

## CHAPTER 6

# PRACTICAL CHALLENGES ASSOCIATED WITH RE-FORMED KZNDEC ENVIRONMENTAL EDUCATION *CENTRES*

### 6.1 ENVIRONMENTAL EDUCATION CENTRES: “AGENTS OF *CHANGE*”

It has been demonstrated that the functioning of the KZNDEC Environmental Education Centres may have to alter to make environmental and educational differences in their communities. Internationally, “environmental education [is perceived] as a change agent” (Chenje 1999:22; own emphasis):

6.1.1 *Agenda 21* describes “education *processes* that deal with the environment and development... [that] are indispensable to changing people’s attitudes so that they have the capacity to *assess* and *address* their sustainable development concerns” (DEAT 1998:63; own emphasis).

6.1.2 The RDP states that there is a need to “develop programmes to rekindle our people’s love of the land, and to increase environmental consciousness amongst youth, to co-ordinate environmental education policy at all levels and to empower communities to act on environmental issues and to *promote* an environmental ethic” (ANC 1994:40; own emphasis).

6.1.3 The Vision of KZNDEC environmental educators is to “encourage Environmental

Education processes that develop responsible lifestyles in harmony with the environment as a whole on the part of all the learners, students and educators of KwaZulu-Natal, and make them aware of the fact that an acceptable quality of life is dependent on their judicious and sustainable use of the environment” (KZNDEC EE Unit 1999:1; own emphasis).

The word change implies “to become different or undergo alteration... to undergo transformation or transition” (American Heritage Dictionary 1992). Therefore, the object of this study has been to explore whether the KZNDEC Environmental Education Centres should (and could) “engage change” (O’Donoghue 2001:3; Section 2.3), and facilitate such changes more proactively, those “transformations needed to move toward sustainable living” in KwaZulu-Natal (Chenje 1999:22).

## **6.2 KZNDEC EE CENTRES: IN THE MIDST OF AN ENVIRONMENT *REQUIRING* CHANGE**

The KZNDEC is committed to change. It is determined to realise two (2) priorities:

6.2.1 achieving equitable access to education; and

6.2.2 improving the quality of education provision (KZNDEC 2003c:40).

Five (5) basic environmental factors affect its “service delivery” on these priorities, however:

6.2.3 The large, rural nature of Province of KwaZulu-Natal (KZNDEC 2003c:28);

- 6.2.4 The lack of widespread infrastructure, including communications (Ibid.);
- 6.2.5 The prevalence of the HIV/AIDS pandemic (Ibid.);
- 6.2.6 Limited financial resources on the part of both of the KZNDEC and of the majority of community members, and the depressed economy (Ibid.); and
- 6.2.7 The limited internal capacity (in terms of shortage of professional personnel and of technical expertise) to satisfy the educational needs of the Province (Ibid.).

Underlying these factors are the complex links between social, economic, ecological and political factors that determine individual and community standards of living (O'Donoghue and Janse van Rensburg 1995:10). Threats to "social well being" influence human health – and a "healthy population and safe environments are important pre-conditions for a sustainable future" (Fien, Spork and O'Donoghue 2001:2).

With their strategic geographic positioning (see **MAP 5:E**), the Environmental Education Centres could play an essential part in attempts to tackle these "issues of development, environment and health [that] are [so] closely entwined" (Ibid.). "[Education], especially environmental education, should be recognised as a major priority in ensuring improvements in the quality of life, eradication of poverty and in placing [people] on a path of social and economic development and environmental protection" (Agabu et al 2002:2; Shongwe 1997:53; Wagiet 2001a:4).

### **6.3 KZNDEC ENVIRONMENTAL EDUCATION CENTRES: CHANGING *DIRECTION***

#### **6.3.1 Confronting the Environmental Crises of the Communities through Education**

The Heads of KZNDEC Environmental Education Centres complain of being quagmired in

attempting to accomplish the multiple tasks associated with promulgating environmental education within their Districts and within the Province (KZNDEC Environmental Education Unit 2000; cf. Chapter 3 Section 3.3.4).

Being personally involved with the experiential learning processes of visiting school groups, helping with programmes in schools, in school communities, running workshops for principals and educators – and being obliged to accommodate more of the Province’s learners (most of whom cannot afford to pay to visit the Centres) – has impeded them from proactively ameliorating the environmental crises of their communities through education (especially environmental education).

### **6.3.2 Re-forming Centres to Contend with Environmental and Educational Crises**

Various solutions have been suggested and explored (Chapter 3, Section 3.6). The most viable of these would appear to be that Centres become re-formed “environmental education resource centres” (or even, simply, “education centres”), venues for building capacity in educators (Duncan 2002; Fien 2002:44). They should be “nodal points” supplying resources and further training for the educational communities of which they are a part (Joubert 1994:36; O’Donoghue and Taylor 2002; Head B 2003).

If this is a practical model, then the Centre Heads would become the environmental education “wing” of their Districts’ TLS (Teaching and Learning Services; the Districts’ Subject Advisors), infusing their peculiar perspectives into the school curricula.

### **6.3.3 The Re-forming of Dundee Environmental Education Centre**

Lotz has claimed that environmental education “promotes a process of social change in

response to the environmental crisis (Lotz 2001:29). It is this “socially critical quality” of environmental education (Robottom 1987:35) which the environmental educators of the KZNDEC have desired that could make a difference in the environment, in the lives, and in education in the Districts of KwaZulu-Natal (KZN EECF 1996).

It is because an evolutionary process of change and reform appears to be underway at the Dundee Environmental Education Centre that the researcher has focused the following stage of research on the possibilities facing such a Centre of better serving its community. This is an exploration of innovative ways to teach and learn for a sustainable future (Fien 2002:44) in rural KwaZulu-Natal.

At meetings held with senior officials of the Ukhahlamba Region and Umzinyathi District (Dundee EE Centre 2003b), and at a meeting held at the request of the Honourable MEC for Education and Culture for KwaZulu-Natal, Mr N Singh (Dundee EE Centre 2003c), a number of scenarios were mooted as being appropriate for a re-formed Environmental Education Centre in the Umzinyathi District.

#### **6.4 KZNDEC ENVIRONMENTAL EDUCATION CENTRES: CHANGING TO MEET THEIR DISTRICTS' NEEDS**

Loubser claims, “A [community based] centre will be more successful... since it can help address local environmental problems better” (Loubser 1994 *in* Dlamini-Boemah and Rouhani 1997). Lötter agrees, stating that much support would come from a community that claims “ownership” of a centre (Lötter 2003). As has been said, an evaluation of a community’s challenges would help define goals and programmes for a re-formed Centre

(Chenery and Hammerman 1985:40; Conradie 1998:108-109; Chapter 5 Section 5.1.2), within the context of specific realities" (Hungerford and Volk 2001:13; own emphases).

Therefore, the researcher has been obliged to explore and investigate

- the environment in which a changed centre would operate;
- the examples of other centres operating in their peculiar milieux;
- exploring *directional* changes towards "environmental education centres" ; and
- postulating what possible functions a re-formed centre would perform.

#### **6.4.1 THE ENVIRONMENT IN WHICH A CHANGED CENTRE WOULD OPERATE**

##### **6.4.1.1 The Need for Physical Amenities in KwaZulu-Natal Schools**

The immense need for physical amenities in the schools around KwaZulu-Natal – especially in the rural communities – speaks of years of neglect and of dire impoverishment. Not only do very many rural schools have no landline telephones, inadequate buildings (such as "learning spaces," toilets and ablution facilities) and potable water, but their "learners and educators do not have basic instructional and learning materials" (Bot, Wilson and Dove 2000:4; KZNDEC 2003c:32; KZN Wilson and Sewpal 2003:v and vii). A lack of electricity, for example, denies a school adequate lighting (especially in winter), the opportunity of possessing and using computers, and operating photostat or fax machines.

Access to 32% schools in the Newcastle/Madadeni area is by “poor gravel” roads; 60.4% of the schools in the Dannhauser/Normandien area have similar conditions; as do 91.3% of the schools in the Nquthu area (Ibid. 2003:vi). The general condition of the buildings in 23.9% of the 92 schools in the Newcastle/Madadeni area is rated from “weak” to “very weak”; 38.7% of 93 schools in the Dannhauser/Normandien area share this description; and up to 47.1% of 174 schools in the Nquthu area are so classed.

Of these schools, only 76% in Newcastle/Madadeni have telephone communication, and 3.9% have access to the Internet; 67.7% have telephones in Dannhauser/Normandien, and none has the Internet; 35.6% of schools in the Nquthu area have telephonic communication and none has the Internet; and 20.1% of schools in the Msinga have telephones and only one (1) has the Internet (Ibid. 2003:vi).

“Electronic equipment that would generally be used in a school [is lacking]... due to the absence of basic infrastructure that precludes the ordering and use of computers, science kits, etc. in schools in [these] remote areas” (KZNDEC 2003c:13). This has a serious effect on the quality of education that the Department is able to provide. Support (for example, in case of breakages and “down time”) and training in the use of computers and computer programmes (for beginners, advanced, and for professional and administrative use) is not readily available (Interview with A. Field, 25 September 2003).

“Exacerbating... [this] lack of infrastructure and the inaccessibility of schools... [and the] critical factor militating against effective education delivery... is the under qualification and transient nature of the educator population” (Ukhahlamba Region 2003:20).

The KZNDEC is caught in a bind, desiring to provide “the levels of education service for which the Constitution provides” (Ibid. 2003:13), yet not having the immediate means to fulfil

its goal. Only when “significant reductions in overcrowding, and in the rehabilitation and building of improved learning spaces” are achieved can “increased funding be redirected towards providing administration blocks, media centres and computer laboratories” (Ibid. 2003:32).

#### **6.4.1.2 A Sample Selection for Investigation of Rural and Urban Conditions**

For the purposes of investigating the socio-economic environment in which a typical “environmental education resource centre” might operate in KwaZulu-Natal (see **APPENDIX 5:E**), the researcher had two (2) major sources of information:

6.4.1.2.1 the schools of the delegates who attended the “Curriculum-Based Environmental Education Courses for Educators held in June and September 2003 (see Chapter 5, Section 5.2). They provided the basis of the researcher’s information on typical mixed rural and urban schools’ communities (Madadeni/Newcastle, Normandien/ Dannhauser and Nquthu); also

6.4.1.2.2 information gleaned (on the Msinga area) from a investigative meeting held with senior personnel and PGSES staff from the Ukhahlamba Region and the Acting CSEM, Msinga CMC, held on 20 October 2003 (Ukhahlamba Region 2003:1).

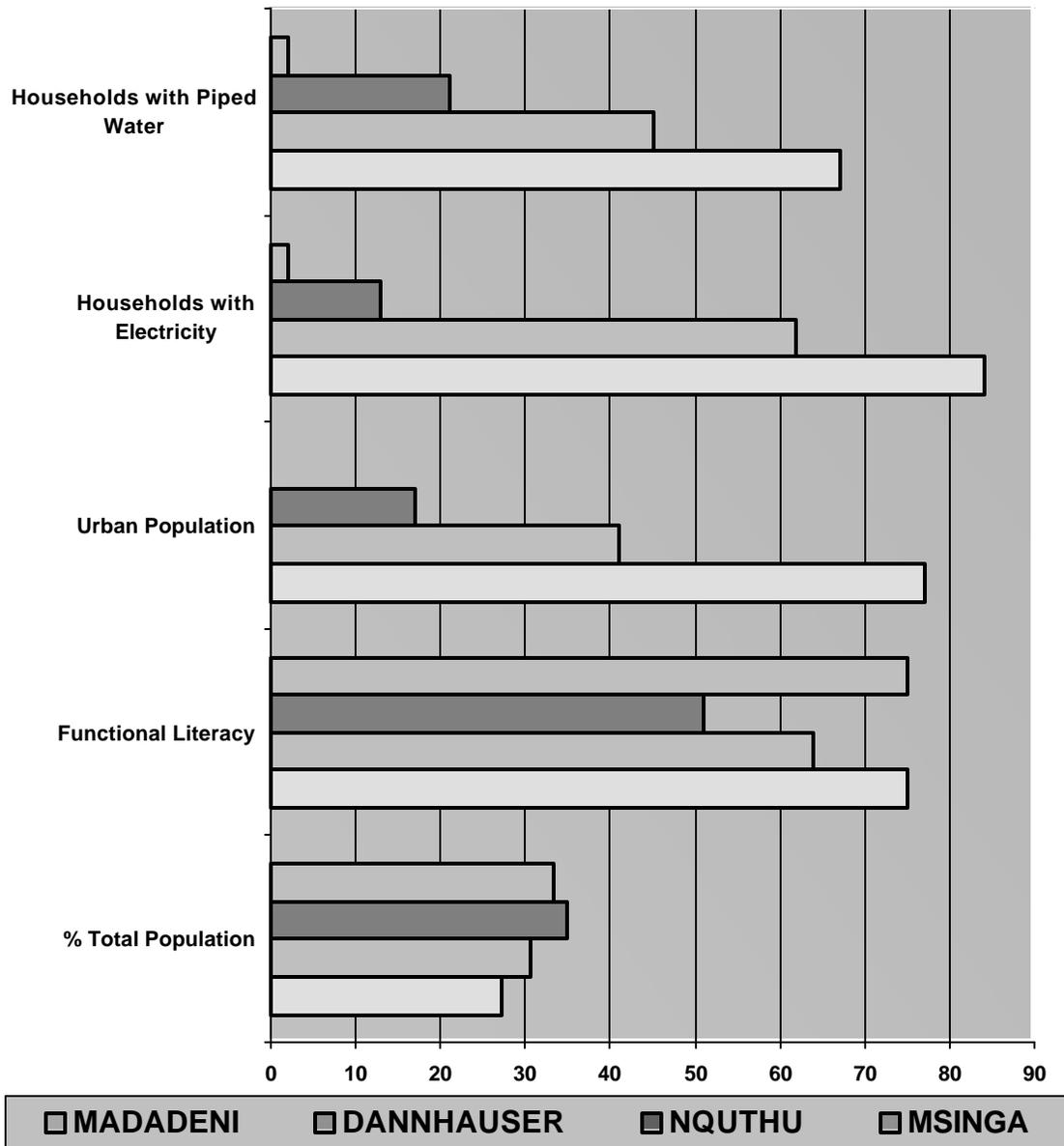
It will be noted that in this first group, for example, twenty-six (26) high schools in Newcastle/Madadeni, the group represented four (4) of that number, or 15.4% (see **FIGURE 6:1**; Wilson and Sewpal 2003:v):

	MADADENI		DANNHAUSER		NQUTHU		TOTAL NO.
	SCHOOLS		SCHOOLS		SCHOOLS		SCHOOLS
							SURVEYED
<b>High</b>	4	15.4%	2	7.7%	1	2%	7
<b>Combined</b>	2	16.7%	5	83.3%	0	0%	7
<b>Primary</b>	6	10.7%	19	31.1%	29	25%	54
<b>TOTAL SCHOOLS</b>	12	12.8%	26	28%	30	17.3%	68

**FIGURE 6:1 – PERCENTAGE OF SURVEYED SCHOOLS IN THE MADADENI/NEWCASTLE, DANNHAUSER/NORMANDIEN AND NQUTHU AREAS OFFERING EDUCATION FOR GRADES FOUR (4) THROUGH NINE (9)**

#### **6.4.1.3 An Examination of Household Socio-Economic Indicators and the Wider Environment**

An investigation of certain indicators in the households of the selected schools' communities revealed much about the socio-economic background to learning and teaching in these four (4) areas (see **GRAPH 6:1**).



**GRAPH 6:1 – PERCENTAGES OF SELECTED SOCIO-ECONOMIC INDICATORS IN THE ENVIRONMENT OF SCHOOLS IN THE MADADENI/NEWCASTLE, DANNHAUSER/NORMANDIEN, NQUTHU AND MSINGA AREAS**

The adjusted annual per capita income for Newcastle/Madadeni (factoring in the relatively large employed, and traditionally “privileged” sector) is R8 600; for Dannhauser/Normandien, it is R6 800; for Nquthu it is R3 700; and for Msinga it is R3 400 (Wilson and Sewpal 2003:viii; Bot, Wilson and Dove 2000:77-78).

These figures coincide with the high rate of unemployment in these areas (Bot, Wilson and Dove 2000:80); which, in turn, hinges on the lack of job creation in the areas, the low economic growth, and the low level of education and skills among the work force (Ibid. 2000:79). Functional literacy (i.e. the attainment of at least Grade 6) in Newcastle/Madadeni is 77% of the adult population (i.e. those aged 20-64 years); 64% in Dannhauser/Normandien; and only 51% in Nquthu (Wilson and Sewpal 2003:viii). Msinga area, about 60 km from Dundee, has the highest illiteracy rate for adults in the country: 75% (Ibid.). The average for South Africa is 41% (Bot, Wilson and Dove 2000:73-74).

Administrators and a representative of the Ukhahlamba Region PGSES state that various aggravants exacerbate these conditions:

- 6.4.1.3.1 the HIV/AIDS pandemic is ravaging rural and urban society (Ukhahlamba Region 2003:14; Bot, Wilson and Dove 2000:91-92)
- 6.4.1.3.2 the exceptional poverty and consequent lack of food security (with concomitant malnutrition and under-nourishment – Lötter 2003; Ukhahlamba Region 2003:14)
- 6.4.1.3.3 the presence of many orphans and also families vulnerable to malnutrition and disease (Ukhahlamba Region 2003:14)
- 6.4.1.3.4 teenage pregnancies (Ibid.)
- 6.4.1.3.5 suicides and attempted suicides (especially amongst juveniles; Ibid.)
- 6.4.1.3.6 the lack of income generation schemes or even possibilities (despite being

situated in close proximity to much-visited battlefields and game lodges; Ibid.)

6.4.1.3.7 the absence of viable agriculture, the gross erosion of land and grazing (Ibid.), and

6.4.1.3.8 the high rate of crime (especially directed at visitors to the area).

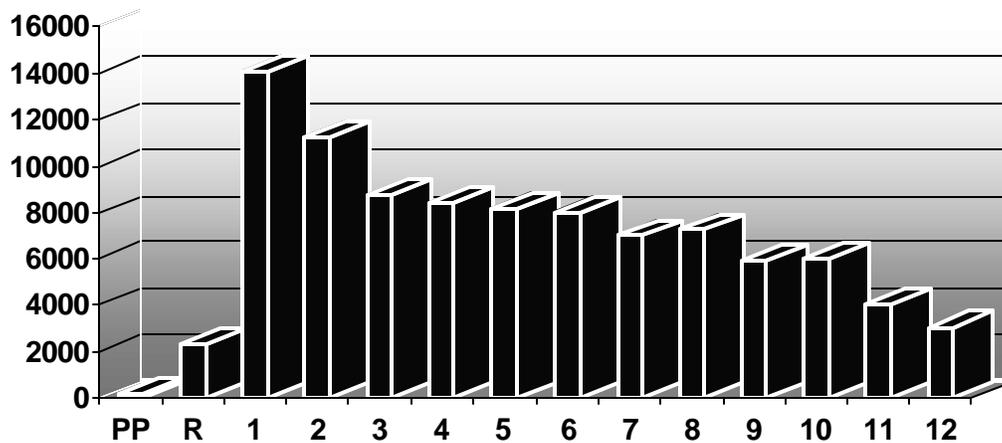
“Poverty and education are inextricably linked” (Bot, Wilson and Dove 2000:19). Studies demonstrate that more than two-thirds ( ) of individuals living in households whose head had completed less than four (4) years of formal education were living in poverty (Ibid. 2000:20). This has severe implications for economic growth in these areas, personal empowerment and even democratisation (Adams and Lisao 2001:2). It also reflects the “uneven output of the education system” (Ibid. 2000:74).

“Food security” (i.e. the assurance of regular, hunger-satisfying meals) is problematic, especially in the rural areas (Ukhahlamba Region 2003:4). Children who are not eating properly are weary, unable to concentrate on lessons, and emotionally stressed (Bot, Wilson and Dove 2000:67; Kajubi 2001:6-7).

#### **6.4.1.4 An Examination of the Effects of Socio-Economic Conditions on Schooling**

Schools in these areas fare hardly better. The learner to classroom ration in Newcastle/Madadeni is 38:1; in Dannhauser/Normandien, it is 41:1; in the Nquthu area, it rises to 61:1 (Wilson and Sewpal 2003:v); and in the Msinga area it is 43:1 (Ibid.; Ukhahlamba Region 2003:8).

It is noted from a perusal of learner enrolment statistics in the Msinga Circuit that numbers tail off severely in the senior grades (**GRAPH 6:2**). Nine (9) years after the 1994 Elections, the majority regard a few years of schooling as sufficient. Of 94 264 learners in schools in the Msinga Circuit, only 3 019 are in Grade 12 in 2003. In 2002, there was a pass rate of 50.8% amongst the Grade 12 (Matriculation) learners. In the present economic climate, this level of education is clearly insufficient.



**GRAPH 6:2 – NUMBERS OF LEARNERS (FROM PRE-PRIMARY THROUGH GRADE 12) ENROLLED IN SCHOOLS IN THE KZNDEC MSINGA CIRCUIT IN 2003**

#### 6.4.2 EXAMPLES OF OTHER SUCH EDUCATION CENTRES IN THEIR MILIEUX

##### 6.4.2.1 Site Visits to Education Resource Centres/Teachers' Centres

KwaZulu-Natal has a number of “education resource centres” around the Province. (Sometimes they are referred to as “Teachers’ Centres” or “Education Development Centres.”) In the course of this study, the researcher visited three (3) in the Durban area (Chatsworth, Durban and Phoenix Teachers’ Centres); one (1) in Richards Bay (CASME

Richards Bay Resource Centre); one (1) in the far north of KwaZulu-Natal (Mbazwana Education Resource Centre), and a last in the Drakensberg (Ukhahlamba Education Resource Centre, currently under construction) (**APPENDIX 6:A**).

#### **6.4.2.2 “Contextualisation” of Education Resource Centres/Teachers’ Centres**

Whilst those “inherited” from the former House of Delegates (HoD) Department of Education exhibit certain similarities (the provision, for example, of bookbinding facilities and audiovisual capabilities), others, constructed more recently, concentrate on the provision of libraries, computers and science laboratories (cf. **APPENDIX 6:A**). Each serves the peculiar needs of its local realities. There is no “set plan” (Lancaster, 20 September 2003).

#### **6.4.2.3 Teachers’ Centres in an Urban Environment**

##### **6.4.2.3.1 Phoenix Teachers’ Centre**

Phoenix Teachers’ Centre, situated north of Durban, is a typical former-HoD institution. Falling under the “Education Support Services” division of KZNDEC’s eThekweni Region, the facilities it has thus far provided reflect its clientele-demands (“with its abundance of learning and teaching resources”: Ukhahlamba Region 2003:1):

6.4.3.2.1.1 A number of medium to small rooms, equipped with functional chairs and stacking tables, used for occasions such as learning area meetings, planning for examinations, smaller workshops, and for learners’ presentations; and a single hall, seating 200, usually used for in-service courses (Pillay 2003:6; Interview with S Chetty, 25 September 2003).

- 6.4.3.2.1.2 Catering – from a small kitchen and outside facilities – that is a source of additional income for the Centre. The Centre is recognised by the KZNDEC as a “service provider,” and it is permitted to tender to supply meals to visiting groups. The funds generated are used for infrastructural improvements (Chetty 2003).
- 6.4.3.2.1.3 A print shop that performs printing, photocopying and binding services for approximately 200 schools in the Phoenix Circuit. The schools are charged a fee, which comes off a financial allocation from the Regional office.
- 6.4.3.2.1.4 A staff member who is available to video or photograph schools’ functions, and a public address system may be hired.
- 6.4.3.2.1.5 A small educators’ library, equipped with video materials and various textbooks.

A recently appointed deputy principal acknowledges that the greatest need is for curriculum development for educators in the area (Chetty 2003). In conjunction with his District’s subject advisors, he has assisted in the formation of local learning area committees. These committees develop “packages” of learning programmes that are printed and circulated to all local schools. In this way, he is trying to bring about co-ordinated networking amongst educators that will lead to collegiality in their own re-education and professional upgrading (Ibid.).

#### **6.4.2.3.2 CASME Richards Bay Resource Centre**

CASME Richards Bay Resource Centre is situated in the industrial area of Richards Bay. Its Head has seen the need for assisting two (2) separate functions to accommodate its twin roles as the “Centre for the Advancement of Science and Mathematics Education”: helping educators perform a better job and providing learners with opportunities to “explore science” (pers. comm., D Fish, 15 August 2003). These functions are housed in...

6.4.2.3.2.1 An educators' "Resource Centre," housing a lending library video tapes, charts, models, overhead projectors and schools' science kits), previous examination papers and reference books, a fully equipped computer centre, duplicating facilities and rooms for professional development courses (CASME RBRC brochure 2003); and

6.4.2.3.2.2 A learners' "Science Centre" (serving over 20 000 learners and 400 educators annually), with display areas for science learning, demonstrations and teaching (Fish 2003).

A qualified science and Biology educator is present every working day to assist visiting educators in fulfilling the Centre's mandate as a venue for professional development (CASME RBRC brochure 2003). A specialist institution, CASME has helped improve Matriculation marks in mathematics and science markedly since it was founded (Interview with M Lötter, 17 October 2003).

#### **6.4.2.4 An Education Resource Centre in a Rural Environment: Mbazwane Education Resource Centre**

The recently-completed Mbazwana Education Resource Centre is located near Sodwana Bay on the KwaZulu-Natal North Coast. "Access roads are poor, being nothing more than sandy tracks in many instances which means that schools are isolated, time consuming if not impossible to reach other than in a 4-wheel drive vehicle or on foot and are seldom seen by Superintendents, Management or Academic [sic]" (Mdletshe 2002).

The percentage of the population in the vicinity of Mbazwana/Ubombo with no schooling is 19.7%, and the percentage of the population that is functionally illiterate is 21%. The adjusted per capita income for adults is R7 152. 54.8% of all households, and 44% of all

schools, are without piped water; and 69.3% of households, and 29.2% of all schools, are without electricity (Department of Education, 2002; 1996 Census in Wilson and Sewpal 2003: vi). 26.1% of all schools' infrastructure is classified as being "poor and very poor" (Ibid.).

The average Matriculation pass rate is 46.5%, and the percentage of schools with a 0-30% pass rate is 32.5%. The learner to educator ratio is 1:39 and the learner to classroom ratio is 1:42.1 (Ibid.).

Faced with this environment, the personnel of the Mbazwana Education Resource Centre (that includes seven [7] educators and fourteen [14] other non-educators on its staff; pers. comm. T Mdletshe, 14 August 2003; Mbazwana ERC "Operational Structure" in Mdletshe 2003:2), are mandated to provide...

- 6.4.2.4.1 a base (i.e. office space) for the local KZNDEC Circuit personnel
- 6.4.2.4.2 "accessibility for Superintendents to reach schools and allow school personnel to keep in touch with district management" (Mdletshe 2003:2)
- 6.4.2.4.3 office space for Mbazwana Head Teachers' Association, "educators' unions and NGO's working in the area, HIV/AIDS counsellors and trainers etc." (Ibid.)
- 6.4.2.4.4 access to fax and photocopying facilities for educators and the public (Ibid.)  
and
- 6.4.2.4.5 meeting facilities for educators and for the public (Ibid.).

The Centre houses...

- 6.4.2.4.6 various seminar rooms (each seating about 25 delegates); one (1) board room (seating 20 delegates); and a hall (with seating for 150 people);
- 6.4.2.4.7 a modern computer centre with Internet and live link-up facilities;

- 6.4.2.4.8 a small professional library (i.e. with books for lesson preparation and educators' personal improvement);
- 6.4.2.4.9 a medium-sized duplicating facility;
- 6.4.2.4.10 a large storage facility for schools' books, stationery and furniture; and
- 6.4.2.4.11 various offices, which include those of the Circuit SEM's (personal visitation, 14 August 2003).

Educators are personally levied a fee to use the computer centre to discourage excessive use of the Internet facilities, and to generate funds to maintain the equipment. The computer centre appears not to be well used. The meeting facilities are utilised regularly for educators' meetings and for community gatherings (Mdletshe 2003).

#### **6.4.3. Exploring Directional Changes for “Environmental Education Centres”**

In the light of changes in direction that appeared necessary, Environmental Educators of the KZNDEC and NEEP-GET (KwaZulu-Natal) met with senior KZNDEC officials at Natal Spa over 7-8 September 2002 (KZNDEC 2002c).

(In the light of the preceding deliberations regarding institutional transformation, the researcher has appended annotations to some of the priorities that this seminar identified for action.)

The forum suggested the following as priorities for action:

6.4.3.1 Active and practical co-operation of all parts of the KZNDEC Unit with “all stakeholders” (KZNDEC Environmental Education Unit 2001:1-2).

6.4.3.1.1 in curriculum development ( EEASA 2002:5 and 9) and

6.4.3.1.2 in environmentally-related projects (e.g. HIV/AIDS programmes, ABET, sanitation projects and in skills development; UNESCO 2003:1; Janse van Rensburg and Taylor 1993:3; O'Donoghue and Janse van Rensburg 1995:4; O'Donoghue 2000:7; **APPENDIX 5:E**).

(These “stakeholders” would encompass subject advisers in every KZNDEC District; the KZNDEC Chief Directorate for Youth and Culture; leaders in community education, especially in environmental issues, such as for ABET; the KwaZulu-Natal EECF; other governmental and independent bodies in environmental thinking, such as DWAF and WESSA); and with those who are developing learning materials, such as BirdLife South Africa.

Such synergism would bring with it evaluation procedures concomitant with espoused constructivist principles of “representivity” and “transparency” – KZNDEC Environmental Education Unit 2000:2 and Lotz 2001:28.)

6.4.3.2 Enabling educators to come into “working contact” with these “stakeholders,” empowering them to pursue curricular and extra-curricular environmental programmes in every school (ESGI 2000:10 and Clacherty 1995:5-10).

6.4.3.3 Materials development (i.e. making “environment” central, and a “catalyst,” in each Learning Area), to help educators “bring out the environment” in their lessons (Department of Education 2002a:l; KZNDEC 2003c:4; Van der Watt 1999).

6.4.3.4 Participation in PRESET AND INSET courses to empower and encourage educators (as was envisaged in the KZNDEC Environmental Education Unit's

*Strategic Plan 2000-2002*; KZNDEC EE Unit 2000a:12-13 and Chapter 3 Section 3.3.4).

6.4.3.5 The collation of an easily accessible database/catalogue (possibly incorporated into a web page) of environmental activities, opportunities and materials in each District or Region (Filho and Bandeira 1995:57).

6.4.3.6 To keep school principals continually aware of Environmental Education.

6.4.3.7 The formation of working School Environmental Policies in each school as an integral part of the schools' Strategic Plans (EEASA 2002:8).

6.4.3.8 To promote visits to Environmental Education Centres as part of an holistic learning experience for the educators (as they appreciate the contextual and contested nature of the term "environment") and for the learners (as field work experiences support the Learning Areas' learning experiences) (EEASA 2002:4).

6.4.3.9 The formation of environmental clubs in schools, to provide training for every learner in sustainable living, "(making) the rescue of the environment the central organising principle of civilisation" (Gore, 1993 in Bowers 1995:5):

6.4.3.9.1 to encourage learners to become realistically aware of environmental problems,  
and

6.4.3.9.2 giving learners some responsibility for planning educational activities and for taking action to solve environmental problems within their local communities (Lotz 2001:5).

(This section particularly honours recommendations of the Tbilisi Declaration that calls for “social groups and individuals [to] acquire the skills for identifying... [and to be afforded the] opportunity to be actively involved at all levels in working toward resolution of environmental problems” [UNESCO-UNEP 1978:15].)

- 6.4.3.10 to promote the “capture” of indigenous knowledge in KwaZulu-Natal (EEASA 2002:6).

[This would serve as both “a sensitising focus on technology-environment interactions” and the introduction of environmentally sensitive indigenous knowledge, renewable energy production, permaculture, etc. into the curriculum (Wagiet 2001a:10).]

- 6.4.3.11 to pursue professional training and development (especially in Environmental Education) for all involved in the KZNDEC Environmental Education Unit, Regional curriculum units and subject advisors.

## **6.5 POSSIBLE FUNCTIONS THAT A *RE-FORMED* CENTRE WOULD PERFORM**

### **6.5.1 A Conduit for Servicing and Resourcing the Education Community**

What seems apparent is that KZNDEC Environmental Education Centres should transform from providing only overnight accommodation for visiting schools’ groups to “promote, demonstrate and model environmental education” (Joubert 1994:28), to “strengthen[ing] the scope of professional activities” of educators (Umgeni Valley 2003).

Loubser concurs: the primary aim of a centre should be at District educators; then at community groups; then at learners (pers. comm. C Loubser, 25 September 2003). This supports the contention by KZNDEC officials that “significant numbers of educators... are underqualified, insufficiently qualified, or inappropriately qualified [as when, for example, a language educator teaches science subjects]” (Ukhahlamba Region 2003:3) and that they require active professional help. This help could be advanced by formal instruction through registered academic courses; informal instruction through INSET; and non-formal instruction through professional advisory support (Ibid.; and DEAT 2001:7).

With direct input into each of these stages (each administered in and from its premises), a re-formed Centre could “contribute to a better environment and [training for] sustainable environmental management” (O’Donoghue 2000:5).

Thus, in the light of the needs presented in the total environment (Sections 6.4.1.1-4 and 6.4.3; Conradie 1998:108-109), the Centre would become a service and resource facility for the local education community.

### **6.5.2 The Centre as a Service Facility**

As a service centre, it could provide a venue from which non-formal, informal and formal on-going re-education of educators can take place:

6.5.2.1 A “home base” and office accommodation for TLS subject advisors, from which they would service their schools in the District. They would also have display areas of teaching aids with which educators could experiment and examine. This would help relieve much of the Centre’s Head’s frustration referred to earlier, as his teaching and “curriculum-enhancing” load would be shared with TLS colleagues (Dundee EE Centre 2003c:1). The “cluster

system” pioneered for subject advisors through the LSP and NEEP-GET programmes could most conveniently be continued (Sguazzin 2002:2-3; Neluvhalani 2002:3).

6.5.2.2 A location from which the Centre’s Head, when not involved with learners’ groups, would also visit schools, co-ordinating, with his TLS colleagues, the infusion of environmental education into the curriculum. This would include help with curriculum planning and execution; assistance with schools’ strategic planning; encouragement with implementation of Schools’ Environmental Policies (Section 6.4.3.7); and aid with the formation and perpetuation of environmental clubs/groups (Section 6.4.3.9).

6.5.2.3 Meeting places for INSET (in-service training) for educators (Section 6.4.3.4); for professional workshops and management meetings (Section 6.4.3.6); for seminars and for curriculum development workshops (Ukhahlamba Region 2003:3 and Section 6.3.1.1.1).

6.5.2.4 Venues for professional development (e.g. for college and/or university lectures, and tutorial sessions; Section 6.4.3.11 and Ukhahlamba Region 2003:2). There should be the possibility of establishing a satellite campus for a tertiary educational institution (Dundee EE Centre 2003c:2).

6.5.2.5 Venues from which PGSES personnel could service schools and hold seminars (sometimes in conjunction with other stakeholders, such as personnel from the Department of Health) on such matters as HIV/AIDS and suicide prevention ( Section 6.4.1.3).

- 6.5.2.6 Venues for stakeholders with the KZNDEC to conduct meetings that benefit education and/or educators (e.g. the Department of Agriculture and permaculture gardening courses – and, in the process, the increase in “food security” – and the Department of Health and sanitation; Sections 6.4.1.3, 6.3.1.2 and 6.4.3.2).
- 6.5.2.7 Venues for management training and development seminars (Ukhahlamba Region 2003:3), and capacity-building workshops (such as financial management courses and conflict management courses) for SMT's and SGB's (Lötter et al 2001:25).
- 6.5.2.8 Venues for collegial meetings (e.g. for learning area associations, phase clusters and educators' unions).
- 6.5.2.9 Workshop facilities – possibly in conjunction with the Media Centre – for the production of learning programmes and teaching aids (Loetsch 1990:186-187; Section 6.4.3.3).
- 6.5.2.10 Catering facilities for teas, lunches and for overnight groups (Section 6.4.3.8).
- 6.5.2.11 Overnight accommodation for small- and medium-sized groups of educators on courses and for learners' groups engaged in Environmental Education excursions (Section 6.4.3.8).
- 6.5.2.12 Storage space for the distribution of stationery and textbook requirements for the Districts' schools.

### **6.5.3 The Centre as a *Resource Facility***

As a resource centre, the centre could provide a venue in and from which educational standards may be improved for the entire District:

- 6.5.3.1 A well-equipped educational media centre with reference books, DVDs, videos, posters, previous examination papers, etc. (Fish 2003). The media centre would provide a research facility (with Internet capability) for educators in lesson-preparation and for personal academic improvement (Field 2003; Section 6.4.3.11); an archive of educational resources (Ukhahlamba Region 2003:1; Section 6.4.3.5); a database facility for the recording of indigenous knowledge (Section 6.4.3.10); and a mobile service for schools and for satellite resource centres (vide the poor road access from schools; Ibid. 2003:2).
  
- 6.5.3.2 A fully equipped computer centre providing computer literacy classes for educators, and enhancing their skills in using multimedia-based resources and strategies in their teaching and record-keeping (UNESCO 2003; Conradie 1998:108-109); enabling classes for school administration personnel in databases, financial records and in correspondence; and a basic repair workshop and for the storage of computer parts (Field 2003).
  
- 6.5.3.5 Printing and duplicating facilities for educators and schools (that are unavailable at many of the District's educational institutions because of the expense and a lack of power supply; KZNDEC 2003c:13).

6.5.3.6 A demonstration laboratory for natural and physical science educators and learners, and a refurbishing facility for borrowed science kits (UNESCO 1997; Fish 2003; KZNDEC 2003c:13).

## 7. CONCLUSION

In this work, the researcher has appraised the role played by KZNDEC EE Centres in environmental education within the educational system of KwaZulu-Natal. Members of the KZNDEC EE Unit (i.e. the Heads of the KZNDEC EE Centres) have in the past committed themselves “to provide the opportunity for all learners in KwaZulu-Natal to become aware of, concerned about, and committed to their environment” (KZNDEC 1999c:1). It is, however, “physically impossible” to reach all two-point-eight (2.8) million of the learners in KwaZulu-Natal and their educators within their 5 968 schools, or as visitors to the Environmental Education Centres (KZNDEC 2003c:28; Section 2.6). Therefore, as a response to KwaZulu-Natal’s environmental crisis, this Vision is, at present, futile (Waddington 2002:2).

Some of the ineffectuality would appear to rest on the skewing of the conceptions of educators to a biophysical approach of the “environment” (Sections 3.5.1 and 4.3). “Generally, [they] have been devoted to running ecology courses” (Clacherty 1995:20). Past methodology demonstrates a largely untested (Section 3.5.3) “faith in awareness-raising that [it is hoped] would... lead to behaviour change” in their visitors’ lives (Taylor 2003a:70; Opie 1986:14; Section 3.5.2).

Realising that this biophysical aspect of “environmental problems cannot be understood without reference to social, economic and political values” (Fien 1993:3), the KZNDEC environmental educators have, of late, demonstrated a willingness to consider the socio-economic and political features of the educational communities of which they are part (Delta

EE Centre 2001:8-9). Their Centres occasionally, for example, sponsor visiting “previously disadvantaged” groups (Section 3.3.5). They have, nevertheless, been log-jammed into believing that only as they accommodate paying visiting learners’ groups their Centres will survive economically (Ibid.).

Dlamini-Boemah and Rouhani commented in their research that “Much as [they] appreciated the work of Environmental Education Centres ... [they wished] to suggest that they should increase their activities towards rural community schools” (Dlamini-Boemah and Rouhani 1997:8). In agreement with their sentiments, and to this end, the researcher has postulated examining the Centres’ communities and contexts to see how the Centres could help, with their facilities to ameliorate “the problems and daily struggles of the people” (Delta EE Centre 2001:8-9). It has been suggested that as the Centres swing their focus to service and resource educators rather than solely learners, from being predominantly learner-centric to being more educator-focused, they could help “empower [their] communities to act [wisely] on environmental issues” (ANC 1994:40).

In 1986, Van den Berg, wrote, “It is... necessary to do some re-thinking with regard to the role of environmental education centres. It might be necessary to consider a shift of emphasis, from mainly offering environmental studies to groups of pupils to the creation of opportunities for teacher training and involvement. Environmental education centres should to greater extent become community centres that serve the local community... [They] can furthermore become resource centres containing environmental education material and equipment that many schools cannot afford” (Van den Berg *in* Opie 1986:14; Clacherty 1995:20; see Section 1.3.1).

As Lotz and Olivier have written, “Social and educational transformation is not likely to come about through externally implemented curricula and training packages, but through ongoing

and reflexive engagement by teachers with aspects of the learning context” (1998 in le Roux 2000). By introducing educators to the re-orientating, sensitising focus in to any learning area that environmental education can provide (Wagiet 2001a:2 and 10), they will cascade it through to many more learners than the Centres could hope to reach.

For the Environmental Education Centres of the KwaZulu-Natal Department of Education and Culture, this may be the time for a change of direction – for “the protection of the environment,” and “for the benefit of present and future generations” in KwaZulu-Natal (Constitutional Assembly 1996:11). In the process, the KZNDEC Environmental Education Centres may be helping society in KwaZulu-Natal in a manner before undreamed of.

By practising active environmental education, international decisions are being implemented not merely to save an environmental education centre, but to affect people’s lives even at a “deep rural” level. Most importantly, the Centres may be helping restore the balance of “the three pillars of sustainable development - economic, social and environmental – and [in the process, having a positive] focus on poverty eradication” (United Nations World Summit on Sustainable Development 2002).