

Nansindlela is a Zulu word meaning "this is the way". It is also the name of the Institute's research and demonstration farm near Pietermaritzburg.

Nansindlela

SPRING 1988

Newsletter of the Institute of Natural Resources, University of Natal. P.O. Box 375, Pietermaritzburg, 3200.



From left: Mr R.A. Plumbridge, Chairman and Chief Executive of Gold Fields of South Africa Limited, His Majesty, King Zwelithini Goodwill kaBhekuzulu, and Prince Gideon Zulu, Liaison Officer, Institute of Natural Resources.

Photo: Gold Fields of S.A.

At a presentation function held in Ulundi during November 1987, His Majesty, King Zwelithini Goodwill kaBhekuzulu accepted a cheque for R468 000 from Mr R.A. Plumbridge, Chairman and Chief Executive of Gold Fields of South Africa Limited, on behalf of the Institute of Natural Resources.

The Gold Fields Foundation's donation is being used to fund three INR projects:

- a three-year agroforestry project which aims at meeting the diverse needs of rural people by introducing agricultural practices which integrate different product systems, e.g. trees, crops and livestock, on limited land areas;
- the establishment of a clinic at the Biyela Rural Service Centre, currently under construction, which will also provide production and marketing facilities, adult education and community services;
- a three-year project which will examine appropriate water technology in both the social and scientific context, with the objective of drawing up guidelines for the transfer of appropriate technologies to rural people through testing the effectiveness, reliability and social acceptability of a variety of water supply and purification systems.

The Gold Fields Foundation granted an additional amount of R100 000 to the Institute to assist in the rehabilitation of community agricultural projects which suffered major setbacks as a result of the September 1987 floods in Natal/KwaZulu. 

Comment from Mr E. Taeuber, founding father of the Institute of Natural Resources

In a remarkably short period of time, in less than a century in fact, man has dramatically changed his lifestyle which today is largely controlled by a technologically computerised system of operations.

Man, through his insatiable demands, the exploitation of finite resources and an unacceptably high population growth, is responsible for pressures on our world which must be viewed with grave concern.

The changed values, codes and disciplines in an ever faster moving jet-age have possibly added to a somewhat distorted picture of life and to the realities which govern nature.

The wonders of nature with which we

in South Africa are so richly blessed, unfortunately have also suffered materially through encroachment by man. It is of paramount importance to appreciate the interdependence of man with nature, the complexity of the ecosystem and the necessity to protect the environment for our wellbeing and, ultimately, for our very survival.

Fortunately, it is generally accepted that without soil and water, there can be no life. Conservation of our precious resources is, therefore, essential. An appreciation of sound conservation practice and all principles in the scientific management of our natural resources should form an integral part of our daily life.

With the specific objective to research and formulate procedures for conservation and sustainable use of nature for our benefit, and to provide a happier world in which to live, a decision was taken to establish the INSTITUTE OF NATURAL RESOURCES by the University of Natal through its Principal, Professor Desmond Clarence. Professor John Hanks was appointed Director on March 1, 1980.

It is the aim of the INR to involve all institutions, agencies and people who are able to assist in the conservation of our environment, and the wise use and protection of our resources, for the survival and pleasure of future generations.



"We abuse land because we regard it as a commodity belonging to us.
When we see land as a commodity to which we belong,
we may begin to use it with love and respect."

ALDO LEOPOLD



First National Bank of Southern Africa Limited - Registered Bank.

NEWS IN BRIEF

COMPUTER DONATION

During February of this year, IMS International generously donated a computer, printer and software to the INR for use by the public relations and fund raising department based in Johannesburg. The donation was made at a function held at the recently constructed Phumangena uMuzi — an authentic Zulu homestead 50 km from the city centre.

JCI DONATION

Johannesburg Consolidated Investment Company Limited recently donated an amount of R110 000 to the INR to be used for the construction of a Training Block, part of the Biyela Rural Service Centre scheduled to be officially opened during November 1988.

The Training Block will facilitate entrepreneurial development by providing training in such areas as carpentry, brick-making, fence-making and tailoring. Production and marketing facilities have also been incorporated into the design and establishment of the centre.

JCI contributed a further R10 000 to the INR to be used for general running expenses.

INR RESEARCHER ATTENDS INTERNATIONAL CONFERENCE

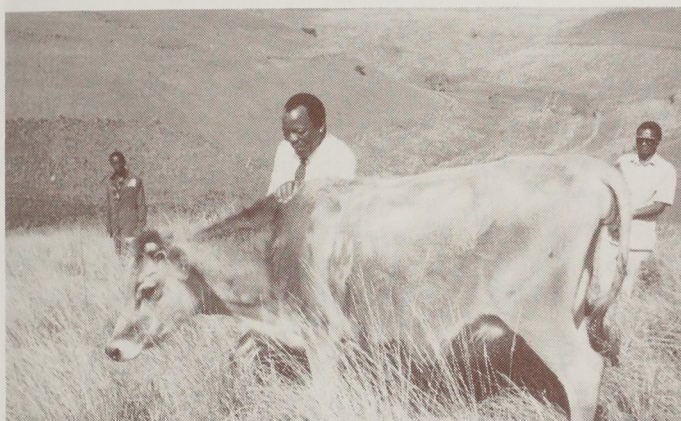
Dr Anthony Cunningham, who is presently carrying out several projects concerned with the traditional use of indigenous plants and animal parts for

food, building and medicinal purposes, was invited to attend an international conference on "The Conservation of Medicinal Plants" in Thailand during March of this year.

Organised by the World Health Organisation (WHO), the International Union for the Conservation of Nature and Natural Resources (IUCN) and the World Wide Fund for Nature (WWF) in association with the Ministry of Public Health of the Royal Thai Government, the conference brought together leading health professionals and plant conservationists with the intention of producing a set of guidelines for countries wishing to make the best possible use of their medicinal plants and to conserve them for the future.



BIYELA INTEGRATED RURAL DEVELOPMENT PROJECT



In general, the precursor trials have performed above initial expectations with regard to economic viability, acceptance by the people and their catalytic effect in terms of promoting development initiatives amongst the local communities.

To many people living in South Africa's cities and towns, the less developed rural areas of the country and the problems of the many millions of fellow human beings living there, are "out of sight, out of mind". For a long time, development experts world wide (and more recently, development planners in this country) have realised that bringing economic development and a much improved standard of living to the "hidden" masses living in such less developed rural areas will not only help to alleviate human suffering but can also serve to promote social and political stability and overall development of a country.

There can be little doubt that South Africa's urban problems arise largely from the movement to the towns and cities of poorly educated, unskilled people with high expectations but little hope of achieving them. Nevertheless, it must be recognised that the process of urbanisation is inevitable and, indeed, desirable if properly planned and organised. The Institute has shown in some of its research projects that the human carrying capacity of the land in most of these less developed rural areas has already been exceeded with disastrous consequences for the environment and natural resource base.

The Institute of Natural Resources, when it commenced operations in 1980, had as one of its principal objectives the conduct of research aimed at promoting the conservation and sustainable use of natural resources in southern Africa. It soon became apparent that achieving this objective required a realistic approach that acknowledged certain basic facts:

- the greatest threat to the environment and natural resources in southern Africa exists in the less developed rural areas of the region;
- sustainable land-use must be the main goal of conservation initiatives;
- for conservation to succeed, it must be carried out with the willing co-operation of land-holders; for this to occur, they must be able to see tangible benefits from the application of conservation, in the form of increased production (and entry to the market economy in the case of subsistence farmers) and income;
- an integrated approach to conservation and development is required, for the one cannot be achieved without giving attention to the other.

With these realities of the southern

African situation in mind, the Institute reached agreement with the KwaZulu Government to become involved in a much needed research and development project. This was to be undertaken in a carefully selected rural area of KwaZulu, representative of less developed areas in the region as a whole in terms of existing land-use and human population pressure, and would attempt to develop and test sustainable land-use systems that were both socially acceptable and economically viable.

PHASE I

The Institute's Biyela Integrated Rural Development Project began in 1981, located in a hilly 23 000 ha area of KwaZulu lying between Eshowe and Melmoth with a population of roughly 23 000 people. The Biyela area is characterised by scattered settlement; a lack of basic infrastructure, services and facilities essential for the initiation and support of economic activity; few employment opportunities; and a system of land-use that was neither productive nor sustainable.

The term "integrated rural development" describes a way of meeting the basic needs of rural people in terms



The Siz'uzulu Market Stall, established in 1985, is situated on the main Eshowe/Melmoth road which traverses the project area.

of three broad dimensions: an increase in agricultural productivity; the provision of such infrastructure and services as are necessary to improve their quality of life; and the stimulation of non-farm commercial and industrial activities to provide employment for those people who exceed the land's agricultural capacity. The integrated approach is based on the premise that a combination of factors — not only the right technology and education, but access to physical inputs and markets, and attractive prices — is essential to get the local economy moving. This means that integrated, simultaneous and comprehensive action on a number of fronts (for example, agriculture, forestry, informal sector, village, water and road development and the provision of services, education and training) is required.

The primary objective of the Biyela project is to evolve appropriate and innovative rural development systems which can contribute to the solution of some very serious problems (low productivity of agriculture, degradation of natural resources and general poverty) in the area and in many other similar less developed rural areas. A fundamental tenet of the Institute's approach has been to examine possibilities for promoting development and economic advancement opportunities for as many people as possible. The surveys carried out at the start of the project showed that if people were to take the step from subsistence agriculture to commercial smallholder farming, or from being unemployed to involvement in rural-based small-scale industries, they would require substantial support and incentives, especially during the initial phases of development. In the case of potential farming and business entrepreneurs, the surveys indicated that six major factors were im-

portant in terms of achieving meaningful development in the area:

- basic infrastructure and services;
- appropriate technology and/or land-use management systems;
- technical skills (through training of local people and government officials);
- effective local organisational structures;
- financial resources (for both capital and recurrent costs);
- motivation (of local people and government officials).

In line with its commitment to develop the individual, on smallholder farming units or in small businesses, the Institute recognised the need for an "action research" approach (that is, conducting research on people's own land with them involved) on its part and a "learning-by-doing" approach on the part of the local people. Working closely with the KwaZulu Department of Agriculture and Forestry, the KwaZulu Finance and Investment Corporation, other interested parties and, most important of all, the rural communities involved, a number of small trials and demonstrations were mounted concurrently with the physical and socio-economic work to assess the technical, economic and social acceptability of various land-use management systems (dryland and irrigated cropping; poultry, dairy and vegetable production; forestry), water and sanitation development systems, produce markets, and organisational structures (for example, development committees and interest groups). Local people were involved (and received training) in all of these trials and demonstrations, with some units being run by families selected by democratically elected development committees.

In summary, the survey, demonstration and trial work conducted in the first few years (Phase 1) of the Biyela Project achieved the following:

- preparation of an inventory of the resource base;
- identification and description of existing land-use systems;
- description of the social characteristics of the local community and of the economic environment;
- description of existing infrastructure (physical and administrative), basic services and financial resources;
- diagnosis of land-use problems and analysis of potential;
- identification of feasible interventions in terms of an integrated rural development approach, with consideration given to land suitability, environmental and social impact, economic factors and the needs and wishes of the local people;
- technology design and selection of "best fit" land-use systems aimed at maximising the returns from the available resources whilst conserving those resources;
- testing of selected technology and land-use systems in precursor trials and demonstrations;
- monitoring and evaluation of the trials and demonstrations;
- modification of technology and land-use systems based on performance and acceptance by the people;
- derivation of research and implementation plans:
 - compilation of overall development recommendations and plans for the Biyela area;
 - conversion into individual research investigations and implementation activities.

A report on preliminary proposals for the Biyela area, which identified the constraints to development in the area and proposed a strategy of integrated rural development was submitted to and accepted by the KwaZulu government in mid-1984.

PHASE II

The main recommendation of the development proposals was that there was a need to continue the research work and commence implementation in the form of a Pilot Project scheme (approximately 1 000 ha) which would allow the proposed approaches to and systems of development to be tested in the field on an integrated basis and on a reasonably small scale. Features of the Pilot Project would include the establishment of two small dairy farms, three

broiler units, three egg units, one cattle ranching unit and two community gardens, commercial afforestation of some 400 ha of steep land, the establishment of a rural service centre, the provision of training and the development of roads, water supplies and sanitation facilities.

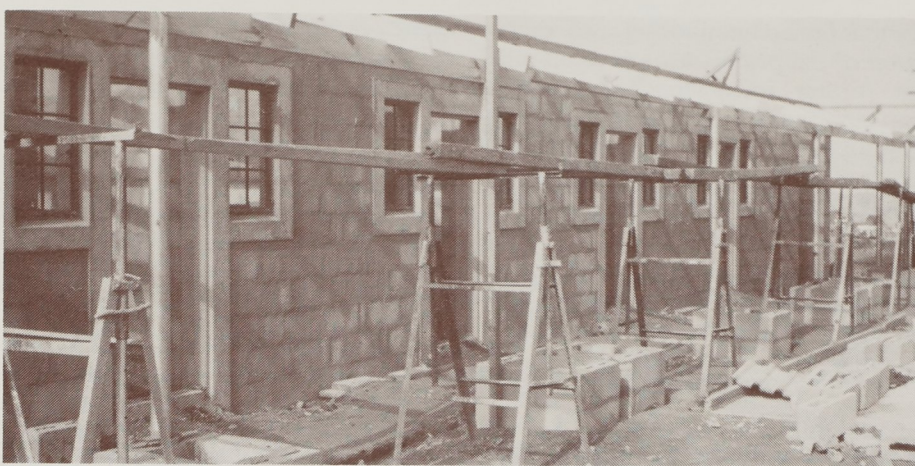
Objectives:

The primary objective of the Pilot Project is to enable the different components of the proposed developments, tested in isolation from each other to date, to be brought together in an integrated rural development project wherein attention is given to the establishment of the complex infrastructure (including rural service centres and institutional structures) required to service commercial agricultural production and marketing. The Pilot Project will, in essence, be a rural laboratory in which further research work will be conducted. In addition to monitoring and evaluating the precursor trials, demonstrations and pilot production units, various Institute researchers will carry out other investigations in the area (e.g. in respect of water and energy supplies, rural service centre establishment, agroforestry, intermediate technology, social and environmental impact etc). The Pilot Project will provide an opportunity to resolve further problems and devise other systems of rural development suitable for and acceptable to the local community. It is anticipated that it will serve as a core of development which will be expanded in a gradual and orderly manner until full development of the whole Biyela Project area is achieved. The development systems evolved and tested there could in future be applied elsewhere in similar areas of KwaZulu.

Results of the Precursor Trials and Subsequent Progress

In general the precursor trials, except for the dairy units, have performed above initial expectations with regard to economic viability, acceptance by the people and their catalytic effect in terms of promoting development initiatives amongst the local communities.

The poultry units have proved to be viable small-scale farming enterprises. Few local people have, however, expressed an interest in becoming egg producers and it is apparent that the simpler broiler production system, with a quick turnover, is preferred. Three people have recently been trained in broiler production methods at the Institute's research, demonstration and training farm, Nansindlela, and two of these people have since established



An important development, currently under construction, is the establishment of the nucleus of a Rural Service Centre comprising a liaison block (above), clinic and training centre.

their own broiler units. An aspirant local building contractor will shortly receive training and it is anticipated that this will greatly facilitate poultry house construction in the area.

Numerous difficulties were experienced in operating the small-scale dairy units (e.g. oestrus synchronization and artificial insemination and management). Some misunderstandings with the local Chiefs also resulted in poor motivation on the part of the farmers. As a result of these difficulties the trials were terminated. However, a local land right holder who had closely observed the trials, began planting pasture in 1985 on his own accord. At present 7 ha of his land right have been planted to pasture and five Jersey cows and a bull purchased with loan finance being provided by the Institute. Milk yields have been higher than expected and few difficulties have been experienced with marketing. It is too early to fully evaluate the management and economics of this unit but there is every indication that it will be successful.

The community garden has operated very successfully and as a result, positive attitudes towards development have been engendered amongst the local community. Attention is now being given to the establishment of additional community gardens since a recent survey amongst the local community has indicated that there is much interest in this type of development.

A form of land-use that could replace unproductive veld on steep slopes in the uplands is afforestation. Initially there was some doubt as to whether this form of land-use would be acceptable to the community since it would lead to a decrease in the available grazing area. The successful operation of the plantation demonstration units has, however, led to an increasing interest being shown by the local community. In 1987 the establishment of eucalypts on indi-

vidual land rights commenced with loan finance, assistance and advice being provided by a local timber company, Natal Tanning Extract (Pty) Ltd. At present, trees have been established on 34 land rights (55 ha) and a further 171 applications to participate have been received. The local timber growers have formed an Interest Group and recent progress indicates that the timber production project could become an important catalyst for further development of the area.

A large market stall was established in 1985 adjacent to the main Eshowe/Melmoth road which traverses the project area, and it has since been run successfully by a local women's group. Vegetable and fruit produce, some of which is grown locally, is sold at the market. Three other small stalls have recently been established in order to facilitate marketing of eggs, milk and vegetables produced within the project area.

An important development, already under way, is the establishment of the nucleus of a Rural Service Centre. The centre will ultimately provide opportunities for small industry, agro-industrial and informal sector enterprises and it will also serve as a market and service centre. The Rural Service Centre, which includes a clinic, will stimulate agricultural development and greatly facilitate contact between local community, researchers, planners, various government agencies and others concerned with development of the area.

Conclusion

With the commencement of some aspects of the Pilot Project, it is now vitally important to ensure that appropriate institutional and organizational structures are created that will facilitate integrated and sustained development of the various components of the project. Clearly there is an important need

for continued monitoring and evaluation of the project as it develops and for further socio-economic research into appropriate systems for ongoing development which will satisfy the needs of the local people and which will result in significant community development.

The Institute strives to be a catalyst for change by means of its action research

approach which closely involves the local people in the research, planning and implementation process.

DONORS

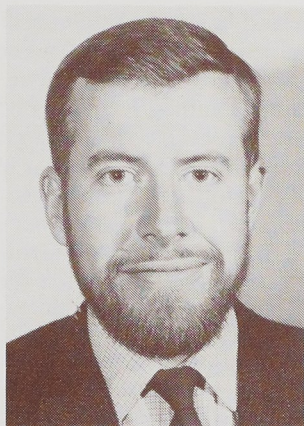
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STAFF PROFILES

JOHN MALCOLM ERSKINE — Project Co-ordinator, Biyela Project



John Malcolm Erskine was born in Surrey, England, on November 19, 1937. He spent nine years at Queen's College, Taunton, and in 1956 won the County Major Scholarship to Liverpool University. He obtained his B.Sc. (General) in 1959 and the following year his B.Sc. (Honours) in Microbiology. In 1961 he obtained a Diploma in Agricultural Science from Cambridge University.

His first post with the New Zealand Dairy Research Institute resulted in a fellowship to London University where he studied for a Ph.D. degree between 1963 and 1966 on the genetics of micro-organisms in the gut of dairy cows. In 1966 he was appointed Head of Applied Microbiology Section, New Zealand Dairy Research Institute. In this position Dr Erskine travelled extensively visiting research and processing centres in Australia, the Pacific Islands, Malaysia, Sri Lanka, the Philippines, Hong Kong, Thailand, India, Iran and the Lebanon. He also visited Canada, Japan, Singapore, Taiwan and New Guinea investigating dairy product development and utilisation.

In 1969 he took a position of Postdoctoral Fellow at the Summerland Research Station, British Columbia, Canada, and in 1970 moved to Stellenbosch, South Africa, as the Senior Pro-

fessional Officer of the Fruit and Food Technology Research Institute. In 1973 Dr Erskine was appointed Lecturer in microbiology and plant pathology at the University of Natal, Pietermaritzburg.

Three years later he entered the business world as Research and Development Manager for Stauffer Chemical SA, in Sandton. Between 1979 and 1981 he worked for the KwaZulu Development Corporation in Durban and then joined the Institute as Co-ordinator of Rural Development.

Married with two children, Dr Erskine has had a life-long interest in mountain climbing and is presently a member of the search and rescue team (Natal) of the Mountain Club of South Africa. He enjoys golf and tennis and is a member of the Henley Midmar Yacht Club.

EDWARD ALAN POLLETT — Project Leader, Biyela Pilot Pro- ject



Edward (Ted) Pollett was born in Harare, Zimbabwe, on July 31, 1947. During the years following his schooling, he worked his way around the world in Australasia, North America, Europe, Asia and Africa which included being employed as a Jackeroo in north-west Australia and working on various sugar cane, tobacco and sheep farms in eastern Australia and New Zealand. In the lowveld of Zimbabwe, Mr Pollett worked on two game ranches, culling a variety of game on a sustainable yield

basis and was later employed as a hunter during university vacations.

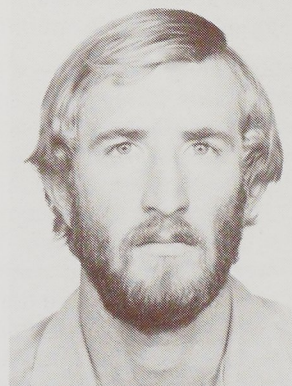
Having obtained his B.Sc. and B.Sc. (Hons.) at the University of Natal (Pietermaritzburg), he returned to work in Zimbabwe as a Land Use Planning Specialist for the Department of Conservation and Extension.

In 1977 Mr Pollett joined R.F. Loxton, Hunting and Associates, an African based member of the British Hunting Group (now Loxton, Venn & Associates) as a consultant pedologist/land-use planner. He became a shareholder in 1979 and a partner in 1981.

As a specialist in the study, planning and organisation of people-orientated rural development projects, Mr Pollett has extensive experience in rural development surveys, regional natural resource studies, soil and land capability surveys, irrigation potential surveys, farm and ranch planning, soil conservation, socio-economic surveys and project planning in Zimbabwe, Transkei, Ciskei, KwaZulu, western and eastern Transvaal, Swaziland, northern Cape and Venda.

He was seconded to the Institute by Loxton, Venn and Associates in September 1987 and is project leader of the Biyela Pilot Project. He is also involved with natural resource, land-use planning and rural development aspects of various other studies being undertaken by the INR.

Mr Pollett enjoys road running, hiking, sailing and wildlife photography.



GAVIN MORTIMER POTE — Field Manager, Biyela Project

Gavin Pote was born in Gweru, Zimbabwe on October 26, 1957. As a scholar he attended Sidbury Farm School and then Graeme College, Grahamstown, in South Africa. During school holidays and for six months prior to national service he worked on various dairy and mixed farms in the Eastern Cape.

While completing his national service Mr Pote was fortunate enough to be seconded to the Kavango Government for 18 months. During this time he cleared 200 ha of virgin land for the establishment of a maize and sorghum project for the local community and assisted with the development and management of the Maria Mwangere Youth Camp near Rundu. This included establishing a small nature reserve and zoo and stocking the area with indigenous game.

In 1979 he joined Inter-Science Services (Pty) Ltd, managing agents for Loxton, Venn and Associates, an agricultural and rural development consultancy. His first post was Development

Officer for the Tibayo Dairy Farm in Swaziland and subsequently for the Ncora Irrigation Scheme in Transkei.

In 1987 he was seconded to the Institute of Natural Resources by Loxton, Venn and Associates where he is presently employed as Field Manager for the Biyela Integrated Rural Development Project.

Married with a daughter, Gavin's interests include horse riding, fishing and rugby.

PRINCE GIDEON ZULU — Liaison Officer



Prince Gideon Zulu, a member of the Zulu Royal Family, was born on Oc-

tober 1, 1934. His grandfather, Prince Ndabuko, was a full brother to King Cetshwayo.

Prince Gideon worked for the Provincial Administration as Administrative Assistant stationed at Eshowe Provincial Hospital from 1957 to 1958. He became a Member of the Legislative Assembly in 1978 and was appointed Assistant Whip of the KwaZulu Government until March 1984. On May 1, 1986 he was appointed Chief Whip of the Legislative Assembly.

He has travelled to the United States of America, Wales and England accompanying His Majesty, King Zwelithini Goodwill kaBhekuzulu. An active member of the Zulu Royal Family, he always leads the regiments during traditional functions on behalf of the Chief Minister, who is traditional Commander of the Zulu regiments.

Prince Gideon Zulu plays a vital role as Liaison Officer for the Institute's Biyela Integrated Rural Development Project.

Married with six children, Prince Gideon's hobbies include tennis, farming, hunting and traditional songs.



DONOR PROFILE

THE IBM SOUTH AFRICA PROJECTS FUND

South Africa's society is going through deep and far-reaching change in which many traditional values and beliefs are coming under intense scrutiny by all the peoples in this diverse land. Within this process of change, the role of the private sector is vitally important.

The reason for our company's involvement in society beyond the narrow confines of our staff is well enunciated by Thomas J Watson Jr, one of the founders of IBM:

"What we must always remember is that countries and systems exist for the benefit of their people. If a system does not measure up to the growing expectations of those people, they will move to modify or change it. To keep faith in our business system and to help build our country, the best thing we can do is make our system work so that everyone shares fairly in it. We won't build good citizenship and we won't build a strong country by holding people back. We will build by helping people to enlarge their goals and to achieve them."

An apt quotation, for we continue to uphold and respect its principles, especially our concern about the society in which we find ourselves.

The IBM South Africa Projects Fund was inaugurated by the IBM Corporation in March 1985. Its objective was to redouble the efforts of IBM in improving the quality of life for all people in South Africa. The Fund, worth 15 million dollars, is aimed at two strategic areas: education and economic development.

Economic development was broadly aimed at both the rural and urban sectors, with the mission to increase the business skills of the population, enabling them to participate more fully in the economy.

The Institute of Natural Resources, which works in rural areas, was supported by a donation of cash and equipment, resulting in the construction of the Nansindlela Resource Centre, the employment of training staff and the establishment of a Geographic Information System.

The Fund was set up to operate over a five-year period and that commitment will be honoured, despite the decision in October 1986 by the IBM Corporation to disinvest from South Africa.

The IBM South Africa Projects Fund supports the Institute of Natural Resources in its role of addressing the problems of poverty in rural areas in a

scientific yet practical way that encourages sustainable use of the natural resource base. The Institute aims to improve the standard of living of those people in rural areas by solving the problems caused by poor land management and over-crowding. Support is concentrated in two areas:

Firstly, by providing computer facilities to support the Geographic Information System (GIS) used for land-use planning. The Biyela area of KwaZulu has been surveyed in detail and the resultant data base makes it possible to locate potential development areas for use by planning and development bodies. It is intended to extend the use of the GIS to other parts of Natal/KwaZulu. The Institute is now also involved in developing GISs for the Umfolozi Catchment (which is subject to heavy soil erosion and relies heavily on agriculture to sustain rural people), for the Pongola Flood Plain in northern Zululand (which has special problems in terms of agricultural development), and the Maluti Mountains' Alpine region in Lesotho (to help develop a management policy for the region which supports many Lesotho rural households). A GIS to map and analyse the basic human and physical resources of the Natal/KwaZulu region has also come to fruition and provides a much

needed overview of the region.

A start was made at the end of July 1986 to use the GIS for practical development applications in the Biyela area. It is being used, for example, to model the expansion of the infrastructure, and to site a rural service centre, woodlots, and water supply points.

The community has endorsed the suitability of a recommended rural centre site and construction has begun. The centre will include a clinic, offices for the agricultural extension officer and

other service-related personnel. There will also be facilities for meetings and evening adult learning programmes, and small-scale industries such as brick-making, carpentry, fence-making and tailoring.

Secondly, the IBM South Africa Projects Fund provided the funds for the construction and operation of a "resource" or training centre at the Nansindlela Demonstration and Training Farm located on the edge of the picturesque and aptly named Valley of a

Thousand Hills, located to the east of Pietermaritzburg. Nansindlela offers practical agricultural training programmes. Courses demonstrate effective land utilization, basic ecology and simple hygiene. Specific topics which are covered include poultry and egg production, fish farming, soil analysis and fertilization and water management. Tremendous strides have been made in the areas of identifying health and sanitation problems and setting community programmes in place to tackle them.



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Protea Assurance Company Ltd

Q Packaged Programs (Pty) Ltd

Robert Storm Rainbow Trust
Reader's Digest Association South Africa (Pty) Ltd
Julius Robinson Trust
Rolfes, Mr M

Saficon Investments Ltd
Safmarine and Rennies Holdings Ltd
The Sage Foundation
Siemens Limited
South African Breweries — Beer Division
South African Cyanamid (Pty) Ltd
South African Druggists Ltd
Southern Life Association Ltd
Suncrush Ltd

Taeuber and Corssen (Pty) Ltd
Taeuber Management Trust
Tokheim Corporation
Tradegro Ltd
Truworthe Ltd
t'Sas-Rolfes Mrs R L
Turner and Newall Holdings Ltd

Unicorn Lines
Union Camp Corporation (USA)
Unisys South Africa (Pty) Ltd
Upjohn (Pty) Ltd

Van Leer South Africa (Pty) Ltd
Vergenoeg Mining Company
Stagg Villett Fund

Wildlife Society of Southern Africa
Wooltru Limited
Wyeth-Ayerst (Pty) Ltd

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