cheaper. Through telemedicine and tele-agriculture, ordinary people can access expensive services provided from distant places (Participant 101, Vodacom, Workshop 3).

There was also caution expressed about the usefulness of ICT, as it is dependent on skills availability: the investment is at risk of becoming a white elephant if people do not know how to use the technology (Participant 75, PIMS, Workshop 3).

Telkom explained that it was in ORTDM's interest to monitor compliance with the licensing conditions of Telkom and mobile phone operators, which require them to provide rural ICT services. Government has established an organization to oversee the process, the Universal Services Agency (USA), which is responsible for providing telecentres. ORTDM also needs to monitor the work of the USA in their area (Participant 92, Telkom, Workshop 3).

The other ICT experts pointed out that ICTs could provide farmers with information on agricultural practices, costs, availability of farm inputs, health insurance and other useful information. Enabling access to this information is perhaps the most significant role of

ICT in poor, isolated areas where people could otherwise be cut off from the rest of the world (Participant 104, Vodacom, Workshop 3).

Although ICTs also play a major role in cutting the cost of education, the potential role of ICTs in education with regard to access and affordability has not yet been fully appreciated by citizens and policy makers. The use of ICT should also be of value to disabled retrenched mineworkers (Participant 103, ICT Expert, Workshop 3).

The principal of Tsolo Agricultural College also made reference to the importance of ICTs in agricultural education (Participant 97, Tsolo Agricultural College, Workshop 3).

Energy: the energy divide is the ‘mother of all divides’ in infrastructure, from the researcher’s experience. Without energy, ICTs and other critical services cannot be delivered. Only 30% of the population of O.R. Tambo had access to energy at the time of writing. In unserviced areas, farmers cannot use an agricultural technology that requires energy. To move from subsistence farming to commercial farming, energy is a necessary input, as the Ulimo Development Agency argued, which makes energy and ICTs not just basic but strategic infrastructure, and necessary for developing commercial agriculture (Participant 98, Ulimo, Workshop 3).

There was doubt as to whether Agrilek, whose function is to bring electricity to farms outside the electricity grid, was as effective as it could be, and whether it was treating provision of electricity to farmers as strategic infrastructure. It was said that DME and

Eskom were also not sufficiently focused with this issue (Participant 36, Municipal Manager, Workshop 3).

4.3.5 Land reform and economies of scale

Access to land and the ability to reach economies of scale are some of the challenges that workers face; most families do not have the capacity to yield large volumes of produce (Interviewee 1, TEBA).

According to the MDA, a form of collective farming is needed, to assist families who do not own enough land to be cultivated economically also to support disabled retrenched workers. To achieve this, collective organization was identified as a priority (Interviewee 22, MDA).

The NUM warned that people fear any form of surrender of their fields, as previous land dispossession was still fresh in their minds. Not only was it used by the old colonial governments, the homeland governments also did the same. This is part of what the land-restitution process is trying to address (Interviewee 2, NUM).

To respond to the challenges of both access to land and finance, the Department of Agriculture has set up the Land Redistribution for Agriculture Development programme (LRAD) which supports both subsistence and small farmers. LRAD makes land available to individuals and groups, which can be used for:

- agriculture;

- settlement purposes; and
- non-agricultural enterprises, e.g. eco-tourism.

LRAD targets women and the youth, and seeks to ensure full participation of women by eliminating gender-based obstacles in the process of accessing land. It requires the contribution of beneficiaries of the grants in cash or labour. LRAD is specially aimed at historically disadvantaged persons, the National Department of Agriculture (NDA) representative explained (Participant 12, NDA, Workshop 3).

4.4 AGRICULTURE IN O.R. TAMBO

The advantage of O.R. Tambo when it comes to agriculture is that there is already a deep attachment to livestock and land, which is an important starting point, as people do not need to be coerced into agriculture (Interviewee 1, TEBA).

According to the Minister of Agriculture, Ms Thoko Didiza, the three strategic goals for building a prosperous agricultural sector are:

- i) access and participation (including land and infrastructure);
- ii) competitiveness and profitability (including market access and economies of scale); and
- iii) sustainable resource management (Interviewee 30).

All of these strategic goals have had a bearing on ORTDM.

O.R. Tambo has a strong resource base but lacks the technical and marketing skills needed to attract investment to the area. It has land that can be used for crop production under intensive irrigation and animal husbandry to enhance livestock, according to the Provincial Department of Land and Agriculture (Interviewee 7).

Overgrazing, inappropriate land use and farming methods are, however, a very great threat to agriculture in O.R. Tambo, and therefore major land-care programmes are needed (Participant 13, Provincial Dept of Agriculture Workshop 1).

The study of the ARC mentioned in the Chapter 1 refers to a number of crops that can be produced in all the local municipalities of the district. There are more than 500 crops that can be grown in O.R. Tambo. The ORTDM has initiated agricultural projects with varying degrees of success. The projects are as follows:

- beef farming;
- fattening and breeding to upgrade the Nguni and Bonsmara breeds;
- cross-breeding to improve meat for abattoirs;
- vegetable gardens;
- maize cultivation; and
- dairy processing.

ORTDM has as one of its goals 'to double agricultural production in five years time, from 2002 to 2007' (Interviewee 13, ORTDM). While the ORTDM would like some of the projects to be commercial, that is proving to be a challenge. It is doubtful that the

initiatives already undertaken are not adequate to realize the goal of doubling agricultural production in five years. No respondent could provide a business plan that will guide the goal of doubling agriculture in 5 years time.

4.4.1 Crops

The district has many possibilities for fruit and vegetable farming, a fact also supported by the ARC study. Maize is the most popular crop/grain, as it is a staple food and needed for food security. But it is not suitable for cultivation in all areas of ORTDM. Other parts of O.R. Tambo have potential for high-value, exotic and export crops such as tea, hemp, olives and strawberries, which have greater commercial returns and less food-security value (Interviewee 7, Provincial Dept of Agriculture). To be successful in those areas a market access plan would be critical, and some education would help. It could turn the possibility for commercial farming into opportunity.

Sugar-cane farming is doing well in Bizana, where there is sugar processing and potential to expand. There is a maize-farming project in Lambasi, which also has a mill. Again, there is room for expansion there (Interviewee 29).

There is also an opportunity to get into organic farming and hydroponics. In fact, some farmers have been sent to Cape Town for training (Interviewee 7, Provincial Dept Agriculture).

4.4.2 Livestock

O.R. Tambo has 700,000 cattle and 2 million goats and sheep, constituting 890,000 animal units (AU), on land with a capacity for 230,000 AU (Interviewee 7). People in rural areas generally value ownership of large numbers of livestock, especially cattle and sheep, even though large stock numbers lead to land degradation and malnourished animals. Participants indicated that it was not easy to convince people in the communities to downsize their stock numbers, and land ownership is considered the most important investment. Most miners have goats, sheep and cattle, and are also overstocking. The MDA recognizes that it has an important role to play in educating its constituency on land-use patterns and beliefs that compromise the economic benefits of mineworkers (Interviewee 35, MDA).

Goat farming is more commercially viable than cattle farming in O.R. Tambo. It is, however, difficult to convince men in particular to limit cattle ownership in favour of goat ownership, as owning large numbers of cattle is regarded as a symbol of prosperity. Without feedlots and fattening schemes, however, farmers end up with thin cattle and high mortality rates that force them to sell their livestock cheaply. Access to feedlots and rightsizing is therefore being encouraged (Participant 13, Councillor, Workshop 1). There are also growing opportunities in the international market for goats. The goat provides meat, skin and dairy products. It can be an important contributor to poverty alleviation, and is also more resilient therefore needing less care. There is a niche market for the Boer goats, which are indigenous to South Africa (Interviewee 30).

The MDA is developing an agricultural strategy for its members that will take advantage of opportunities in primary and secondary agriculture. Since mineworkers own many of the sheep in O.R. Tambo, the MDA is exploring a mohair project, and is planning to build dipping pans and shearing sheds to enhance the quality of the wool in O.R. Tambo. A partnership with the Woolgrowers' Association of South Africa is to be established (Interviewee 22, MDA).

4.4.3 Youth and women in agriculture

Youth and women play an important role in agriculture in ORTDM, and are targeted by state programmes, especially piggery and poultry farming, and are attempting to build business capabilities with the assistance of government. Through government support they can access seed capital, individually or in groups (Interviewee 13, ORTDM).

Women constitute 51% of the agricultural producers of ORTDM, while youth make up 21% (Interviewee 7). Therefore any strategy to boost agriculture will have to involve women. Women are more likely to adapt to economic changes with less regard for social status (Participant 5, Municipal Official, Workshop 1).

Women have found it easy to enter into collective farming, even on family land. They do not find it difficult to choose goat farming over cattle farming, if that is what makes economic sense. MDA projects also target women who are relatives of ex-miners (Interviewee 35, MDA).

4.4.4 Food processing/Value addition

The Land Bank identified the absence of a food-processing industry – food processing and the conversion of raw products into consumer products, such as fruit to juice, maize to mielie meal, cattle to beef, as well as non food processing such as skins to leather – as one weakness in O.R. Tambo (Participant 38, Land Bank, Workshop 3)

Food processing is indeed one of the facilitators of growth in agriculture, as it can add new jobs and expand the value chain. The ORTDM has already started some projects in food processing: a small abattoir and a dairy farm in Umtata, though it is still very modest, especially when considering the needs of ORTDM (Participant 6, Municipal Official, Workshop 1).

A representative of the Secondary Agriculture Education and Training Authority (SAETA), which is concerned with providing skills for food processing, highlighted skills development as an important requirement for a food-processing or value-addition industry. He pointed out that it is a highly competitive market. It is highly globalized, and influenced by domestic and international market trends, volatile prices and consumer lifestyles. Food processing is governed by very strict health regulations that have to be conformed to. SAETA has just begun with its first learnerships in sugar-cane processing in KwaZulu Natal. It has more learnerships planned for the future, but nothing as yet in O.R. Tambo (Interviewee 5, SAETA).

4.4.5 Business development and access to finance

Local entrepreneurs who want to invest in the different sectors and in local labour complained about the lack of access to finance, infrastructure and skills needed to do business in O.R. Tambo (Interviewee 19, NAFCO/NAFU). It was, however, indicated by the Industrial Development Corporation (IDC) and the Land Bank that they have developed funding products which are meant to assist such entrepreneurs (Participant 25, Workshop 3). In some cases, the IDC and the Land Bank even collaborate.

These investors argue that their problem as financiers is that of finding good and bankable business plans. The financiers stressed that the key sectors identified for O.R. Tambo were in fact priority sectors that would qualify easily for financing if only the proposals were good (Participant 38, Land Bank, Workshop 3).

Through the Land Bank, the Department of Agriculture facilitates access to finance. The objectives and vision of the Land Bank include 'to be a provider of world class financial services to related rural sectors in South Africa'. Some of the Land Bank's financial products target the poor, e.g. grant funding, unsecured lending, micro-financing, rehabilitation of farmers and mobile banking (Participant 38, Land Bank, Workshop 3).

4.5 ISSUES AFFECTING THE TRAINING OF MINeworkERS, IN AGRICULTURE AND OTHER SECTORS

4.5.1 Cross-cutting competencies and skills for the natural resource industry

There are almost similar training needs in all the identified sectors in ORTDM, which is why the researcher has also briefly considered them while keeping greater focus on agriculture. For all the sectors there is a requirement for basic knowledge of natural resources management and sustainable utilization. For forestry, eco-tourism and agriculture, land-care skills are critical, as they can prevent overgrazing and soil degradation.

Skills to care for water resources to ensure there is no contamination from pesticides, toxic substances and other pollutants that would impact on plants and crops as well as marine resources are needed.

Farmers, like their colleagues in eco-tourism, need to be able to deal with invasive and alien plants as well to protect endangered species, whether marine, flora or fauna, as for all natural resources the maintenance of the ecological balance is critical.

All the identified sectors in the natural resource industry have products that can be processed into value-added products. As the study progressed it became clear to the researcher that a sound knowledge of natural resource management is irreplaceable for productive use, sustainable development and natural resource and poverty alleviation.

Broad-based training can equip farmers with skills that can be utilized across the natural resources sector, which would have the desired multi-skilling effect.

4.5.2 Recognition of prior learning (RPL) of mineworkers

RPL means that trainers have to consider what the retrenched miners have learnt and what their experiences are. Views on what mineworkers are likely to have learnt in the mines differed significantly, from those who thought nothing useful was learnt by miners to those who identified specific competencies that are likely to have been picked up by ex-miners.

The researcher's interaction with ex-miners showed they were hesitant about the usefulness of what they know and the relevance of their experiences from the mines. The ex-mineworkers spoken to indicate that their first choice for another job would always be that of a mineworker (Interviewee 12, Retrenched miner).

According to a JET consultant, this lack of confidence is probably influenced by the disappointment brought about by failing to find jobs and the inability to sell any of their skills (Interviewee 3).

Another view was that of the Chief Inspector of Mines who is also responsible for mine health and safety, who argued that workers pick up 'tacit skills'. Based on the manner in which the work is organized in the mines, they are required to have basic skills to read simple graphs and statistical information from notice boards, operate machines and

appreciate the importance of maintenance. 'Very importantly, they have to know about health and safety. Every mine has to see to that in accordance with the Mine Health and Safety Act of 1988.' Those working in open-cast mines should also be aware of the hazardous nature of working in an exposed environment and the harmful effects of dust pollution. This knowledge should be useful both directly and indirectly, especially on a commercial farm, which uses machines and is also applicable when working outdoors on the land anywhere (Interviewee 37, DME).

An ex-mine technician argued that mineworkers who become aides to electricians, boilermakers and participate in digging drains, drilling and attending to ventilation equipment etc. learn from that experience and from their superiors. He argued that ex-mineworkers from Mozambique were able to use that experience in rehabilitation projects following the floods. In fact, project managers preferred them as workers because of their experiences in the mines and their familiarity with machines (Interviewee 36).

A mine manager running a successful training programme that is targeting ex-mineworkers so that they can start their own enterprises expressed a contrary view. He did not think workers brought any skills from their mineworker experience. He also stated that the ex-miners he was training often opted for service and retail type work such as running spaza shops and driving, instead of technical jobs (Interviewee 39, Mine Manager). The success rate in the creation of SMMEs after training in this group was

about 50%, which is above average from my experience of working with small businesses at the DTI.

There was yet another view from a NUM representative, who argued the training needs of workers who are jobless due to injury on mines and disability also need attention. He also argued that some workers gained leadership experience from leading and being part of organized labour. Their exposure to large capitalist and global companies means that they can, with some assistance, grasp with better appreciation the workings of capital markets and how it could affect the initiatives they will undertake as entrepreneurs (Interviewee 2, NUM).

Dr Mthwecu, the CEO of MQA, explained that most companies were already providing training up to ABET level 4, which is grade 9. There was room to improve the content. The plans were to ensure that in every mine not only did workers have up to ABET level 4, but that they acquired the fundamental skills of communication in English and mother tongue; common care skills, which is human relations; occupational health safety knowledge; IT and business skills; plus specialization, which could be in hard rock, cement, coal, etc. (Interviewee 15, MQA)

Other scholars doing further research could consider these opposing views and the progress that is envisaged for the mineworkers' education at the workplace.

4.5.3 Emotional well-being of trainees

As retrenchment is a traumatic experience, training providers who have to deal with retrenched workers must pay attention to the emotional well-being of their trainees or risk making their training ineffective, a consultant for JET argued. She argued that ‘trainers must not think they can simply take a course from the shelf and thrust in upon on examiners. They need to provide customized training. They must also assist in building the workers’ self-esteem.’ Many workers lose self-esteem, become depressed and even blame themselves for losing their jobs, she argued. They sometimes find it hard to learn (Interviewee 3, JET).

4.5.4 Role of training providers

The principal of Tsolo Agricultural College explained that the targeted trainees would benefit from their evolving training courses. Their new mandate includes mentoring of farmers and research into new trends such as agri-technology and the specific circumstances that emerging farmers encounter. He provided an illustration of specific agricultural commodities that warrant customized training because of their potential to enable emerging farmers to specialize and cope better with the changes brought about by modern technologies (Participant 97, Tsolo Workshop 3).

He motivated for commodity-based training, driven through established commodity groups. Commodity groups come together because they do similar types of farming and in similar commodities. That is also good for peer learning, as the farmers could exchange experiences.

The established groups include those who specialize in:

- poultry;
- piggery;
- red-meat farming; and
- dairy farming; etc.

In this way, they can learn about the primary and secondary agricultural aspects of their specialized area (Participant 97, Tsolo Workshop 3).

The principal of the college regrets decline in the numbers of active of extension services, as they enhance on-site training, a view shared broadly by participants and one of the issues of significant consensus. Extension officers are trained agricultural experts who are also skilled in outreach teaching of farmers in a similar manner to health workers doing home visits.

To enhance the effectiveness of extension officers, retraining is necessary. That will add to their knowledge about the new economy. The Provincial Department of Land and Agriculture (PDLA) indicated they needed more than a hundred extension officers to provide adequate services and to have an extension officer in each ward; rural wards are very large because of sparse population (Participant 13, Workshop 1). The likelihood of creating that many posts in the public service will not be easy, in the experience of researcher. This view was also echoed by Minister of Agriculture (Interviewee 30, Ministry of Agriculture).

It was stated that budgetary constraints are responsible for the reduction in the number of extension officers, as it was not only personnel that was needed, but also transport and operational facilities (Participant 13, Provincial Dept of Agriculture and Land Affairs, E/Cape, Workshop 1). In some cases it leads to total dependency on the state on the part of farmers, which needed to be curbed (Interviewee 30, Ministry of Agriculture).

ORTDM only employs three people with the relevant agricultural skills to service the agricultural sector; this is for a population bigger than the whole of Swaziland.

As indicated in Chapter 1, the National Department of Agriculture representative stated that government did not have a monopoly on training: it is a shared responsibility, and he encouraged partnerships and collaboration with other government departments, NGOs, agribusinesses, parastatals, technikons and universities. These organizations must also be encouraged to train and provide extension officers with support services (Participant 12, NDA, Workshop 3).

4.5.5 Access to skills in O.R. Tambo

Only 5% of people in O.R. Tambo have post matric qualifications. The area has Unitra and Tsolo Agricultural Training College. There is also Fort Cox Agricultural Training college and the University of Fort Hare, both close to Alice.

Workshop 3 was attended by Tsolo, Fort Cox and Unitra. All had expressed interest in improving the skills profile of O.R. Tambo. That was confirmed by the Mayor

(Participant 76, ORTDM Mayor, Workshop 3). UNITRA, which is based in Umtata, also has a school of rural development in ongoing cooperation with ORTDM (Participant 100, UNITRA, Workshop 3).

Many participants have little or no information on cooperation with the SETAs, whose role they did not fully understand. The district has HRD as one of its targeted activities in the IDP (Participant 14, Municipal official, Workshop 2). That has not yet begun. ORTDM has no budget for it. The resources they have for training are for the ORTDM staff and councillors. In fact, there were concerns that this study could raise false expectations from people outside the ORTDM budget (Participant 64, ORTDM, Workshop 3).

4.6 WHAT SKILLS AND COMPETENCIES ARE NEEDED BY EX- MINERS IN ORDER TO BECOME PRODUCTIVE FARMERS?

The challenges raised in relation to agriculture and learning needs apply to the sectors addressed by the study. All are natural resource sectors and therefore have some similarities as indicated.

In relation to the main question: What skills?

Participants generally took an outcomes-based approach. They answered this question by highlighting the competencies needed by emerging farmers to become productive and to deal with identified barriers to effective farming.

According to ORTDM the key obstacles to successful farming are:

- lack of skills;
- lack of proper infrastructure; and
- lack of capital (Participant 14, ORTDM, Workshop 2).

The identified overarching skills and competencies needed by emerging farmers, and ex-mineworkers in particular, are:

- **Land care and resource management**, which would introduce trainees to responsible and scientific use of land, and to deal with problems of land degradation and overgrazing. These skills are good for nature conservation broadly.
- **Knowing which crops or animals are appropriate for particular areas; what to do during different seasons and crop protection** (Participant 97, Tsolo, Workshop 3).
- **Rightsizing of livestock**
- **Basic animal husbandry**: fattening, controlling market rate, use of dipping pans, grazing.
- **Record keeping**, which enables farmers to monitor patterns in the growth of crops and behaviour of animals. It also enables farmers to take corrective measures timeously.
- **Weed and pest control**, which would enable trainees to learn about responsible uses of pesticides, including organic farming and the impact thereof. Dealing

with invasive trees and the protection of natural resources, endangered crop and animal species and restoration of biodiversity

- **Value addition/food processing**, learning to convert raw materials to more valuable products, e.g. processing cattle to beef; fruit to juice (Interviewee 5, SAETA).
- **Use and maintenance of farming machinery**, learning to use and maintain machinery to improve productivity and move from subsistence to commercial farming (Participant 19, Eskom, Workshop 1).
- **Information Communication Technology**, learning the use of ICTs including being trained as agricultural ICT brokers, extension officers and providers of e-education. They could also learn how to learn through ICTs (Participant 93, Telkom, Workshop 3).
- **Business and marketing skills**, introduces farmers to commercial aspects of farming and understanding how the markets work. How to secure markets and access finance (Participants - ORTDM/Ulimo, Workshop 3).
- **Farm management**: some will have to become farm managers, for which they will need management and leadership skills to manage farms and their other resources (Participant 65, ORTDM, Workshop 3).
- **Water resource management** and irrigation matters.
- **Risk management**: acts of God – floods and drought, man-made disaster, fires.

Training for commodity specialization

In addition to the skills identified above, which are generic, overarching skills include specialization in specific commodities that the trainees engage in, e.g. piglets, poultry and maize production, etc. The learner will have greater benefit if commodity specialization is vertically integrated in each product, from primary to tertiary agriculture, such as pig farming and bacon making; poultry farming and egg trading. That depends on objective conditions in each farm.

Gaining competencies in the above area would produce an effective farm worker and those with business and managerial skills could become farm managers.

How to train the ex-miners was a matter of concern to the ex-miners, who indicated that they feared being treated like children in their new status as unemployed dependants (Interviewee 12, Retrenched miners). Training providers also highlighted this aspect and indicated that the method of training had to suit adult learners (Participant 79, Prolit, Workshop 3).

The emphasis was also on the need for training not to be 'classroom style' and theoretical; it must be practical and provided on-site as much as possible (Participant 79, Prolit Workshop 3).

The fact that some ex-miners are almost destitute means that the training must be practical and actively fight against hunger and poverty. To make this impact, the training

must produce something the trainees can eat (Participant 73, O.R. Tambo Councillor, Workshop 3).

ICT-based training and Internet education must be considered where appropriate (Participant 92, Telkom, Workshop 3) and ICT is a cheaper method of obtaining a quality education.

ICT experts highlighted the benefits of the ICTs such as:

- e-government, which enables citizens to have access to government information and be better informed;
- e-learning, which enables citizens to source information and knowledge via the Internet;
- e-commerce, marketing of goods and services and transactions via the Internet by linking up players in international markets (Participant 101, Vodacom, Workshop 3).

Whom to train?

In addition to the ex-miners who are a target group for this study, the training has to target other members of the community who play an important role in agricultural production, such as women and youth (Participant 98, Ulimo, Workshop 3).

Where to train?

The emphasis is on practical training provided on site, which could be the trainees' farms; a demonstration farm set aside for this purpose; and through learnerships. The

MDA has an interest in demonstration farms on the surface land of mining companies that can train both employed and ex-miners (Participant 48, MDA, Workshop 3). ORTDM already provides land to its citizen to do collective farming, such programmes can serve as training grounds but for now they are more for food security.

Why train?

The willingness of ex-miners to undergo this training should not be taken for granted. Even before making plans for training, the reason for training needs to be convincing to the trainees and relevant to their needs (Participant 19, Eskom, Workshop 3).

Training of trainers

The retraining of extension officers is to develop skills needed in the new agricultural economy as well as community-based extension workers. ABET facilitators and the training providers need to be linked to the relevant SETAs, and mentors who will assist in the learnerships need to balance global changes against the specific needs of the very local target group (Participant 8, DME, Workshop 2 - 2002).

4.7 CONCLUSION

O.R. Tambo is a land of opportunities as well as challenges, from what the participants said. The natural resources are ORTDM's best assets. They all need to be looked after, and to be used to leverage value. Infrastructure, education and financial resources are some of the inputs needed, and to achieve that it is possible to train ex-miners so that they can derive greater benefits from agriculture. The skills needed are in the first instance

those that will by and large help protect and nurture the essential natural resources such as land and water.

The study demonstrated the interrelationship among the sectors targeted in O.R. Tambo and how, even in training, skills can be collaborated upon, even by SETAs. Education is critical but it is not a complete solution. The study therefore highlighted other relevant inputs such as infrastructure and finance, which also need to be given due attention. The study established a set of skills that ex-miners could benefit from having if they pursue agriculture. Key challenges in O.R. Tambo's agriculture include land degradation and overgrazing, all of which need urgent attention within and outside the envisaged education context.

BACK TO THE FUTURE

CHAPTER 5: INTERPRETATION OF DATA DISCUSSION AND CONCLUSION

5.1 WHAT THE CHAPTER WILL COVER

This chapter will capture the socio-economic history of the mineworkers in South Africa and that of O.R. Tambo, against the backdrop of economic growth and job losses as experienced by the South African economy.

It will refer to the findings on training matters, the skills identified for retrenched mineworkers including training of the trainers and the role of SETAs and other training providers.

We also refer to additional inputs that need consideration if training is to be valuable. It concludes by highlighting key findings on which recommendations are made.

5.2 SOCIO-ECONOMIC BACKGROUND

As stated in Chapter 1 O.R. Tambo is not only the poorest district of the thirteen rural nodes in which ISRDS is implemented, it is also the poorest district in South Africa.

In this study we have seen that land dispossession at the turn of the twentieth century led to a decline in agricultural productivity in the African communities while legislated discrimination over the years entrenched the process of deskilling black workers.

Over time a combination of lack of development in the dense labour-sending areas, and disempowerment at the mines, especially due to denial of skills and career paths, produced 'abundant cheap unskilled labour' from areas that were under-developed. It was mostly the convergence of these circumstances that led to the situation confronting the ex-mineworkers in O.R. Tambo today.

The change of political dispensation in South Africa has enabled better co-operation between government, mining companies and labour. As a result of the Mining Summit in 2000, these three parties jointly adopted, among other things, human resource development and rural development as shared priorities in terms of the development of communities affected by mining and the retrenchment mineworkers.

Notwithstanding the historic and contemporary challenges facing O.R. Tambo, the researcher argues that there could be a window of opportunity for development of the district through *inter alia* development of its natural resources, access to education, achieving food security and progressively developing commercial agriculture including value addition. The district also has mineral resources that the study did not pursue. This issue is controversial, as the area has been profiled as an eco-tourism destination; whether eco-tourism and mining can co-exist would make an interesting topic for further research.

5.2.1 Responding to Economic growth and job losses

The mining industry has been an important player in the economy of South Africa and continues to be a major employer. The numbers of people that the industry has been shedding has shrunk the South African labour market. In Chapter 2 it was argued that this trend affects the most vulnerable workers, the uneducated.

Continuous growth of the South African economy in the last 8 years while adapting to the global economy, which requires knowledge-based skills, has meant that the economy has been shedding the low skilled jobs which affected mineworkers significantly. The cumulative effect of job losses denies the economy the benefits of growth and the newly created jobs, which require the high end of the skills hierarchy. The only way to benefit optimally from the economic growth is to systematically provide training that is needed timeously and in significant numbers such that new jobs are taken. Otherwise benefits of growth are wasted.

In Chapter 2 we also noted arguments on how retrenched workers with low-level skills are not likely to find formal jobs again. In the case of O.R. Tambo and probably in general, the training provision is not yet adequate or comprehensive enough to be regarded as a serious response to job losses. An appropriate response would mean systematic positioning of workers for the new and realistic opportunities in the growth sectors and for self-employment.

ORTDM has a limited economic base, and agriculture is one sector in which ex-miners can re-integrate in an economically meaningful manner. It can provide with job creation, an improved quality of life, and household income. To achieve this, training is one required intervention together with availability of infrastructure; ICTs, markets, finance and a diversifying local economy.

5.2.2 Natural resources dominate the economy of O.R. Tambo

The study argues that it is important to first identify the economic opportunities so that it informs the decision on the skills needed. It was further noted that all the identified sectors in O.R. Tambo are in natural resource industries and some of the skills required were similar across these industries and with further work the skills identification can even be more exact.

It can be concluded that training providers could collaborate to provide the critical skills needed for agriculture while also training for the other sectors. They can make training much more appropriate only if they respond to real opportunities. The skills identified in the study can be used in the different sectors and are therefore 'portable'.

The recognition by training providers of skills portability will be important, as that could possibly influence their course structure and reinforce the portability of skills and collaborative training especially between SETAs. Such collaboration may be slightly difficult in value addition but most possible in primary agriculture.

The study also noted that the most serious challenges facing O.R. Tambo's agricultural development as identified by ORTDM which are: education levels, poor infrastructure, and access to finance. From the data gathered for the study I would add: poor land care due to overstocking and overgrazing, wrong farming methods as constituting the most immediate threat to sustainable agriculture in ORTDM. If that is not attended education will not make as much sense or give as much benefits.

5.3 TRAINING MATTERS

5.3.1 Human resource development in O.R. Tambo

The skills shortage in O.R. Tambo was a concern shared by participants in all the workshops, particularly in workshop 3.

The HRD manager in O.R. Tambo, however, stated that his mandate is limited to the training needs of the employees of the district council and the councilors. The reality therefore is that the poorest district council has no dedicated resources to rid it of one of its critical challenges, the skills shortage. That was a finding for the study, one which requires a follow-up.

It is the view of the researcher that ORTDM needs an HRD plan to address its massive skills problem, for the district as a whole, which would then include a skill plan for agriculture. If ORTDM is to fulfill the vision of higher agricultural outputs in five years time, it has to train its citizens as well as its employees for that challenge and task.

This concern prompted the Workshop 3 participants to motivate for collaboration between ORTDM and the different training institutions especially Unitra.

5.3.2 Women and youth

Youth and women represent 71% of all farmers in O.R. Tambo. That makes them important stakeholders in any agricultural training plan and strategy in O.R. Tambo. They would have to be prioritized for training and encouraged to specialize including becoming professional extension officers and community-based extension officers.

5.3.3 Findings on ‘what skills?’

The study identified a set of skills that are essential for agriculture and for the natural resource sector. These are skills that will protect and ensure sustainable use of natural resources as well as enabling progress to commercial agriculture or to initiate subsistence farming. There is a realization that in future many workers will not be in the formal sector, and therefore the skills must anticipate self-employment challenges.

The identified skills have been grouped as follows:

- **Protection of natural resources and management** e.g. land care, pollutants and pesticide management, protection of water resource needed for irrigation and marine culture, rightsizing of livestock and crop rotation;
- **Skills for commodity specialization:** specific commodities e.g. piggery, grain farming, cattle breeding up to value addition;
- **technology, ICTs and farm equipment management and maintenance;**

- **entrepreneurial, business and marketing skills for farmers;**
- **management and leadership skills for farm managers.**

The training proposed could be structured to lead to training of **farm workers and farm managers**. In Chapter 2, we discussed the intention of the SETA responsible for primary agriculture, PAETA, to provide training for farm workers and farm managers. The relevant unit standards and courses were being developed at the time of writing. That training and course content need to be responsive to the needs of these farmers and not one size fit all.

5.4 APPROACHES TO LEARNING

Having identified the necessary skills, the question of how to teach and learn arose, ABET emerged as the preferred approach, with an emphasis on being demonstrative and practical. The MDA has put forward concrete proposals for trainees to learn and practice agriculture in mine-owned surface land. Demonstration farms in O.R. Tambo and in the mines should be considered for learning and food production purposes.

Meeting the challenges of hunger has to be part of the process, so that trainees can produce food for themselves to meet their basic needs while they learn.

5.4.1 Train the trainer

It became clear in the course of the study that educational institutions, like the workers they train, also have to adjust. The specialist-learning organizations (SLOs) must become

learning organisations. Educators who are unable to change could become an obstacle to the multi-skilling of their trainees. Educators more than anyone else need to understand the changing nature of work and reflect it in their training.

5.4.2 Intermediaries

As part of improving access and appropriate delivery, it is the researcher's view that consideration must be given to the training of trainers regarded as 'intermediaries' who are specialists in their fields, who can facilitate the delivery of learning in a customized manner. They can specialize in ensuring relevance of content and delivery, and accommodate issues raised by the JET consultant in chapter 4, i.e. that trainers must pay attention to the emotional well being of retrenched workers. The intermediaries must know the target group very well and be in a position to adapt easily. They must also be specialists in a field of knowledge required in O.R. Tambo: agriculture, eco-tourism, food processing to name a few. In other areas the specialization must be accordingly.

The intermediaries could include:

- Community-based extension officers who can be drawn from the targeted community, and who can, if necessary be mentored by professional agricultural extension officers. The target groups, e.g. mineworkers, women, youth, should be considered for training as intermediaries in agriculture.
- ICT brokers are another possible category of intermediary; who need to build ICT capabilities among rural people and farmers who have specific and common training needs such as tele-agriculture or ABET. Telkom has argued

for better use of ICTs especially to broaden access to cost-effective government education (see Chapter 4).

- ABET educators can also specialize in e-education and enhance the ABET learners' skills in line with the changing nature of work in a globalizing economy, and also to prepare bankable documents, to seek finance assisted by finance intermediaries.
- The role of intermediaries should be to improve access to education and roll out 'en masse' the delivery of training to the unskilled; they could be part of a bold and comprehensive response to the challenges of 'growth and job losses'.
- The needs of rural citizens have to be met by skilled persons, through when there is a massive problem of migration of skills to urban areas. Regulations and incentives should be explored to regain or retain these skills, an approach that is similar to community service for doctors. The targeted employees must be drawn from both the public and private sectors. This proposal is mainly concerned with specialized intermediaries, similar to doctors doing community service. Intermediaries would be drawn from their community and taken for enhanced training to become specialists. Specialists could also be seconded from the targeted sectors e.g. agricultural organisations, environmentalists, ICT specialists or energy workers to name a few.

5.4.3 Agricultural extension officers

The findings indicate that O.R. Tambo has a shortage of extension officers, which needs to be addressed. Participants in all three workshops identified that need as an important ‘missing link’ in the provision of agricultural education to emerging farmers. The Department of Agriculture made it clear that they see the issue of training emerging farmers as a shared task with other stakeholders, who also have an interest in the development of self-reliant communities, and food security support for emerging commercial farmers.

Other stakeholders who could assist in that regard include DME, DOL, TEBA, Chamber of Mines, and MDA they are also concerned with the plight of ex-miners and could possibly support training in agriculture. The training of trainers has indeed emerged as an issue that needs to be part of a complete HRD picture in ORTDM.

5.4.4 SETAs and other service providers in O.R. Tambo

The SETAs are not yet known or visible in O.R. Tambo, is the observation of the researcher. In all workshops their role didn’t feature much except for the role of the MQA. An interview with SAETA also confirmed that they had not as yet worked in O.R. Tambo.

ORTDM being the poorest of the rural node qualifies for urgent and sustained attention of part of all SETAs with skills most needed in O.R. Tambo. The CEO of MDA is pursuing some plans, which involve PAETA and SAETA. Together these SETAs could

play a bigger role with regards to miners even before they are retrenched, as well as after retrenchment. For multi-skilling in O.R. Tambo the SETAs of agriculture, tourism and marine culture could consider cooperating and help with the HRD Plan of the district such cooperation would be easier and MQA could initially help to facilitate coordination with other SETAs.

SETAs also need to anticipate retrenchments better, and to be proactive in fighting the impact of job losses, especially in mining where the numbers are so large and job losses always anticipated. The value of proactive training as well as proactive planning by departments and the municipality affected by large retrenchments cannot be over emphasized.

A participant cautioned about the difficulty of expecting non-mining SETAs to train mineworkers at the mines or even to train the already retrenched miner-workers in O.R. Tambo. This is in part because the skills levy that pays for the training is very sector specific, so that SETAs train people who are already in their own sector, it was claimed (Participant 4, DME, Workshop 2).

The CEO of MQA clearly had a different experience, he indicated that there is an initiative that involves agricultural SETAs that is exploring agricultural assistance to ex-mineworkers which came out of Workshop 3 deliberations.

Migration of workers to sectors with better options for jobs has to be encouraged and pursued actively as one concrete way to utilize the benefits in growing sectors. This is potentially a moving target as the skills demand profile is not static, and training has to recognize that fact.

To achieve multi-skilling of the poorest people, the policy framework of the SETAs needs to be enabling and facilitative in order to encourage and allow for greater SETA collaboration for multiskilling, and to ensure that mineworkers can acquire alternative skills besides mining related skills while still at work and beyond.

5.5 ADDITIONAL INPUTS TO ENHANCE TRAINING

5.5.1 From Brain Drain to Brain Gain

The desire to bring back some of the people who have migrated was expressed. How to get some of the ‘brains’ back to the villages in order for them to contribute in the areas they may still regard as home and ancestral land, and to reduce the impact of this ‘brain drain.’ In their contribution, Telkom argued for ‘brain gain’ using ICT during Workshop 3. ICT can bring back the expertise that is needed in rural areas and circulate it to where it is needed, hence it is also referred to as “brain circulation”. That is a matter for follow-up on the part of ORTDM not just for agriculture but for all sectors.

5.5.2 Mining Social Plan and targeted assistance to ex-miners

For years MDA was the only organization that had dedicated services for ex-mineworkers. The study indicated that Governments did not have an adequate social

safety net to cope with the large numbers of retrenched people of an economic active age. Over the last few years there are more NGOs, government and industry role players taking part as shown in the study as indicated in the study. Benefits could be maximized through better coordination starting with national level coordinating with district municipalities.

The Social Plan provides for the establishment of “future fora”, as indicated in Chapter 2. Currently, there is hardly any working relationship between ‘future fora’ and authorities of dense labour sending areas, specifically ORTDM where so many retrenched workers go back for their future. Such contact could assist to make the plans made in ‘future fora’ more realistic and responsive to the realities of the dense labour sending areas. It could also enable municipalities to anticipate large retrenchments better.

Large retrenchments soon become a challenge of the affected municipalities in the main. The municipalities need to plan for the resettlement of retrenched workers and on how to access targeted assistance.

In ORTDM at a district level, seems to have good communication with TEBA and MDA and ORTDM but there is no evidence of shared programming as such. ORTDM does not provide targeted assistance to the 22,000 retrenched miners O.R. Tambo. As far as ORTDM is concerned, they would prefer to deal with all unemployed people in an equal manner not sectorally.

The consequence of not tapping targeted assistance could be that retrenched workers and other stakeholders including the municipality miss out on services dedicated to specific groups of retrenched persons. ORTDM with such an exceptionally high number of retrenched workers, limited resources and hardly any safety net is in no position to cope alone. Further, the reality is also that retrenchments in mining are an ongoing and predictable phenomenon which has to be prepared for. Already the active role of MQA providing support to training programmes in ORTDM following Workshop 3 is proof that targeted assistance can work.

The Mining Charter which also has aspects that targets dense labour sending areas like O.R. Tambo is not likely to benefit retrenched miners and families optimally if there are no intermediaries and no assigned contact points in affected municipalities to work with those who have a full grasp and mandate to focus on this issue (Interviewee 16, SALGA).

5.5.3 What do miners learn during their employment

That remains unclear as seen in Chapter 4 as well as an interesting subject for further studies. Clarity on the matter is important for both enhancing RPL and ensuring skills and knowledge transferred during work in the mines is formally accredited.

5.5.4 Basic and strategic infrastructure

Water and Sanitation

Data in Chapter 4 showed that skills training would not achieve much without being complemented by the provision of basic and strategic infrastructure, in this case water and sanitation. Water is critical for irrigation and in fact it is impossible to farm without a reliable supply of water. Water is critical even for subsistence agriculture.

Energy and ICT

Strategic and essential infrastructure such as ICTs and energy is also needed to enable commercial development and competitiveness of the district, so that it progresses beyond subsistence over time to use ICTs to cut costs of high quality education and broaden access. The energy needs of the farmers need to be part of what informs provision of electricity by Eskom through Agrilek, which is responsible for electrifying farms.

The need to ensure that infrastructure development is targeted for sustainable job creation did not emerge from the participants. From the experience of the researcher there is an opportunity to create jobs, through provision and maintenance of infrastructure services. Both need a structured coordination and prior technical training.

That is also the case for services needed for energy, water sanitation and ICT. O.R. Tambo with its infrastructure backlog can ensure that by developing infrastructure, it can also provide training and jobs.

The importance and need to use ICT to ‘leap frog’ the citizens of O.R. Tambo, starting with tele-education and tele-agriculture cannot be over-emphasized.

5.6 LAND DEGRADATION AND OVERSTOCKING

Though the need for a land-care programme was raised frequently, there was no evidence of a comprehensive plan to deal with this problem.

A comprehensive programme that can rehabilitate the land, where it has been degraded and prevent further degradation should be considered. Such a programme could introduce rightsizing of livestock to relative capacity as per available grazing land.

It is the view of the researcher, that the extent of land degradation in ORTDM indicates that today’s communities may be lacking knowledge of basic soil sciences which was historically passed on from generation to generation. New methods of educating families and communities are needed, because the “chain” has been broken. Young people who are mostly attending school are presumably no longer involved in agriculture as a household chore. This valuable knowledge, which became part of the community’s institutional memory is slowly being lost.

Other researchers may look into this assumption and the validity of this reasoning. O.R. Tambo has to deal with this challenge with some urgency to focus on land rehabilitation, rightsizing of stock, and the adoption of appropriate farming methods. Land degradation

is potentially a more serious threat, even worse than skills shortage, in the short and long term.

5.7 BUSINESS PLAN FOR AGRICULTURE

The vision for agriculture does not have quantifiable business plan. A great deal of knowledge is available on what can be planted, where it can be planted and how to take care of stock. The ARC study (see Appendix 7), the knowledge of the Departments of Agriculture, both nationally and provincially, and ORTDM could all be used to develop a business plan with targets and realistic milestones. The available information also shows there is a great potential for cultivating cash crops and staple food crops. Such a business plan would also need to focus on value addition, which has to be sensitive to market conditions. The plan would need to include land rehabilitation.

Without a measurable plan with milestones and a skills plan, benefits might not be as good as they could be for agriculture.

5.8 CONCLUSION

The skills identified are not only critical for agriculture but also for the natural resource sectors of O.R. Tambo. This offers an opportunity for collaborative training and a degree of multi skilling for the trainees. It also offers generic skills in natural resources management and sustainable development. These findings highlight that sustainable development is key for poverty alleviation and productivity. This study found that the value of skills training may not be realized unless numerous other 'facilitating conditions'

are addressed or present. Furthermore, both primary and secondary agriculture need to be considered.

To maximize benefits of targeted assistance for the retrenched mineworkers, coordination within government would need to include the affected municipality of ORTDM, who could tap into private and public sector resources set aside for the purpose of supporting retrenched mineworkers, their families and communities. To be without targeted assistance for a programme for 22,000 retrenched mineoworkers in ORTDM is a shortcoming. It has been argued that an enabling policy environment and disposition to enhance support to retrenched miners, their families and communitiese exists. Lack of coordinating capacity at the ORTDM could also deny the district the benefits of the mining reforms such as the Mining Charter which are also meant for the dense labour sending areas.

With regard to training of the ex-miners for agriculture, the skills to be provided also need to be understood to include disabled mineworkers injured in the mines. Some of the jobs they could do require some of the identified portable skills.

The training would need to consider the changing nature of work in a globalising economy and the use of the new technologies to the best advantage of the trainees, for example through tele-education and tele-agriculture, which disabled miners could also learn. If ICTs is the 'electricity of the 21st Century' as stated by Castells in Chapter 2 (Castells, 2000), then there is an urgent need for ICT training in the district is imperative.

Such training may require that educators get additional training and adapt to be retrained in accordance with the new economy.

It would also mean gearing for training delivery on-site and on demonstration farms, the use of 'intermediaries' such as agricultural extension officers including community extension officers in the case of agriculture and ICT brokers, energy workers and social plan workers in the case of other related services.

O.R. Tambo as a case study has raised some questions, which could be pursued by another researcher and general answers. The findings could also inform plans for future programmes in different municipalities affected by mining.

The broad lessons to be drawn from this study include the importance of the co-ordination and inclusion of municipalities affected by retrenchments, when support initiatives are being undertaken at different levels. This suggests that the need for a comprehensive skills plan that is targeted to the identified key sectors in the resource poor areas in particular, which have high unemployment and low skills levels, is important. Nationally, there is a need to replace disappearing jobs rather than providing random training, to provide skills that prepare more people to be self-employed and to become entrepreneurs.

A combined training programme by different SETAs to maximize benefits for trainees and enable multi-skilling and portability of skills could prove useful. This could also

enable trainers in the natural resources to have shared training capability, without losing specialist training in eco-tourism, agriculture, or fishing.

Training in general needs to be stepped-up for the large untrained and trainable masses, without sacrificing quality and taking full advantage of new technologies. Training needs to ensure opportunities created by a growing economy are not wasted by failure to gear up training and prepare citizens to gain full benefits of a growing economy, while responding to the bigger challenge of job losses. The response has to be proportional to the challenges at hand. That is not the case yet and that made the interventions more token than real. The training and secondments from the public service also need to be located with a policy framework, which is greatly needed.

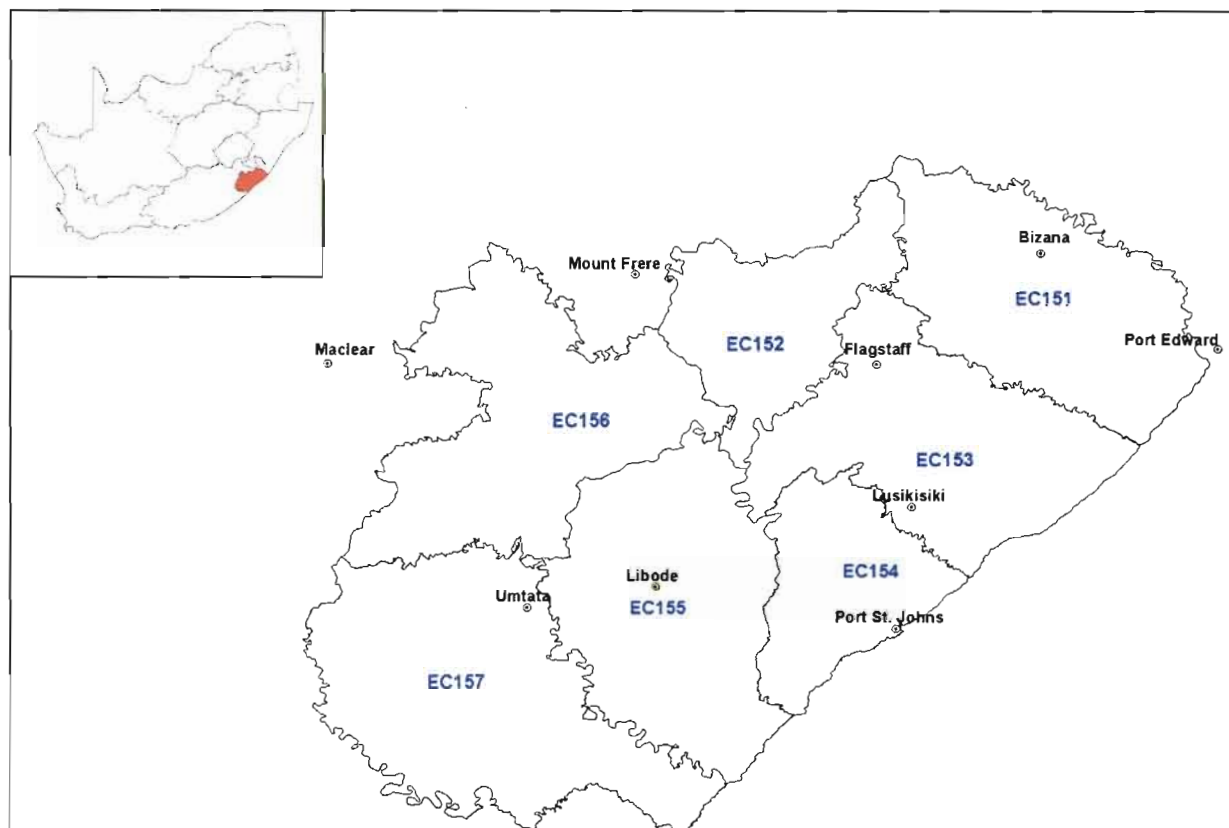
Land degradation like training needs to be done timeously and the scale of intervention is important; it could also take the form of public works. Over time some of the reversible land problems could become irreversible such that winning the education battle may be too little too late.

MDA is the most experienced party in the work of training ex-miners TEBA in their new role could also assist in preparing the ground for effective training in dense labour areas. Together, they could also assist Government and Business, and the social planning process. Many other stakeholders such as DME, Chamber of Mines, MQA, Land Bank, Department of Labour, Department of Agriculture, Department of Provincial and Local

Government and Department of Public Services and Administration could also have a key role and contribution to make.

Appendix 1

Location of O.R. Tambo District Municipality



Node 1 includes the following Local Municipalities:

Number	New Local Municipality name	Old Municipality name
EC151	Mbizana	Bizana
EC152	Ntabankulu	Ntabankulu
EC153	Ingquza	Lusikisiki Flagstaff
EC154	Port St Johns	Port St Johns
EC155	Nyandeni	Libode Ngqeleni
EC156	Mhontlo	Qumbu Tsolo
EC157	King Sabata Dalindyebo	Umtata Mqanduli

Source: Agricultural profile for the O.R. Tambo (DC15) District Council in Eastern Cape.
Information compiled by the Agricultural Research Council

Appendix 2

INTERVIEWS

	<u>ORGANIZATION</u>	<u>NAME</u>	<u>PLACE</u>	<u>DATE</u>
1.	CHAMBER OF MINES	Representative	Johannesburg Telephonically	May 2002
2.	DEPT OF LABOUR: PROVINCIAL	Manager	Bisho	July 2002
3.	DEPT. OF AGRICULTURE	Mr Makinana	Umtata	July, September 2002
4.	DEPT. OF AGRICULTURE AND LAND AFFAIRS	Minister Thoko Didiza	Pretoria	January 2003
5.	DEPT. OF ECONOMIC AFFAIRS, ENVIRONMENT AND TOURISM	MEC Godongwana	Bisho	January 2003
6.	DEPT. OF ECONOMIC AFFAIRS, ENVIRONMENT AND TOURISM	Manager	Bisho	January 2003
7.	DEPT. OF PUBLIC WORKS	Minister Stella Sigcawu	Pretoria	January 2003
8.	DFLG	Baby Mogane Ramohotswa	Pretoria	July 2002
9.	DME	M. Hermanus Chief Inspector of mines	Pretoria	January 2003
10.	DME	Kgosi Mogaki	Hluleka	January 2003
11.	DME REGIONAL OFFICE	Official	Pretoria	Pretoria 2002
12.	ELUCINGWENI	Inkosi/Chief	Nyandeni	July 2003
13.	ENTREUPNEUR	A. Hendricks	East London. Telephonically	January 2003
14.	EX-MINER	Z. Zonkana	Lusikisiki	June 2002
15.	ICT EXPERTS	Mama Monde, Zolisa Msiza, Tlokomo Bikitsha	Umtata Johannesburg	May 2002
16.	IDT	Lulu Gwagwa	Umtata	August 2002
17.	IMPHULO C.C.	B. Nazo	Umtata	July 2002

18.	JET/SDS CONSULTANT	P. Sigodi	Johannesburg	May 2002
19.	MDA	Buyisa Zokufa	Pretoria	July 2002
20.	MDA	Kate Phillips	Johannesburg	May 2002
21.	MDA	Sonwabile Msezeli	Umtata	June 2002
22.	MQA	Dr Mthwecu	Johannesburg	January 2003
23.	MQA	Chairperson	Pretoria	January 2003
24.	NAFCOC	M. Gaba	Umtata	September 2002
25.	NUM	Crosby Moni	Johannesburg	May 2002
26.	ORDTM COUNCIL	L.S. Nduku	Umtata	July 2002
27.	ORDTM COUNCIL	Z. Mzamane	Umtata	July 2001
28.	ORDTM COUNCIL	Mayor Z. Capa	Umtata	June, September 2002
29.	ORDTM COUNCIL HUMAN RESOURCES DEPT.	Mahlaka Luvuyo	Umtata	July 2002
30.	QINQOLO WOMEN	6 village women	Qingqolo	June 2002
31.	SAETA	Fakazani Mgwaba	Johannesburg Telephonically	July 2002
32.	SALGA	Councillor Nduku	Umtata	July, 2002
33.	SHELL/ESCOM	Herman Boss	Pretoria, Hluleka	July 2002
34.	TEBA	Christopher Boyana	Umtata	June 2002
35.	TELKOM	C. Cloese	Umtata	July 2002
36.	TRADITIONAL AUTHORITY OFFICIAL	Induna of Elucingweni	Lusikisiki	July 2002
37.	TSOLO COLLEGE OF AGRICULTURE	Z. Mdyibi	Umtata	January 2003
38.	VODACOM	Mama Monde	Pretoria	June, July 2002
39.	WESTERN AREA J/V MINE	Mine Manager	Randfontein	January 2003

Appendix 3

First Workshop in O.R. Tambo – 11 June 2002

List of participants

ORGANIZATION
1. O.R. Tambo – official
2. O.R. Tambo – Executive Mayor
3. DME official
4. DME – Social Plan
5. O.R. Tambo – official
6. O.R. Tambo – official
7. DME – Energy Officer
8. Eskom
9. Provincial Department of Land Affairs
10. Provincial Department of Public Works
11. Provincial Department of Agriculture
12. DME – Energy Officer
13. Provincial Department of Agriculture – Director
14. Provincial Department of Public Works
15. Provincial Department of Agriculture
16. Women in Construction – SMME
17. Honey Bees Bakeries – SMME
18. O.R. Tambo – LED official
19. O.R. Tambo – LED official
20. O.R. Tambo – LED official
21. O.R. Tambo – District Manager

Appendix 4

Second Workshop in Pretoria – 22 July 2002

List of participants

<u>ORGANIZATION</u>
1. DME – Ministry
2. Eskom
3. Land Bank – District Manager
4. DME – Social Plan
5. DME – Regional Managers
6. TEBA – Rural Development Manager
7. Shell–Eskom – MD
8. DME – Ministry
9. Eskom
10. Eskom
11. Eskom
12. DME official
13. O.R. Tambo official
14. O.R. Tambo official
15. DPL official
16. EU official
17. National Development Agency
18. National Development Agency
19. World Health Organisation

Appendix 5

Third Workshop in O.R. Tambo – 16 & 17 August 2002

List of participants

<u>ORGANIZATION</u>
1. Alfred Nzo District Municipality – official
2. Alfred Nzo District Municipality – official
3. Bonesa
4. Bonesa
5. Bellville Development – NGO
6. Centre for Integrated Rural Development – NGO
7. CSIR
8. CSIR
9. DBSA – Project Manager
10. Provincial Department of Agriculture and Land Affairs – Director
11. Provincial Department of Agriculture and Land Affairs
12. Provincial Department of Agriculture
13. Provincial Department of Labour
14. Dondashe & Associates – NGO
15. DPLG
16. ECATU – NGO
17. Eskom
18. Eskom
19. Eskom – Rural Development
20. First Ready Development – NGO
21. Fort Cox Agricultural College
22. Fort Cox Agricultural College
23. Provincial Department of Housing and Local Government
24. Provincial Department of Housing and Local Government

25. IDC
26. IDT
27. IDT
28. IDT
29. Iphulo cc – SMME
30. Iphulo cc – SMME
31. Iphulo cc – SMME
32. Iphulo cc – SMME
33. IRDP/Kelloggs – NGO
34. Kellogg Foundation
35. King Sabata Dalindyebo Local Municipality – councillor
36. King Sabata Dalindyebo Local Municipality – Manager
37. King Sabata Dalindyebo Local Municipality
38. Land Bank – District Manager – Eastern Cape
39. Mbizana Local Municipality – councillor
40. Mbizana Local Municipality – councillor
41. Member of Parliament
42. Mhlontlo Local Municipality – councillor
43. Mhlontlo Local Municipality – councillor
44. Mhlontlo Local Municipality – official
45. Mhlontlo Local Municipality – councillor
46. Minerals and Energy – Social Plan
47. Minerals and Energy Officer
48. Mining Development Agency
49. Mining Development Agency – Director
50. Mining Qualifications Authority – CEO
51. NDT
52. Ntabankulu Local Municipality – councillor
53. Ntabankulu Local Municipality – councillor
54. Ntabankulu Local Municipality – councillor

55. Nyandeni College
56. Nyandeni College
57. Nyandeni Development Trust – NGO
58. Nyandeni Development Trust – NGO
59. O.R. Tambo official
60. O.R. Tambo – Program Implenentation Management Support Service (PIMS)
61. O.R. Tambo – official
62. O.R. Tambo – Director in office of Executive Mayor
63. O.R. Tambo – Deputy Director, Finance
64. O.R. Tambo – Human Resource Director
65. O.R. Tambo – councillor
66. O.R. Tambo – official
67. O.R. Tambo – LED
68. O.R. Tambo – official
69. O.R. Tambo – official
70. O.R. Tambo – LED
71. O.R. Tambo – official
72. O.R. Tambo – official
73. O.R. Tambo – councillor
74. O.R. Tambo – official
75. O.R. Tambo – PIMSS Manager
76. O.R. Tambo – Executive Mayor
77. O.R. Tambo official
78. Port St Johns Local Municipality
79. Project Literacy
80. QRC
81. Roshcon – General Manager
82. Rural Research and Development Institute
83. SANDF

84. SANDF
85. SAWIMA
86. SchlumbergerSema
87. SDS Consultants – NGO
88. Shell Solar – MD
89. Siemens – Manager
90. TEBA
91. TEBA
92. Telkom – Executive Regulatory and Government Relations
93. Telkom
94. Telkom
95. Thuthukani Women's CDT – NGO
96. Thuthukani Women's CDT – NGO
97. Tsolo Agricultural College – Principal
98. Ulimo Development Agency – NGO
99. Ulimo Development Agency – NGO
100. Unitra
101. Vodacom – Foundation Manager

Appendix 6: INTERVIEW AND WORKSHOP QUESTIONS

Overview of O.R. Tambo's Social Economic situation and skills matters.

1. What are the economic opportunities in O.R. Tambo?
2. What are the constraints to taking full advantage of the opportunities?
3. What are the specific constraints affecting agriculture?
4. What are the specific required skills for entrants in agriculture?
5. What level of skills is required?
6. Where can these skills be acquired?
7. Does the District Council or Provincial Department of Agriculture have a skills plan? If yes, how does it work? If not, why not?

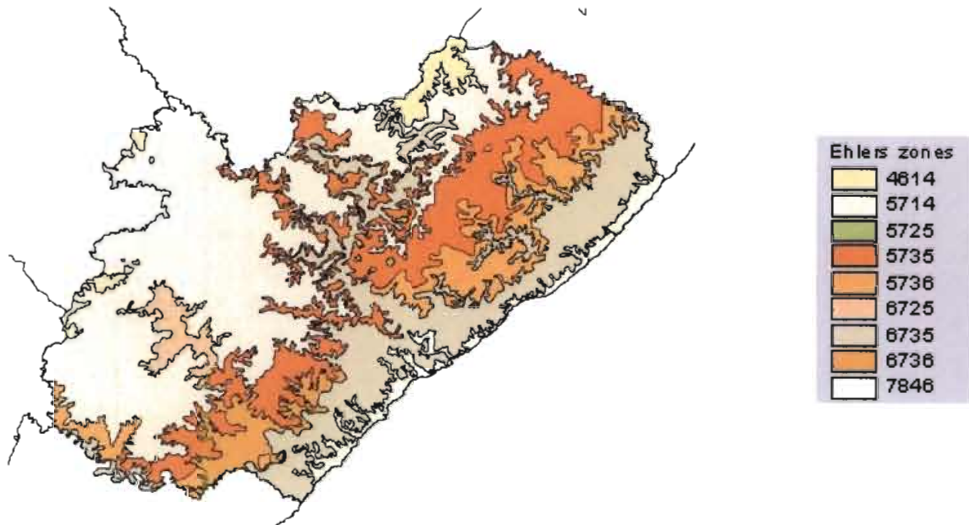
Skills and Training

(The following questions were directed to service providers, as this is their forte)

8. What are the training needs of retrenched miners?
9. What are the barriers to the training of miners?
10. What skills do workers acquire in the mines?
11. Do retrenched mineworkers go back to their ancestral land?
12. How best can the skills acquired in mines be used in agriculture?
13. How do mine owners and affected municipalities co-operate on the implementation of the Social Plan?
14. What informs the course content of the Social Plan?

Appendix 7.

SUMMARY OF ARC's ANALYSIS OF O.R. TAMBO NODE



OPPORTUNITIES

Unlocking the integrated livestock and plant production potential of the area:

- Establishment of a processing factory (freezing, canning, frozen organic foods, also fresh and pre-prepared foods - Woolworth's type) with contract out growers
- Establish a dairy processing facility – with contract producers
- Establish livestock fodder and feed producers for dairy and feedlot activities (maize, soya)
- Enhance current cattle/goats/sheep production systems, including processing and marketing (e.g. meat, hides & skins/fibres)
- Investigate a network of feedlots with auction facilities
- Encourage traditional medicinal plant production and local processing – for human and animal natural remedies
- Encourage production and activities (drying, pressing, processing, extracting) around the sustainable utilisation of indigenous and exotic natural products (herbs, perfumes, oils etc).
- Promote flower production

Agro-tourism (improved infrastructure for tourism will favour agriculture)

- Traditional style village accommodation

Estuarine aquaculture

Revitalizing of small scale irrigation projects

Mariculture (marine aquaculture)

CONSTRAINTS

- Unproductive livestock production systems
- Soil acidity
- Infrastructure insufficient (e.g. markets, access roads, handling facilities)
- Lack of market information – national and International
- Unproductive plant production systems
- Lack of processing skills and facilities
- Lack of access to knowledge and information for skills development.
- Technical Support (inappropriately trained extension service)
- Poor project management and project design
- Uncoordinated agricultural activities
- Restricted or no access to markets (farmer cannot sell his livestock off take)
- Degraded resource base with low production. Fodder flow limitations

Prepared by the Agricultural Research Council of South Africa, 2002

BIBLIOGRAPHY

African National Congress, 1994. *The Reconstruction and Development Programme: A Policy Framework*. Umanyano Publications, Johannesburg

Annan, K. 2000. *Millennium Development Goals*. United Nations: New York

Balakrishna, S. and Rangacharyuli, S.V. (eds.) 1999. *Poverty Decline and Human Development Factors in Some States* National Institute of Rural Development, November

Barker, Frans 1999. *The South African Labour Market: Critical Issues for Renaissance*. J.L. Van Schaik

Bendix, S. 2000. *Industrial Relations in South Africa – The South African Labour Market*. Juta, Cape Town

Bos, Michael 2000. *The Multi-skill Effort*. New Standard Institute

Breier, Mignonne 1998. Faint Hope or False Promise? The Recognition of Prior Learning Principle of the National Qualification Framework in Wally Morrow and Kenneth King (eds.) *Vision and Reality: Changing Education in South Africa*. UCT Press, Cape Town

Bromberger, Norman 1978. Mining Employment in South Africa 1946-2000. Saldru Working Paper no.15, August. Unpublished.

Brown, L.R.; Flavin, C. and French, H. 2000. *State of the World*. World Watch Institute

Buchler, M. and Ralphs A. 2000. *RPL Challenges Higher Education and Workplace Practice: A Training and Policy Conference on the Recognition of Prior Learning* Proceedings of JET conference on RPL, 3–5 October, Johannesburg

Burkey, Stan 1993. *People First: A Guide to Self-reliant, Participatory Rural Development*. Zed Books

Carr Securities. 2001. *China's Next Five Years*. Indosuez, 26 March. Unpublished.

Cassara, B.B. 1990. *Adult Education in a Multicultural Society*. Routledge: London, New York

Castells, Manuel, 1996. *The Information Age: Economy, Society and Culture, Vol. 1: The Rise of the Network Society*. Oxford: Blackwell

Castells, Manuel 2000. Reader: Selected Papers, reviews & interviews CHET, May. Unpublished.

- Castells, Manuel 2001. Information Technology and Global Development, in J. Muller, N. Cloete and S. Badat (eds.) *Challenges of Globalisation: South African Debates with Manuel Castells*. Maskew Miller Longman
- Centre for International Forest Research (CIFOR) 2002. *Making Markets Work for Forest Communities*. CIFOR: Washington DC
- Chamber of Mines 2002. Statistics on Mineworkers' Return to the Rural Areas. Unpublished letter to the DME
- Chambers, Robert 1983. *Rural Development: Putting the Last First*. Longman Scientific & Technical
- Chambers, Robert 1992. Rural Appraisal: Rapid, Relaxed and Participatory Discussion Paper for the Institute of Development Studies, October. Unpublished.
- Choudhury, R.C. and Durgaprasad, P. 1999. *Basic Rural Infrastructure and Services for Improved Quality of Life*, vols. 1 and 11. National Institute of Rural Development, July
- Christie, Pam 1985. *The Right to Learn: The Struggle for Education in South Africa*. SACHED Trust/Ravan Press
- Cohen, Louis and Manion, Lawrence 1989. *Research Methods in Education*. 3rd edition, Routledge
- Cooper, Cliff 2001. National Productivity Institute: *The ABC of Productivity Measurement*. National Productivity Institute, 24 March
- COSATU, 1997. Skills for Growing Economy. Presented at Joint Standing Committee on Finance, 20 March. Unpublished.
- Cousins, B. (ed.) 2000. At the Cross Road: 1987. Saldru Working Paper no.77, February 1987. Unpublished.
- Davies R. O'Meara D. and Dlamini S. 1984. *The Struggle for South Africa: A reference guide to movements, organizations and institutions. Volume 1*. London Zed Books Ltd.
- Department of Agriculture 2000. Capacity Building for Emerging Farmers. Department of Agriculture Information Services, Pretoria. Unpublished.
- Department of Agriculture 2001. *The Strategic Plan for South African Agriculture* Department of Agriculture Information Services, Pretoria, November.

Departments of Education and Labour 2001. *Human Resources Development Strategy for South Africa: A Nation at Work for a Better Life for All*. Department of Education and Labour

Departments of Education and Labour 2001. *Human Resources Development Strategy for South Africa: A Nation at Work for a Better Life for All*. Department of Education

Department for International Development 2002. The Rural Poor – New agendas for action. A side event at the World Sustainable Development on Tuesday, 3 September. DFID, UK Unpublished.

Department of Labour 2000 Sector Skills Plan Guide. Final Draft. Unpublished.

Department of Labour 2002. Social Plan. Unpublished.

Department of Trade and Industry 1997. Review of Small Business Development. Unpublished.

Development Bank of Southern Africa 1999. DBSA Position Paper on Delivering Rural Development. July. Unpublished.

District Rural Development Agency 2001. *DRDA 2001: Guideline for DRDA Administration*. Ministry of Rural Development, Government of India

DME: Department of Minerals and Energy 2002. *Mining Reforms*. Unpublished

Dobson, W. 2000. A Guide to the Microeconomic Reform Strategy. Department of Trade and Industry. Unpublished.

Douglas, G. (ed.) 1985. Cultivating Agricultural Literacy – Challenge for the Liberal Arts. Kellogg Foundation. Unpublished.

DPLG: Department of Provincial and Local Government 2002. IRSDS. Unpublished.

Eastern Cape Department of Agriculture 2002. ORTMD. Discussion Paper. Unpublished.

Edwards, Richard 1994. Pulling Together: Optimising RPL, *People Dynamics*, vol. 12 (6), May.

Edwards, Richard, 1997. *Changing Places: Flexibility, Long Learning and a Learning Society*. Routledge

Elliot J. 1991. *Action Research for Educational Change*. Oxford University Press. University of East Anglia.

Engo, Ruth B. 2001. Civic Competence and the Effectiveness of Academic Activities in Challenging Poverty. United Nations, New York. Unpublished.

FAO: Food Agriculture Organisation 2000a. *A Gender Perspective on Land Rights*. United Nations

FAO: Food and Agriculture Organization 2000b. *Report on Sub-Saharan Africa*. United Nations

FAO: Food and Agricultural Organisation 2002. Anti hunger programme *Report on sub-Saharan Africa*. United Nations

Fennel, Richard 1994. Optimising RPL, *People Dynamics*. Vol. 12 (16).

Forrester, K. and Ward, K. (eds.) 1991. *Unemployment, Education and Training: Case Studies from North America and Europe*. Caddo Gap Press Inc.: Sacramento, California

Freire, Paulo 1985. *The Politics of Education*. Bergin & Garvey

Friedman, S. and de Villiers, R. (eds.) 1996. *Comparing Brazil and South Africa: Two Transitional States in Political and Economic Perspective*. Centre for Policy Studies, Foundation for Global Dialogue and Instituto de Estudos Economicos Sociais

Garrick, John 1999. 'The Dominant Discourse of Learning at Work' in D. Boud and J. Garrick (eds): *Understanding Learning at Work*, Routledge: London, New York.

Gerber, P.D., Nel, P.S. and Van Dyk, P.S. (ed.) 1999. *Human Resources Management*. 4th edition, Oxford University Press

Gerber, R. and Braun, R. 1998. *New Connections: Telecommunications in a Changing South Africa*. University of Cape Town Press

Graaf, Janet and Maree, Johann 1977. Residential and Migrant African Workers in Cape Town. Saldru Working Paper no.12, July. Unpublished.

Guile, David and Young, Michael 1998a. Reflexivity, Knowledge and Learning: The Challenge of Specialist Learning Organizations (SLOs) and Non-specialist Organizations (NSLOs) Unpublished manuscript.

Guile, David and Young, Michael 1998b. Beyond the Institution of Apprenticeship: Towards a Social Theory of Learning as a Production of Knowledge. University of London, draft paper presented at Helsinki workshop, 4 May, as part of EU COST programme on improving flexibility through vocational education. Unpublished.

Harris, Judy 2000. *RPL: Power, Pedagogy and Possibility – Conceptual and Implementation Guides*. Pretoria: HSRC

Hendricks, M.N. 2001. The Extent to which the Recognition of Prior Learning in Higher Education Promotes Social Transformation: The Case of the University of the Western Cape Research report to the School of Government, in partial fulfilment of a Master's degree in Public Administration, October. Unpublished.

Heyster, S.; Gerhard, R. & Raymond, T. 2001. *South Africa Studies on Social Dimensions of Globalisation*. ILO

Hiemstra, Roger and Burton, Sisco 1990. *Individualising Instruction: Making Learning Personal, Empowering and Successful*. Jossey-Bass

Horner, D. and Kooy, A. 1980. Conflict on South African Mines 1972-1979. Saldru Working Paper no. 29, June. Unpublished.

HSRC 2001. A Skills Analysis of the Small scale Mining Sector in South Africa. HSRC, Employment and Economic Policy Research Division. Unpublished.

HSRC 2002. Analysis of Workplace Skills Plan and Training Reports: Mining and Mineral Sector. March, HSRC. Unpublished.

Hudson, E.H. 1990. *When Telephones Reach the Village: The Role of Telecommunication in Rural Development*. Ablex Publishing

Hutton, B. 1992. *Adult Basic Education in South Africa*. Oxford University Press

IDT: Independent Development Trust. 2002. Integrated Sustainable Rural Development Strategy. Unpublished report.

International Council for Science 2002. Energy and Transport, Series on Science for Sustainable Development No. 2. United Nations. Unpublished.

International Institute for Management Development 2000. *World Competitive Yearbook 2000*. IIMD

ILO: International Labour Office 1982. Basic Needs in Danger: A Basic Needs-oriented Development Strategy for Tanzania. ILO, Addis Abbaba. Unpublished.

ILO: International Labour Office 1999a. *Provisions of the ILO Conventions and Recommendations concerning Migrant Workers* excluding social security instruments; ILO, Geneva

ILO: International Labour Office 1999b. *Series on Workplace Learning*. ILO, Geneva

Jansen, B. 1999. *Multi skilling and Job security*.

Jhabvala, R and Subrahmanya, R.K.A. 2000. *The Unorganised Sector: Work Security and Social Protection*. Sage

Joffe, Avril, Kaplan, David, Kaplinsky, Raphael and Lewis, David 1995. *Improving Manufacturing Performance in South Africa*. Report of the Industrial Strategy Project. UCT Press

Johansson, T.B. and Goldemberg, J (eds.) 2002. *Energy for sustainable Development: A Policy for Action Agenda*. UNDP, New York

Kgobe, T. 2000. The Wrong Path: The Skills Training Debate, *SA Labour Bulletin*, vol. 24 (2), April

Khosa, M.M. (ed.) 2001. *Empowerment through Economic Transformation*. African Millenium Press

Kraak, Gerald 1989. Financing of African Worker Accommodation in Cape Town. Saldru Working Paper no. 82, May. Unpublished.

Kraak, Andre 1992. Human Resources Development and Organised Labour. *South African Review no. 6*. Johannesburg

Krafchik, W.A. 1991. Small scale Enterprises, Inward Industrialisation and Housing: A Case Study of Subcontractors in the Cape Peninsula Low Cost Housing Industry. Saldru Working Paper no. 82, May. Unpublished.

Land and Agricultural Reform in South Africa into 21st Century. Papers from a conference held at Alpha Training Centre, Broedestroom, Pretoria, 26-28 July. Braamfontein: National Land Committee. Unpublished.

Luyt, J.L. 2002. An Investigation into the Implications of Formally Accrediting Training offered by Non-governmental Organisations: A Case Study Approach. Minor dissertation submitted in partial fulfilment of a Master's degree in Philosophy in Education, University of Cape Town, February. Unpublished.

Macun, Ian 2000. Strategic Planning: Contributing to Skills Development, *SA Labour Bulletin*, vol. 24 (2), April

Mayo, Peter 1999. *Gramsci, Freire and Adult Education: Possibilities for Transformative Action*. Zed Books

McCarthy, W.E.J. (ed.) 1972. *Trade Unions*. Penguin

Maree, J. 1992. *Cooperation: A Matter of Survival for Education* HRM, June. Unpublished.

Mbeki, T. 2001 Speech by the President of South Africa, HE Mr Thabo Mbeki, at the launch of the South African Integrated Sustainable Rural Development Strategy ISRDS. Department of Agriculture, 27 November. Unpublished.

Melody, W.H. 1997. *Telecom Reform: Principles, Policies and Regulatory Practices*. Den Private Ingeniorfond

Merriam, S.B. 2000. *A Guide to Research for Educators and Trainers of Adults*. Kriegler Publishing Company

Mineworkers' Development Agency. MDA. 2000a. An Overview of the Programme. 5 October. Unpublished.

Mineworkers' Development Agency MDA 2000b. Report – Annual General Meeting: April 1999- March 2000. 5 October. Unpublished.

Mining Qualifications Authority. Revised March, 2001. The Skills Plan for the Mining and Mineral Sector: April 2001 – March 2005. Unpublished.

Mining Qualifications Authority. MQA. 2002 Report on Workshop for Small –scale Mining SGG. MQA, 11 March. Unpublished.

Mokwunye, A Uzo (ed) 2002. *Bridging the knowledge gap. Revitalizing Africa's Universities*. Unu/Inra

Mulcahy, D. 2000. Training for New Times: Changing Relations of Competence, Learning and Innovation, Studies in Continuing Education, vol. 21 (2). Unpublished.

NEPI: National Education Policy Investigation 1992a. *Adult Basic Education*. Oxford University Press

NEPI: National Education Policy Investigation 1992b. *Curriculum*. Oxford University Press

NEPI: National Education Policy Investigation 1993a. *Adult Education*. Oxford University Press

NEPI: National Education Policy Investigation 1993b. *Post Secondary Education*. Oxford University Press

New Partnership for Africa's Development. NEPAD 2001. From a Vision and Programme of Action to Implementation. NEPAD update, prepared on 11 February, after the Joint Communiqué by HE Prime Minister of Britain, Mr Tony Blair, and HE Mr Abdoulaya Wade, President of Senegal, 9 February. Unpublished.

Ngonini, X. 2001. Waai-waai: The Impact of Retrenchment, *SA Labour Bulletin*, vol. 25 (2), April

Nogxina S. 2002. DME Mining Charter. Unpublished.

NUM: National Union of Mineworkers 1996. New Times, New Challenges: Lessons for the NUM from a Visit to Britain and France, February–March 1996. NUM. Unpublished.

Nyoni, S. 1999. Women and Energy: Lessons from the Zimbabwe Experience, in *Regional Network for Environmental Experts*. Zero Publications, Working Paper no. 2

ORTDM: O.R. Tambo District Municipality 2000. Integrated Development Plan. Unpublished.

ORTDM: O.R. Tambo District Municipality 2002a. Intergrated Development Plan. South African Government. Unpublished.

ORTDM: O.R. Tambo District Municipality 2002b. Situation Analysis. Working paper on ORTDM IDP. Unpublished.

PAETA: Primary Agriculture Education and Training Authority 2001. Sector Skills Plan01/04/01 – 31/03/02. PAETA. Submitted 28 February 2001. Unpublished.

Parker, B.E. and Hudson, H.E. et al. 1992. *Electronic Byways: State Policies for Rural Development through Telecommunications*. (Westview Press)

Philips, Kate 1996. Economic Cooperation: Mineworkers show the way. *South African Labour Bulletin*. Vol 20, no. 5

Plaatje, Sol, 1978. *Mhudi*. Heinemann

Plaatjie, S. 1982 *Native life in South Africa*. Heinemann

Presidential Commission 1996. Restructuring the South African Labour Market: A Report to investigate the Labour Markets Policy. June

Ramphela, Mamphela 1986. Zimbabwe: The Lessons for us in South Africa. Saldru Working Paper no. 65, July. Unpublished.

Rau, S.K 2001. *Global Search for Rural Development*. National Institute for Rural Development, June

- Ray, M. 1997. Building on Ashes: A New Future for Coalmining Communities? *SA Labour Bulletin*, Vol. 21 (3), June
- Reynolds , Norman 1977. Rural Development in Botswana Saldru Working Paper no13 September. Unpublished.
- Reynolds, Norman 1981. The Design of Rural Development: Proposals for the Evaluation of a Social Contract Suited to Conditions in Southern Africa,part 2. Saldru Working paper no.41, August. Unpublished.
- Roberts, J. and Cassim, S. 2002. Evaluation of the Workforce Advising and support Services .WASSP. Pilot Project, March. JET. Unpublished.
- Rossi, P.H., Freeman, H.E. and Wright, S.R. 1979. *Evaluation: A Systematic Approach*. Sage
- Ruiters , Alistair 1989. Managing the Democratic Process: The Cooperation Case. Saldru Working Paper no.5 September. Unpublished.
- Rural Development Agency 2002. Mining Summit Preparation Papers. Department of Mineral and Energy. Unpublished.
- SALGA: South African Local Government Association 2001. Integrated Development Plans: keynotes address by Deputy Minister Botha, Gauteng Association of Local Authorities. SALGA Annual General Meeting, 14 December. Unpublished.
- Samson, M. & Vally, S. 1996. Snakes and Ladders, in *SA Labour Bulletin*. Vol. 20 (4), August.
- Schei, P. and McNeil, C. 2002. *Biodiversity*. World Summit on Sustainable Development :Johannesburg
- Senior Education and Training Authority for Secondary Agriculture 200. Sector Skills Plan. SETASA, 1 September
- Seitz, John L. 1995. *Global Issues: An Introduction*. Blackwell
- Senge, P. M. 1990. *The Fifth Discipline: The Art and Practice of Learning Organisations*. Random House
- Sevlan, David 1976. Housing Conditions for Migrant Workers in Cape Town. Saldru Working Paper no.10 December. Unpublished.
- Shepherd, Andrew 1998. *Sustainable Rural Development*. Palgrave

Soni, Balbir 2001. *Reform Prospectus for Rural Development*, Vol. 1. Dominant Publishers and Distributors

South African Government 1994: Reconstruction and Development Programme.

South African Government 2002a. Concept Paper on Sustainable Development. Second revised draft, 13 March

South African Government 2002b. Information Society and Development . Unpublished.

Statistics South Africa 2000: *South African Statistics 2000*, Stats SA, Pretoria.

Stilwell, David 2000. Rural Development and Economic Growth: Opening Markets for the Poor. DBSA, May. Unpublished.

Stilwell, T., Mmakola, D. and Dusmanitch, C. 1999. Delivering Rural Development. A report to Minister Pahad, Office of the President. DBSA, 26 July. Unpublished.

TEBA: Employment Bureau for Africa. 2002. Unpublished.

TEBA, MDA and COM - Employment Bureau for Africa, Mining Development Agency and Chamber of Mines. Social Plan Fund 2000. Unpublished memorandum of understanding

UNDP: United Nations Development Programme 2000. *Human Development Report 2000*.

Venter, Minnie (ed) Community Education in South Africa 1995 Conference report, 5–7 July. Convened by the National Institute for Community Education and the College Sector Coalition, with the Department of Education. Unpublished.

Vlok, E. 2001. Phanzi Retrenchments, Phanzi! *SA Labour Bulletin*, Vol. 25 (2), April.

Wagner, Lynne (ed.) 2001. *Creating Opportunities for Sustainable Agriculture*. Crop Life International

Walters S. and Manicom L. Feminist Popular Education in the light of Globalisation in Walters, S. (ed.) 1997. *Globalisation, Adult Education and Training – Impacts and Issues*. Zed Books

Walters, S. 2001. Literacy in Africa: Prepared for African Ministers of Education Caucus. 17 October, UNESCO, Paris. Unpublished.

Webster, E.C. and Leger, J.P. 1992. Reconceptualising Skills Formation in *South Africa. Perspectives in Education*, vol.13 (2)

Wheatcroft, G. 1985. *The Randlords: The Men who Made South Africa*. Weidenfeld and Nicholson

Wilson, JMV 1996. The Role of Mining in an Evolving World. *Mining Journal*.

World Commission of Environment and Development 1997. Report on Sustainable Development and Environment. United Nations: New York

Yanta, T. 2001. Job Losses: What Can Trade Unions Do? *SA Labour Bulletin*, vol. 25 (2), April

Yau, Carrie 2001. *Hong-Kong – Connecting the World*. Hong-Kong