

C S I R A N N U A L
R E P O R T 2 0 0 1

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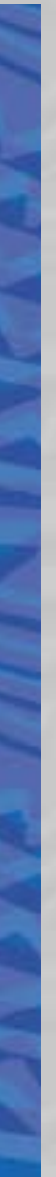
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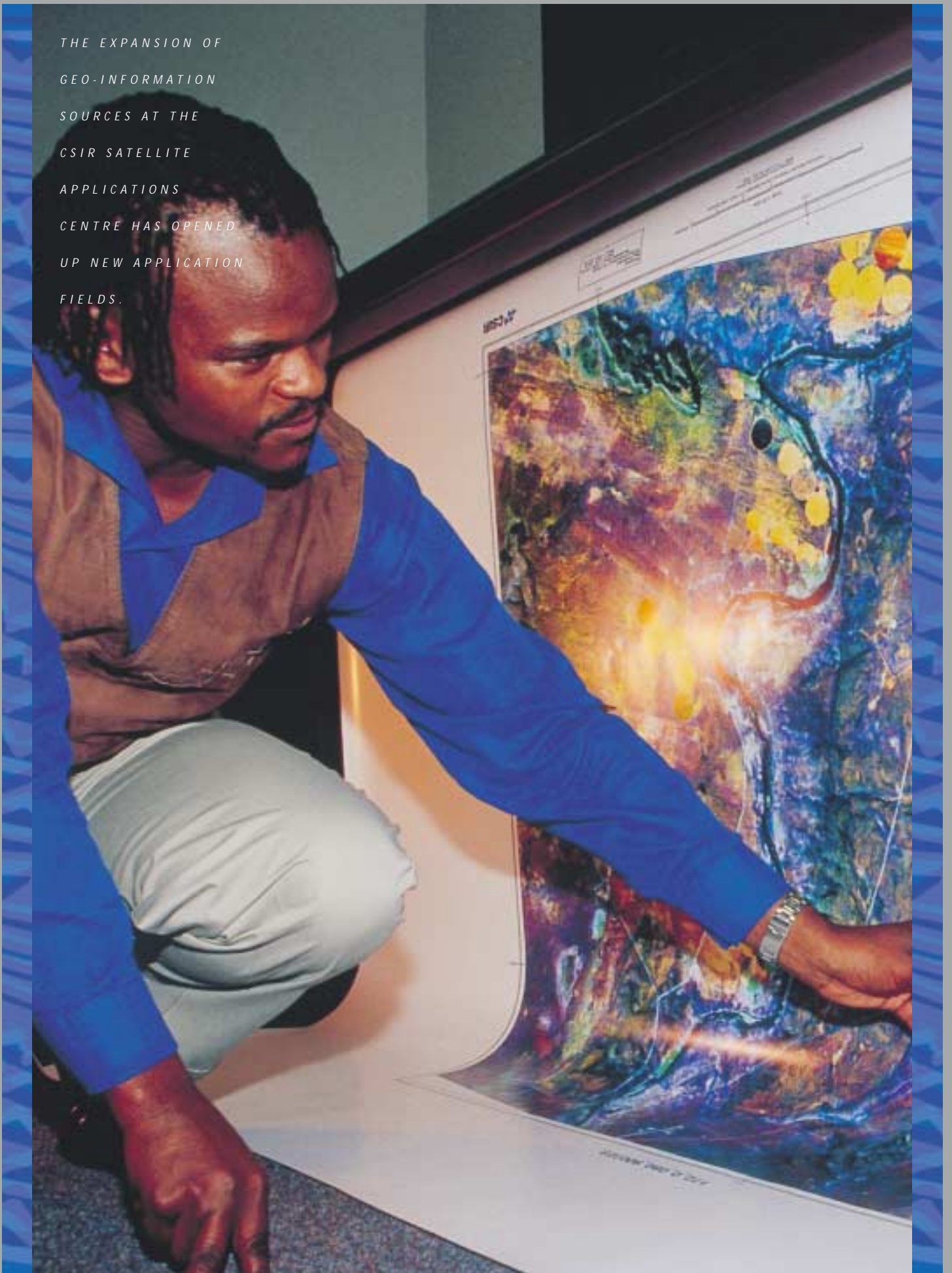


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THE EXPANSION OF
GEO-INFORMATION
SOURCES AT THE
CSIR SATELLITE
APPLICATIONS
CENTRE HAS OPENED
UP NEW APPLICATION
FIELDS.



Highlights and Achievements

In this report we highlight achievements which are indicative of our commitment to delivering technology solutions. A fuller description of our contribution during the year under review, and its impact on competitiveness and an improved quality of life, can be found in Technology Impact, the companion document to this Annual Report. Our aim is to be internationally competitive and locally relevant, and to make a positive and meaningful difference to the lives of all South Africans.

Cementing our partnerships

- ▶ The strategic alliance between the CSIR and the University of Pretoria made considerable progress in fostering an academic, scientific and technical environment that will benefit and enhance learning, development and innovation. The branding of the alliance as the Southern Education & Research Alliance (SERA) embodies the essence of the two organisations (education and research), its location in a global context, and the two organisations working together to create a world-class and globally visible flagship for South Africa in the new millennium.
- ▶ SERA (Pty) Ltd was established to serve as a vehicle for formal contracting on behalf of SERA. Its primary focus is the protection and use of Intellectual Property through venturing, commercialisation and the licensing of Intellectual Property.
- ▶ A memorandum of understanding was signed between the Gauteng Provincial Government and the CSIR/UP alliance in which the Gauteng Provincial Government, through its Blue IQ initiative, is investing in The Innovation Hub. The objective of the Hub is to create a physical and virtual space to enhance and support the growth of technology-led businesses through best practice transfer from both local and international expertise. The Hub aims to provide incubators for start-up businesses, create an enabling environment for high-tech entrepreneurs, attract anchor tenants and stimulate research and development.

- ▶ The CSIR and the DTI signed an Institutional Framework for co-operation which is aimed at aligning and enhancing interaction in support of national priorities.

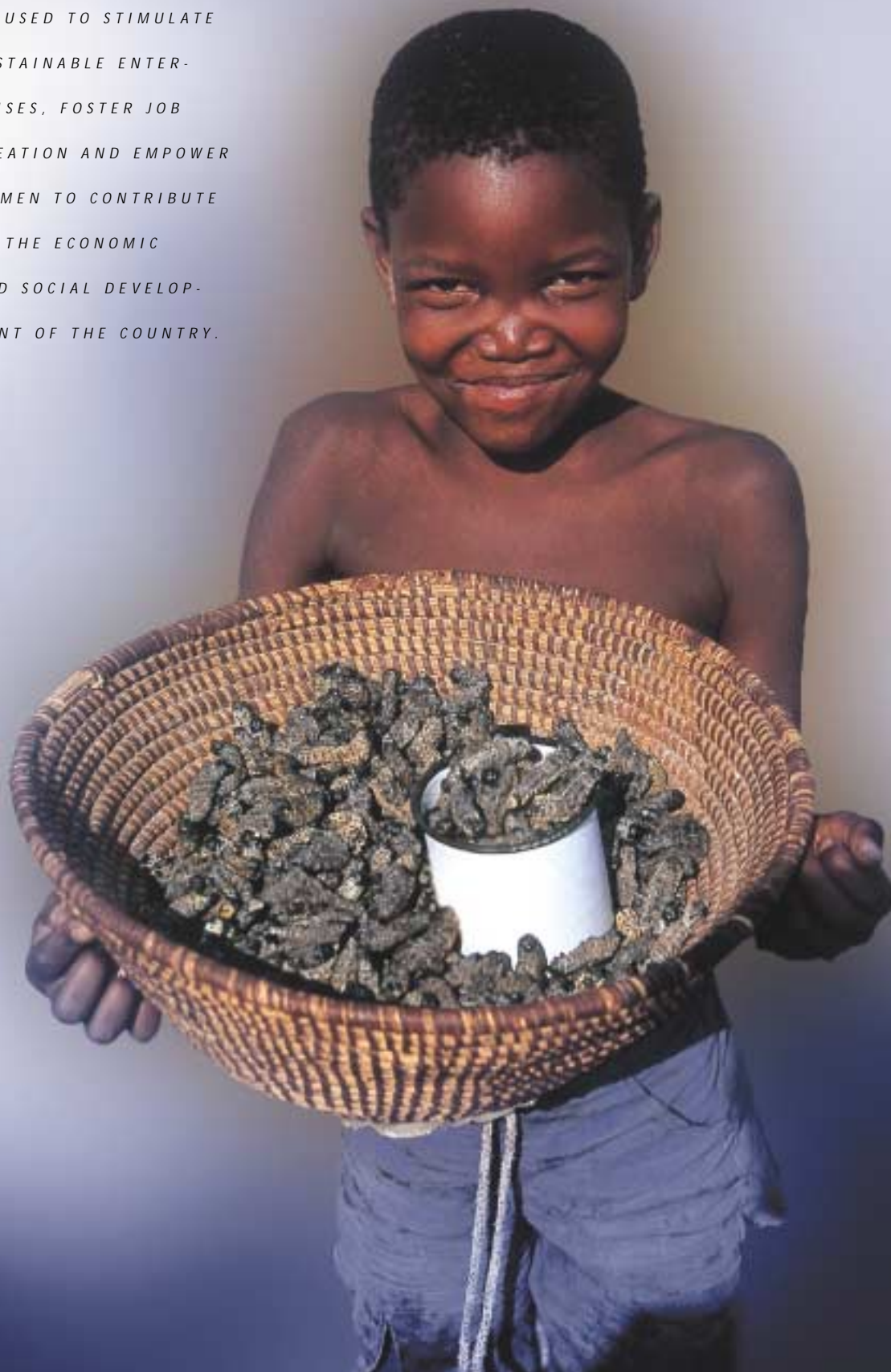
Some Innovation Highlights

The achievements that we lift out here and those portrayed in Technology Impact show how we support the key pillars of the Government's Science and Technology Policy and demonstrate our progress in delivering technology and innovation to make a real difference.

Quenching your thirst/fighting crime and protecting our ecosystem

- ▶ Safe drinking water is now available to the community of Suurbraak in the Western Cape. The CSIR identified a suitable and sustainable technology appropriate for rural water treatment and the innovative distribution of drinking water.
- ▶ DACST has funded the establishment of the Crime Prevention Research Resources Centre. It is a conduit for research information sourced worldwide to support crime fighters in becoming smart users of technology in the fight against crime.
- ▶ An intensive scientific field campaign with the University of the Witwatersrand, in partnership with NASA and the University of Virginia, provided a vital contribution to SAFARI 2000, the most comprehensive study ever conducted of Africa's land/atmosphere system and the sustainability of the region's sensitive and pressured ecosystems.

*THE RICH ABUNDANCE
OF "UNKNOWN" FOODS
IN THIS COUNTRY CAN
BE USED TO STIMULATE
SUSTAINABLE ENTER-
PRISES, FOSTER JOB
CREATION AND EMPOWER
WOMEN TO CONTRIBUTE
TO THE ECONOMIC
AND SOCIAL DEVELOP-
MENT OF THE COUNTRY.*



The health of our rivers/fresh air underground and enhanced data

- ▶ The first State-of-Rivers report for South Africa was released during National Water Week. The findings of ecological surveys conducted on three major river systems of Mpumalanga, the Crocodile, Sabie-Sand and Olifants Rivers, are highlighted.
- ▶ VUMA: software for simulating atmospheric and environmental conditions in underground mines, provides the mining industry with a unique tool kit. VUMA is technically advanced with a modern, user-centred design to enable better and more cost-effective decision making.
- ▶ LANDSAT 7 is a new generation earth observation satellite. The data from LANDSAT 7 became available this year via the CSIR's Satellite Applications Centre. The images can be used in agriculture, land use assessment and a multiplicity of other uses. At 15m resolution, enhanced decision support is now readily available - as is 20m resolution terrain mapping and visualisation.

Easy access to data/predicting a missile's path and e-leasing equipment

- ▶ IPort is a focused, well-researched public transport database, enabling quick and easy access to key policy and planning.
- ▶ Advanced Computational Modelling (ACM) is an essential tool in predicting aerodynamic behaviour. The CSIR, working with Kentron, a local defence manufacturer, enabled the prediction of the release trajectory of a missile currently under development, with the power of ACM.
- ▶ The CSIR developed business-to-business e-commerce enabled functionality for a US West Coast Internet start up. The solution underpins a web-enabled infomediary between companies leasing capital equipment and funding institutions.

Future of mining/analysing spectrum efficiency and tickling your taste buds

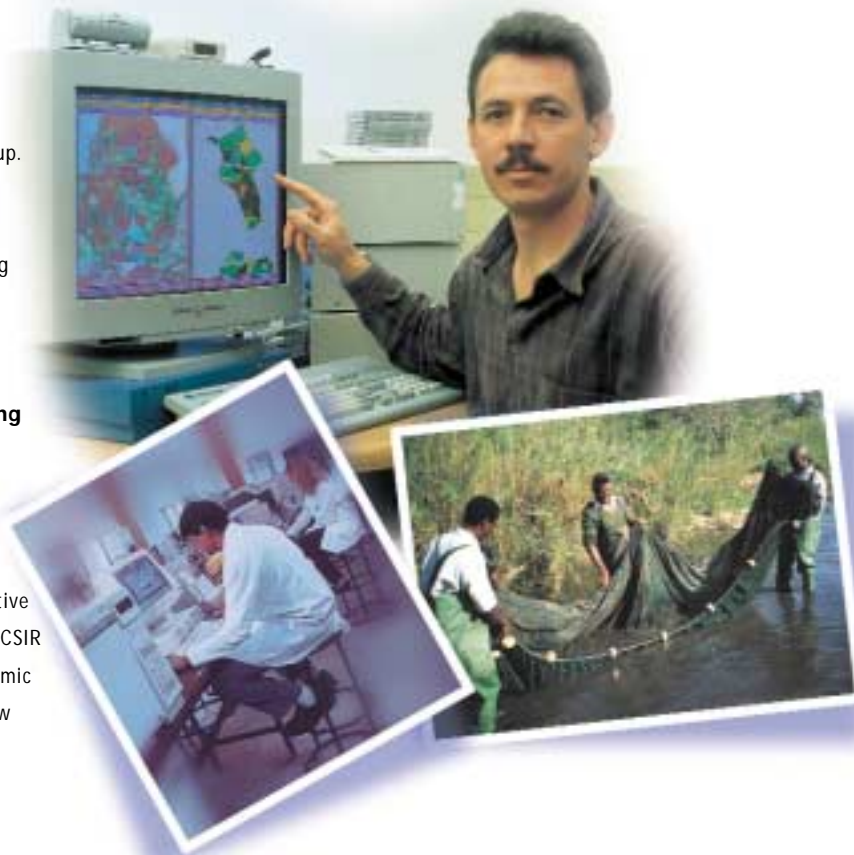
- ▶ Following the success of the DEEPMINE and COALTECH 2020 collaborative research programmes, the CSIR and its industry and academic partners are creating a new collaborative programme:

FUTUREMINE. The consortium will research and develop the technology required for existing mining operations to mine profitably and safely well into the 21st century.

- ▶ The CSIR implemented a methodology to calculate GSM spectrum efficiency for a cellular service provider. This allowed benchmarking with foreign operators. The study found the cellular provider as efficient in spectrum use as some of the top foreign operators in their markets.
- ▶ The promotion and commercialisation of South Africa's indigenous foods can have a major impact on the alleviation of poverty in rural areas. The rich abundance of "unknown" foods in this country can be used to stimulate sustainable enterprises, foster job creation and empower women to contribute to the economic and social development of the country. The CSIR is a key player in this DACST funded poverty alleviation project.

Enhanced environmental assessments/ strengthening the gene pool and fighting AIDS

- ▶ Satellite imagery was used to visualise and animate different land-cover and land-use scenarios in a Strategic Environmental Assessment of the Pongola catchment, an environmentally sensitive area. This novel use of high-tech multimedia had a positive impact on the understanding of this complex ecological and environmental study.
- ▶ The CSIR has mastered techniques to genetically engineer pearl millet and has successfully achieved downy mildew resistance in the cereal. Millet is a crucial staple food in the semi-arid areas of Africa and Asia.



VUMA: SOFTWARE
FOR SIMULATING
ATMOSPHERIC AND
ENVIRONMENTAL
CONDITIONS IN
UNDERGROUND
MINES, PROVIDES
THE MINING
INDUSTRY WITH A
UNIQUE TOOL KIT.



- The CSIR joined forces with the South African government and the mining industry in a major collaborative initiative aimed at combatting HIV/AIDS through community intervention in a major coal-field. Dubbed the Powerbelt/HIV/AIDS project, the initiative incorporates programmes for community empowerment and capacity building.

Healthy buildings/precision farming and stimulating biotechnology

- Old Mutual Properties became the first subscription member in the Showcase Partner programme run by the CSIR Green Buildings for Africa. The programme quantifies and showcases the benefits of green building conversions, a key element in building sustainable urban environments.
- AGRIMAGE (Pty) Ltd is a spin-off venture of the CSIR's Satellite Applications Centre. The company provides satellite imagery for precision farming, an area that has experienced rapid growth in South Africa as a result of pressures to cut production costs.
- A bioincubator (funded by DACST and DTI) is being established by the CSIR. Stimulating the economic development of third generation biotechnology businesses and application of solid state fermentation to small scale chemical production are key focus areas.

Safer mining/safer communities and renewable energy

- Minsim 2000 is the latest release of the CSIR's integrated rock engineering software. Mine designers and consultants to the mining industry will be the beneficiaries of the new technical features in the enhanced product.
- "Making South Africa Safer" is a knowledge-rich manual to assist local authorities in designing crime prevention plans which address local crime problems and respond to the needs of local communities.
- Grid electricity is still years away for many South Africans. The CSIR and Eskom have formed a partnership to provide a decision support tool (with a geographical information system) to identify and plan reliable non-grid energy supply to South Africans far from the grid's reach.

Managing waste safely/testing the market and business growth

- In partnership with the Department of Health and the Pharmaceutical Society of SA, the CSIR developed a set

of guidelines for effective healthcare waste management in developing countries, with specific attention to remote rural primary healthcare centres.

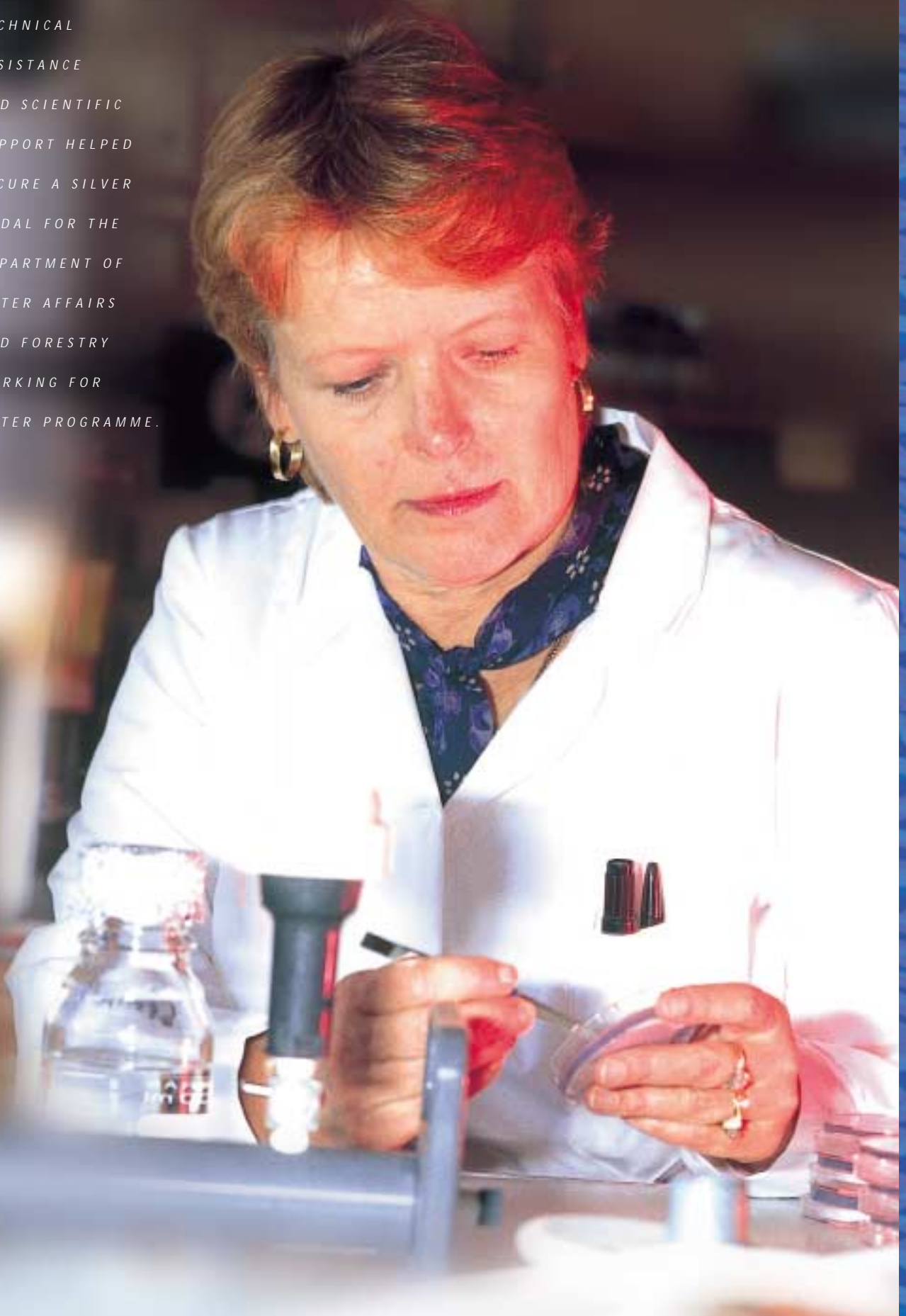
- A multi-purpose fine chemicals plant (Imbiza) has begun toll production of trial products for market testing and regulatory approval. This capacity is available to the chemical industry using a variety of business and technology development models.
- The CSIR's work in the area of Defence Aeronautics has grown significantly in the international arena over the past financial year. Contracts were signed with three European countries and with the US Army to work with NASA in the USA.

Travel at your fingertips/out for a duck and competing globally

- In a joint venture with Satour, the CSIR has developed South Africa's first integrated tourism package on CD. VEZA can be used for planning tours, packaging products and marketing tourism in the country.
- Visi-Edge, an integrative contact recognition software system, can reliably discern whether bat and ball contact occurs in a cricket match. It eliminates any uncertainty about contact with the batsman's bat, pads or body, a key determinant for sound umpiring decisions.
- The CSIR entered into a joint venture with the Gauteng Province's Blue IQ initiative to establish the Automotive Industry Development Centre (AIDC), which aims to transform the South African automotive industry into a globally competitive player.



THE CSIR'S
TECHNICAL
ASSISTANCE
AND SCIENTIFIC
SUPPORT HELPED
SECURE A SILVER
MEDAL FOR THE
DEPARTMENT OF
WATER AFFAIRS
AND FORESTRY
WORKING FOR
WATER PROGRAMME.



Recognition for our Achievements

- ▶ The CSIR's manufacturing and materials technology business unit (M&Mtek) received the Presidential Award for Export Achievement in the category of Research and Development.
- ▶ Francois Malan won the prestigious Rocha Medal for 2001. This medal is awarded by the International Society for Rock Mechanics for the best PhD thesis in the world. CSIR Miningtek is the only group in the world to have achieved this honour twice in three years (and three times in ten years).
- ▶ Sadi Motsuenyane won the Individual National Science and Technology Forum (NSTF) Award for her contribution to activities other than research and innovation.
- ▶ Mark Napier won the prestigious JD Roberts Award for the year 2000. The JD Roberts Award embraces promoting competitiveness in seeking environmentally sustainable solutions to human dilemmas.
- ▶ Ntlanganiso Fesi was appointed to the Intellectual Property Advisory Board by the Minister of Trade and Industry, Alec Erwin.
- ▶ François Denner was awarded the H. D. Einhorn Trophy by the South African National Committee on Illumination (SANCI). The award is made in recognition of a significant scientific, technical or artistic contribution to the field of lighting which has a national or international impact. Honours also went to Dr Franz Hengstberger, who was elected as an Honorary Vice-President at the SANCI Congress, in recognition of his outstanding service as an office bearer of the SANCI Executive Committee, and gives him life membership of the Executive Committee.
- ▶ The Lekoa Vaal Road Building Unit Development Project received top honours at the IMPUMELELO 2000 AWARD ceremony (Impumelelo is the isiXhosa word for "success by working together"). The project was selected from more than 180 applicants as one of the top ten governmental and public-private partnership projects in South Africa tackling poverty conditions in creative and effective ways. The Lekoa Vaal Metropolitan Council contract-
- ▶ ed the CSIR to initiate a training project for members of road building units to create job opportunities in the local service construction industry.
- ▶ The CSIR's technical assistance and scientific support helped to secure a silver medal for the Department of Water Affairs and Forestry Working for Water programme in the prestigious Commonwealth competition: The International Innovators Award 2000.
- ▶ Phil Paige-Green was awarded a fellowship by the SAIEEG (South African Institute for Engineering and Environmental Geologists). This fellowship is awarded to engineering geologists who have contributed to the profession, have extensive experience in the field and who have published relevant scientific literature.
- ▶ The South African Geographical Society awarded Karen Wentzel with the best Masters dissertation in Geography in South Africa last year. Karen was awarded the M.Sc degree cum laude following a study of the erosion potential in the Nsikazi district adjacent to the Kruger National Park, using satellite imagery. The medal is not awarded every year.
- ▶ Jane Morris was invited to be a member of the National Advisory Committee on Genetically Modified Organisms (GMOs).
- ▶ Alex Weaver has been appointed professor extra-ordinary in the Department of Geography and Environmental Studies at the University of Stellenbosch. He has also been appointed as leader of the Southern African component of the Mining, Minerals and Sustainable Development Project.
- ▶ Reinie Meyer was elected president of the Geological Society of South Africa.
- ▶ Erla Harden was nominated Chromatographer of the Year.
- ▶ Rodney Milford was appointed to the Construction Industry Development Board (CIDB).
- ▶ Adi Paterson was re-elected President of the Associated Scientific and Technical Societies of South Africa.

Chairman's Review

With the emergence of the new challenges of the 21st century, the role of the CSIR as a prime science and technology institution in South Africa is increasingly important. Worldwide industrial research organisations are expected to provide new solutions and innovations to promote economic development to ensure sustainability of industries. President Mbeki's increased engagement in Africa also extends the role of the CSIR on our continent.

Our environment requires a robust, responsive strategy in relation to opportunities and challenges. The CSIR has five focused, strategic priorities which are the basis of our operational strategy and the creation of value for our clients, partners and stakeholders.

Leading solutions provider

The CSIR is a leading knowledge and technology solutions provider. However, scale and scope are critical in the knowledge economy. This has resulted in the CSIR adopting a "Team South Africa" approach to build alliances and leverage its resources with complementary organisations. The most important development in this regard is the strategic alliance the CSIR has entered into with the University of Pretoria (UP), South Africa's largest science and technology university.

Encouraging progress has been made over the past year with the UP/CSIR alliance, which is branded as the Southern Education and Research Alliance (SERA). Now formally established, SERA will seek to add value to, and complement the two organisations through exploiting synergies and reducing overlaps and potential conflicts.

Allied to this initiative is the creation of The Innovation Hub

as a joint venture between SERA and the Gauteng Provincial Government's Blue IQ initiative. The establishment of The Innovation Hub is creating a unique space where high-tech entrepreneurs, world-class business, education, research and venture capital will meet, network and prosper. In the information age, small, nimble innovative businesses will become a key economic driver, and the Hub will act as their business incubator, supporting their creation and growth. The positioning of this world-class facility between the UP and the CSIR will provide the Hub with the critical ingredients to help make Gauteng the "Smart Province" and create a gateway for South Africa to the international world of technology.

Sustainable growth

The CSIR is an externally focused knowledge-intensive technology organisation, and must achieve real growth in its external sales to ensure its financial sustainability. As stated in our strategic priorities, our contribution is achieved within the context of the CSIR's mandate to support sustainable development and economic growth in South Africa.

The CSIR's efforts to go beyond "business as usual" are most clearly reflected in its innovative business development strategies. These include forging alliances and partnerships;



Roger Jardine – Chief Executive Officer: Kagiso Media

exploiting new opportunities such as those presented through e-marketing/commerce; an increased emphasis on commercialisation involving the creation of "spin-off" companies; and the accelerated evolution of the CSIR to a knowledge intensive technology organisation (KITO). These strategies have ensured the success of the CSIR in developing external revenue to above 60% of its total income.

While the CSIR's focus is primarily local, it is also active in the rest of Africa, in particular in the South African Development Community, and it cannot afford to neglect the international markets. The CSIR's market share in the international arena has been growing over recent years and now represents 13% of its external income. A review of its international activities during 2000 highlighted the excellent start the CSIR had made towards participation in international markets and underscored the importance of these markets to the CSIR's fiscal health.

Empowering our people

In the knowledge intensive economy of today, it is the people of the CSIR who have given the organisation its cutting edge. In line with the challenges of the new South Africa, a strategic priority of the CSIR is to achieve transformation. It fully recognises that true empowerment is achieved through

creating an enabling environment in which to address the discrepancies of the past. The extent to which shared goals have become the driving force in the organisation is testimony to the willingness of the CSIR community to deal proactively with transformation. This is evident in the positive shift in the transformation demographics. The past year saw a 23% growth in the number of Black professionals in senior technical and management positions.

Innovation, Development and National Imperatives

The CSIR's commitment to sustainable development and economic growth is evident through a wide range of its activities, from stimulating small businesses in indigenous foods, to providing leading edge mapping systems in anti-hijacking initiatives. The CSIR's investment in this area is guided by both the objectives of the National System of Innovation, and the priorities of the National Imperatives. These include combating HIV/AIDS; crime prevention; job creation; rural development; national human resources development; urban renewal and rural integration. In this respect the CSIR is working both individually and in concert with its sister Science Councils



Prof Anton Eberhard
IIRR Management Programme
Graduate School of Business
UCT



Dr Dhiro Gihwala
Dean: Faculty of Science
Peninsula Technikon



Dr Zavareh Rustomjee
Special Advisor to the Minister
Department of Trade
and Industry



Mr Kymus Ginwala
Founder and former President:
Northern Research and Energy
Corporation, Boston, USA



Ms Nobusi Shikwane
Group Executive:
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Ms Joan Joffe
Group Executive:
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**Dr Nthoana
Tau-Mzamane**
Deputy Director-General:
Science and Technology
Department of Arts, Culture,
Science and Technology



Ms Anne Letsebe
Deputy Director-General:
Office of the President and
Head of the Cabinet Office



Mr Eugène van As
Executive Chairman:
Sappi Limited

The Information Society

The CSIR is accelerating its evolution to a knowledge intensive technology organisation and is working towards an equitable information society. To achieve this, the organisation utilises information and communication technology to support education, promote social development and prevent marginalisation. The organisation's efforts in this regard are widely acknowledged, as in the case of the Manguzi Wireless Internet project, a winner in the Equal Access category of the Stockholm Challenge 2000. The project aimed to provide internet access, e-mail and learning resources to a very remote area of KwaZulu Natal by utilising a unique combination of radio and satellite broadcasting technologies.

In Conclusion

I would like to pay a special tribute to Dr Geoff Garrett, the seventh president of the CSIR who left at the end of last year to take up the post of chief executive of the CSIRO, Australia's premier science and technology organisation. His leadership skills were widely acknowledged, and garnered both himself and the CSIR many prestigious awards. On behalf of the CSIR, I wish him well in his new role and thank him for his dedication and unfailing support

In closing, I would like to thank the CSIR management and staff, and my fellow Board members for their support, dedication and exceptional work over the past year. I am truly honoured to be part of such a team. In the difficult market conditions of 2000/2001, the CSIR reported good year end results, growing its external contract income by 14% compared to last year. Backed by the solid performance of the past year, the CSIR is ready to meet the challenges of the new financial year,

Mr Roger Jardine
Chairman

Report by the Auditor-General

Report of the Auditor-General on the group financial statements of the Council for Scientific and Industrial Research for the year ended 31 March 2001.

1. Audit assignment

The group financial statements as set out on pages 14 to 55, for the year ended 31 March 2001, have been audited in terms of section 188 of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996), read with sections 3 and 5 of the Auditor-General Act, 1995 (Act No. 12 of 1995) and section 14(1) of the Scientific Research Council Act, 1988 (Act No. 46 of 1988). These financial statements, the maintenance of effective control measures and compliance with relevant laws and regulations are the responsibility of the board of the Council for Scientific and Industrial Research (CSIR). My responsibility is to express an opinion on these financial statements and the compliance with relevant laws and regulations, applicable to financial matters, based on the audit.

2. Regularity audit

2.1 Nature and scope

2.1.1 Financial audit

The audit was conducted in accordance with generally accepted government auditing standards which incorporate generally accepted auditing standards. These standards require the audit to be planned and performed to obtain reasonable assurance that the financial statements are free of material misstatement. An audit includes:

- examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements;
- assessing the accounting principles used and significant estimates made by management; and
- evaluating the overall financial statement presentation.

I believe that the audit provides a reasonable basis for my opinion.

2.1.2 Compliance audit

Furthermore, an audit includes an examination, on a test basis, of evidence supporting compliance in all material respects with the relevant laws and regulations which came to my attention and are applicable to financial matters. I believe that the audit provides a reasonable basis for my opinion.

2.2 Audit opinion

2.2.1 Financial audit

In my opinion, the group financial statements fairly present, in all material respects, the financial position of the CSIR and the group at 31 March 2001 and the results of its operations and cash flows for the year then ended in accordance with generally accepted accounting practice.

In my opinion, the performance information furnished in terms of section 55(2)(a) of the Public Finance Management Act, 1999 (Act No. 1 of 1999) fairly presents, in all material respects, the performance of the CSIR for the year ended 31 March 2001 against predetermined objectives and on a basis consistent with that of the preceding year.

2.2.2 Compliance audit

Based on the audit work performed, nothing has come to my attention that causes me to believe that material non-compliance with laws and regulations, applicable to financial matters, has occurred.

3. Emphasis on matter

Without qualifying the audit opinion expressed above, attention is drawn to the following matters:

3.1 Subsidiaries excluded from the consolidated financial statements

Quality Electronics Development (Pty) Ltd was not consolidated, as the board of the CSIR was of the opinion that it would be of no real value to the users of the financial statements in view of the insignificant amounts involved. I concur with this decision.

3.2 Arbitration

I draw attention to note 23 of the financial statements. The arbitrator's ruling on the allocation of costs is presently uncertain.

4. Appreciation

The assistance rendered by the staff of the CSIR during the audit is sincerely appreciated.

H van Zyl – for Auditor-General , Pretoria, 19/06/2001

Corporate Governance

Governance Principles

Framework

Corporate Governance, formally, is concerned with the organisational arrangements that have been put in place to provide an appropriate set of checks and balances within which the stewards of the organisation operate. The objective is to ensure that those to whom the stakeholders entrust the direction and success of the organisation act in the best interest of these stakeholders. It is about leadership with integrity, responsibility and transparency.

The CSIR is committed to principles and practices that will provide our stakeholders with the assurance that the organisation is managed soundly and ethically. We have established a management model which governs and provides guidance for the way that all employees, not just the leaders, interact with our various stakeholder groups.

The underpinning principles of the CSIR's corporate governance rest upon the three cornerstones of an effective and efficient organisation, namely day-to-day management processes, a long-term strategic planning process and effective transformation processes. These processes are supported by CSIR systems which are used to plan, execute, monitor and control the strategic and operational domains of the organisation. The supporting infrastructure and its evolution are documented in our management model which is regularly reviewed and updated.

The CSIR Board and the Executive Board believe that the organisation has applied and complied with the principles incorporated in the Code of Corporate Practices and Conduct as set out in the King Report.

Financial statements

The CSIR Board and the Executive Board are responsible for the preparation and integrity of the annual financial statements and related financial information included in this Annual Report. The financial statements are prepared in accordance with generally accepted accounting practice. The external auditors are responsible for independently

auditing and reporting on the financial statements in conformity with generally accepted auditing standards.

Risk management

In the case of risk management, the CSIR Board retains control through the final review of key risk matters affecting the organisation. The focus of risk management in the CSIR is on identifying, assessing, managing and monitoring all known forms of risk across all business units. CSIR systems have been put in place to review aspects of economy, efficiency and effectiveness. Management is involved in a continuous process of improving procedures to ensure effective mechanisms for identifying and monitoring risks, such as skills, technology, reputation, Parliamentary Grant, legislation compliance, professional liability and general operating risks. Equal consideration is given to matters of safety, health and the environment as to the more obvious risks such as financial risks.

Operating risk management

The CSIR endeavours to minimise operating risk by ensuring that the appropriate infrastructure, controls, systems and people are in place throughout its business units. Key practices employed in managing operating risk include segregation of duties, transaction approval frameworks, financial and management reporting and monitoring of metrics which are designed to highlight positive or negative performance across a broad range of key performance areas.

Financial risk management

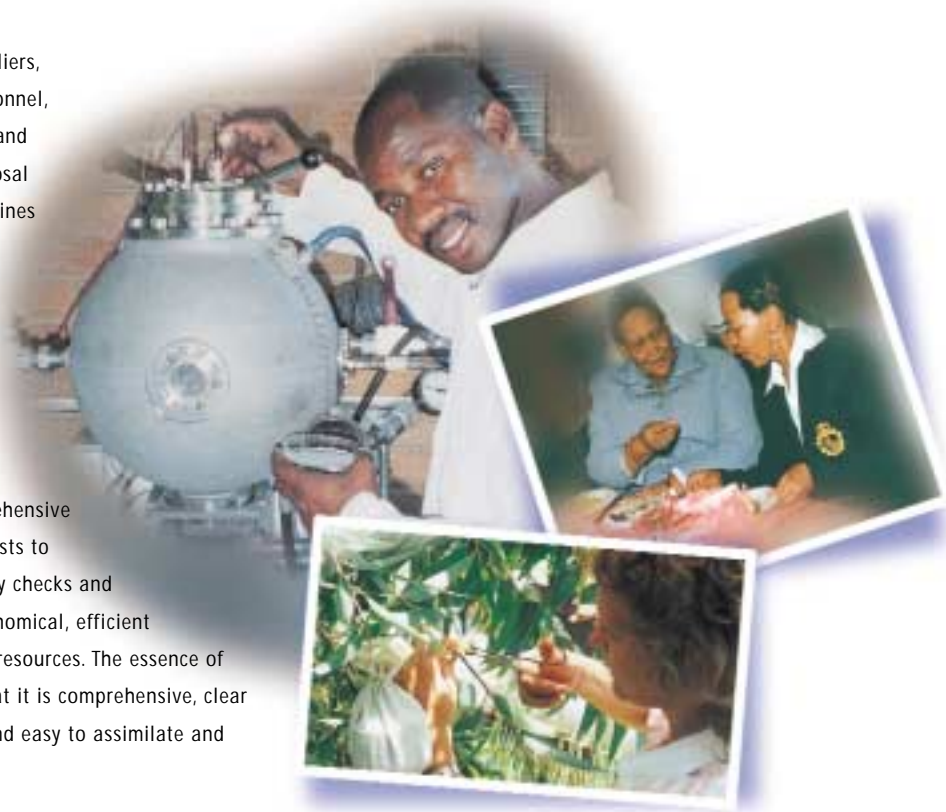
Financial risks are managed within predetermined procedures and constraints as identified and detailed in the various CSIR policies and the setting of annual goals and objectives. Compliance is measured through regular reporting against the business goals, internal audit checks and external audit verification.

Approval framework

The CSIR Board has adopted an approval framework which governs the authorisation processes in the CSIR. It deals with, inter alia, the construction of strategic plans, development of business plans and budgets, appointment of bankers

and key service suppliers, appointment of personnel, approval of salaries and acquisition and disposal of assets. It also defines authority levels in relation to organisational position.

Appropriate controls exist to ensure compliance with this framework. A comprehensive set of procedures exists to provide the necessary checks and balances for the economical, efficient and effective use of resources. The essence of this framework is that it is comprehensive, clear and unambiguous, and easy to assimilate and internalise.



Internal control

The CSIR Board has ultimate responsibility for the system of internal controls. The key controls required to ensure the integrity and reliability of financial statements have been identified in conjunction with the internal and external auditors. Close co-operation between the external auditors and CSIR Corporate auditors ensures adequate and efficient audit reviews of the proper functioning of these key controls.

The annual audit plan is based on the key financial risks to the organisation. The work programme that gives effect to the plan is reviewed by the Audit Committee at their November meeting and ratified or modified, as necessary.

Employee participation

The CSIR strongly encourages effective and modern workplace practices and relationships to foster employee participation and work process involvement as a key practice at all levels in the organisation. Employee participation happens, for example, through self-directed teams, transformation action groups, union representation, a leadership development programme, technical and strategic focus groups and task teams, and employee satisfaction measurement processes.

Charter of Ethics and Organisational Values

The CSIR Board and Executive Board have approved and adopted a Charter of Ethics which reflects its commitment to a policy of fair dealing and integrity in conducting its business. The Charter, which incorporates the CSIR's Code of

Conduct and links closely to its set of values, requires all employees to maintain the highest ethical standard, ensuring that business practices are conducted in a manner which, in all reasonable circumstances, is beyond reproach. Monitoring ethical behaviour is devolved to business unit level and transgressions are addressed by means of procedures detailed in the CSIR's Conditions of Service. Our annual employee survey includes, by design, questions formulated to determine the organisational climate as it relates to values and ethics. The results from the survey are used to inform and adapt as necessary, internal processes linked to these issues, such as the ongoing values entrenchment process.

Safety, Occupational Health and Environmental Management (SHE)

As a corporate citizen, the CSIR acknowledges its obligation to its employees and the communities it serves to conform in its operations to safety, health and environmental laws and the internationally accepted standards and practices. Its commitment to provide a safe and healthy workplace for its employees is demonstrated by the CSIR's achievement of a 4-star rating, co-audited by the National Occupational Safety Association (NOSA).

In 1997, the CSIR commenced with the implementation of the internationally recognised Environmental Management System, ISO 14001, which included the development, publication and adoption in 1998 of an Environmental Policy for application throughout the organisation at all its sites.

General

The CSIR acknowledges that systems of corporate governance should be continuously reviewed to ensure that they are sound and consistent with world-class standards in a way that is relevant to the business of the CSIR and the evolution thereof.

We will continue to comply with all major recommendations of the Code of Corporate Practices and Conduct as set out in the King Report on Corporate Governance.

Governance Structures

CSIR Board

The CSIR Board approves the mission, strategy, goals, operating policies and priorities for the organisation and monitors compliance with policies and achievement against objectives.

CSIR Board members are appointed for a term of three years by the Minister of Trade and Industry. With the exception of the President of the CSIR, all the members of the CSIR Board are non-executive. CSIR Board members are actively involved in, and bring independent judgement to bear on Board deliberations and decisions. A formal system is in place to evaluate Board member participation and performance. The CSIR Board, whose current number of members meets the statutory minimum requirement, meets quarterly. For the year under review, the Board met on 13 June, 28 August, 15 November 2000 and 21 February 2001. The CSIR Board has the following committees: the Human Resources and Remuneration Committee, the Audit Committee, the Mergers, Acquisitions and Commercialisation Committee, the Science and Technology Committee and the Joint Strategic Governance Committee of the CSIR Board and the Council of the University of Pretoria (see Table on page 17). These committees comprise members of the CSIR Board and CSIR Vice-Presidents ex-officio. The members are selected according to the skills sets required for the committees to fulfill their functions.

An important initiative is a formal and structured Board induction process designed to give new Board members an understanding of the business and the risks associated therewith.



Executive Management Board

The Executive Management Board has executive responsibility for the CSIR and consists of the Chief Executive Officer (CEO) and five Executive members responsible for the portfolios of Finance and Commercialisation; Human Resources; Policy and Technology for Development; Information; and Business Development. The Executive Board meets biweekly.

CSIR Management Board

The CSIR Management Board is responsible for strategy implementation and managing the day-to-day affairs of the CSIR and its business units in accordance with the policies and objectives approved by the CSIR Board. This Board comprises the members of the Executive Board, together with the eight business unit directors (profiled in Technology Impact). The Management Board meets twice monthly.

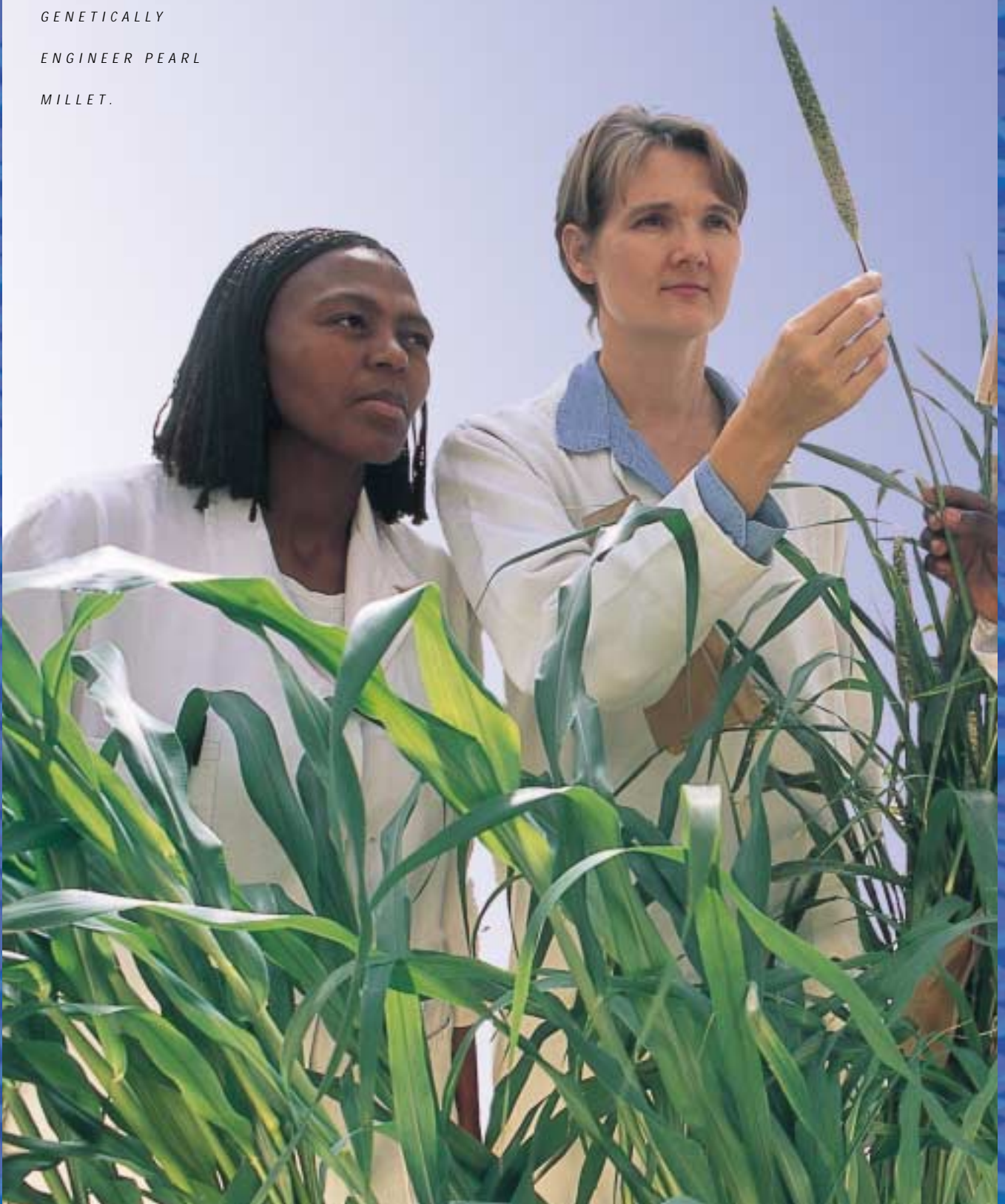
The Chief Executive Officer of the CSIR is the President, whose business address is given on the inside cover of this report.

The coming into effect of the Public Finance Management Act, Act No. 1 of 1999, on 1 April 2000 has necessitated certain responses by the CSIR, which have impacted on governance matters in terms of the regulation of financial management in the public sector.

CSIR Board Committees 2000/2001

Committee	Members	Meetings	Purpose
Audit	Mr Eugène van As (Chairman) Dr Dhiro Gihwala Ms Nobusi Shikwane Prof Anton Eberhard Dr Geoff Garrett (until December 2000) Mr Albert Jordaan (ex-officio)	8.6.2000 23.11.2000	Deals with all matters prescribed by the regulations issued in terms of the Reporting by Public Finance Management Act, Act 1 of 1999. Controls the final reviews of the key risk matters affecting the organisation. Determines the scope, and reviews and approves the annual audit plan and the work of the CSIR Corporate auditors. Acts in an unfettered way to understand the dynamics and performance of the organisation with no artificial boundaries created by protocol.
Human Resources and Remuneration	Mr Roger Jardine (Chairman) Ms Nobusi Shikwane Ms Joan Joffe Ms Anne Letsebe Dr Geoff Garrett (until December 2000) Mr Albert Jordaan (from January 2001) Dr Namane Magau (ex-officio)	26.5.2000 24.8.2000 2.11.2000	Provides the vehicle for the CSIR Board to influence and control human resources and remuneration in the organisation. Determines human resource policy and strategy. Approves remuneration changes and bonus payments.
Mergers, Acquisitions and Commercialisation	Mr Roger Jardine (Chairman) Ms Joan Joffe Dr Zavareh Rustomjee Dr Nthoana Tau-Mzamane Dr Geoff Garrett (until December 2000) Mr Albert Jordaan (ex-officio) Dr Anthos Yannakou (ex-officio)	28.8.2000	Reviews the strategic viability of any proposed merger or acquisition of significance. Reviews the principles involved in contractual arrangements. Advises on negotiating processes in merger, acquisition or commercialisation processes. Makes appropriate recommendations to the CSIR Board on whether the relevant acquisition or merger is in the interest of the stakeholders.
Science and Technology	Prof Anton Eberhard (Chairman) Dr Dhiro Gihwala Dr Nthoana Tau-Mzamane Dr Geoff Garrett (until December 2000) Dr Adi Paterson (ex-officio) (until September 2000) Dr Anthos Yannakou (ex-officio)	31.7.2000 27.9.2000 15.2.2001	Provides guidance and advice on the long-term trajectory and composition of the CSIR's science and technology portfolio in the context of the needs of the country. Ensures that key innovation and research processes are conducted effectively and benchmarked against international best practice, and that research outputs, organisational climate and credibility remain congruent with the role and objectives of the institution.
Joint Strategic Governance Committee of the CSIR Board and the Council of the University of Pretoria (UP)	Mr Ben Alberts (Co-Chair) Mr Eugène van As (Co-Chair) Dr Geoff Garrett (until December 2000) Mr Albert Jordaan (from January 2001) Ms Anne Letsebe Dr Zavareh Rustomjee Dr Adi Paterson (ex-officio)	30.5.2000 13.11.2000	Meets to approve and oversee the effective implementation of the joint CSIR/UP strategy and business plan. The primary roles are to act as a facilitator and sounding board to assist senior management of both institutions in carrying out approved plans; to undertake a "watching brief" on behalf of the respective constituencies; to assess progress against plans and report back to constituencies; and to ensure effective communication with the governance structures of the respective institutions.

*THE CSIR HAS
ACHIEVED A WORLD
FIRST IN THE
DEVELOPMENT OF
TECHNIQUES TO
GENETICALLY
ENGINEER PEARL
MILLET.*



Executive Report

On behalf of the CSIR Board, we have pleasure in submitting to Parliament, through the Minister of Trade and Industry, this report and the audited financial statements of the CSIR for the year ended 31 March 2001. In the opinion of the CSIR Board, who fulfil the role of directors as envisaged by the Companies Act, Act 61 of 1973, the financial statements fairly reflect the financial position of the CSIR as at 31 March 2001 and the results of its operations for the year then ended.

Introduction

Knowledge intensive technology organisations such as ours have increasing challenges and opportunities worldwide. We strive to remain relevant and effective in an environment characterised by global competition. The CSIR plays an important role in the development and upliftment of communities within South Africa, and is increasingly a relevant, impactful and sustainable contract research organisation. This annual report provides us with the opportunity to review our contribution and highlights our achievements during the 2000/2001 year.

Acts and Legislation

As a statutory research council, established by Government, the CSIR is governed by the Scientific Research Council Act (Act 46 of 1988, as amended by Act 71 of 1990). We were listed as a Public Entity in terms of the Public Finance Management Act, Act 1 of 1999, as amended by Act 29 of 1999.

Our mandate

The CSIR's Act records our mandate as follows: "In the national interest, the CSIR, through directed and multi-disciplinary research and technological innovation, should foster industrial and scientific development, either by itself, or in partnership with public and private sector institutions, to contribute to the improvement of the quality of life of the people of South Africa".

Function and objectives

The nature of our business

Within the framework of our mandate, we source and develop knowledge and technology that enables us to provide technology solutions and information, establish ventures and license intellectual property. We support sustainable development and economic growth in the context of our country's national priorities and global challenges.



Standing left to right:

Mr Neo Moikangoa
Executive Vice President
Policy and Technology
for Development

Dr Adi Paterson
Executive Vice President
and Chief Information
Officer

Dr Anthos Yannakou
Executive Vice President
Business Development

Seated left to right:

Mr Albert Jordaan
Acting President and CEO
and Executive Vice
President Finance and
Commercialisation

Dr Namane Magau
Executive Vice President
Human Resources



From left to right –

Directors of:

icomtek

Dr Bruce Foulis
(Acting Director)

Transportek

Mr Phil Hendricks

Miningtek

Dr Güner Gürtunca

Bio/Chemtek

Dr Petro Terblanche

Environmentek

Mrs Tina Eboka

Defencetek

Mr Johann Ahlers

M&Mtek

Dr Hoffman Maree

Boutek

Mr Neo Moikangoa
(see page 19)

The focus of our Parliamentary Grant investment remains centred around the key initiatives of the National System of Innovation, and the complementary priorities of the government.

The essence of our strategy

The CSIR's vision, mission and values provide us with a solid foundation as we head into the new millennium. A review of our mission and values by the CSIR Board established that they remain relevant and robust for the years ahead. Our mission acknowledges that global challenges have become our challenges, that relationships with our partners, clients and stakeholders are integral to our success, and that licensing intellectual property and establishing ventures are the key areas of future growth.

The CSIR's strategy is to accelerate our evolution to a knowledge intensive technology organisation which contributes to the African Renaissance and is both internationally competitive and regionally relevant.

Our strategic priorities – 2000 to 2003

South Africa's national imperatives and global challenges provide the macro-strategic framework within which we conduct our business and achieve our business goals. Using a series of scenarios relevant to our knowledge-intensive business and the South African environment, we have identified five strategic priorities.

- ▶ Positioning the CSIR as a leading knowledge and technology solutions provider through our strategic alliance with the University of Pretoria - our goal is to create a world class alliance that can compete globally in science and technology; offer opportunities that will attract and retain the best people; reinforce and support the objectives of the National System of Innovation; and create an internationally effective flagship for South Africa in the new millennium.
- ▶ Business growth through focused business development locally, regionally and internationally - we will continue to grow the CSIR's external income in all the domains of our external business, with tight cost control underpinning our ongoing financial sustainability, and with increasing

emphasis on the strategic management of innovation.

- ▶ CSIR people: achieving transformation with excellence - our focus is on creating an enabling environment and agile system to attract and retain talent, and to grow our culture of innovation. This includes providing career development opportunities, the continuous enrichment of our technical competences, developing the ability to work across boundaries, building leadership skills and developing exceptional client relationship-building and partnering skills. Correspondingly, we strive for substantially enhanced demographic representivity, particularly amongst professional staff.
- ▶ Enhanced impact on South Africa's sustainable development and the National Imperatives - the focus of our Technology for Development (TFD) activities is on quality delivery and an enhanced track record in the packaging and transfer of technology into the development domain. In particular, and linked with the efforts of our sister Science Councils, we are seeking to respond to the National Imperatives of job creation, crime prevention, HIV/AIDS, rural development, urban renewal, human resource development, and regional integration.
- ▶ Leveraging the CSIR's intellectual capital and knowledge resources through harnessing the power of information and communications technology - as these technological forces fundamentally change the dynamics of business, our goal is to utilize the best approaches to knowledge management to grow our contribution in information and communications technology, as a fast follower globally and a leader in the information society in South Africa and the continent.

Our operational priorities 2000/2001

The CSIR's strategy translates into operational priorities against which our performance, both quantitatively and qualitatively, can be measured. These priorities in turn provide our business goals.

For this reporting period our specific business goals have been to grow our business, embed quality in everything we do, create an increasingly innovative and rewarding working environment for our people, make an impact on sustainable development, and harness the information revolution.

Performance against our goals

The CSIR's performance is summarised in the Table on page 22 for easy reference. More detailed information on the achievements and progress made in the respective goals is provided in the following section.

Goal 1: Growing our Business

During a year in which conditions remained competitive, the CSIR exceeded its targeted external operating income of R450,4 million by R33,7 million, reflecting a year-on-year growth of 13,5%. Correspondingly 62,4% (2000: 58,4%) of our total income is now derived from non-Parliamentary Grant sources against a target of 60,7%. The most significant year-on-year growth (14,2%) was achieved in the private sector market - itself an indicator of quality performance and delivery.

In addition, good growth has occurred in provincial and local government sales, and, despite defence spending having declined in real terms over the past five years, the growth of 12,1% in the safety and security sector is noteworthy.

Achieving sustainable real growth in external income, at an acceptable level of margin, continues to be a critical requirement. A number of growth initiatives for improved market penetration and development in the private and public sectors, both locally and internationally, have been implemented through focused action plans.

In the business domain, these included the restructuring and strengthening of our information and communication technology competency, and the incorporation of our textile technology competency into our manufacturing and materials business unit, which will better service the large/formal as well as small and medium manufacturing sectors.

In the Government sector, which includes all levels of government as well as parastatals, an important development last year was improved alignment with the industrial, competitive and job creation activities of the Department of Trade and Industry. The CSIR and the Department of Trade and Industry signed an Institutional Framework for co-operation, which is aimed at aligning and enhancing interaction in support of national priorities.

Financial performance overview

The total income for the year of R790,9 million exceeded our targeted income of R754,1 million. The Parliamentary Grant received was 4,6% lower than in 1999/2000.

We achieved a net margin of R8,9 million or 1,13% of income (1999/2000: R11 million or 1,5% of income) against a targeted R8,5 million (1,13% of income). Although the CSIR has traditionally not sought high margins, it remains an important measure for sustainability and positive cash flow.

Cash flow generated from operating activities for the year being reported on was R72,8 million (2000: R53,5 million). This allowed an increase in cash and cash equivalent holdings to R79,5 million (2000: R55,4 million) against a target of R10,1 million.

Internationally active

The CSIR's international income has grown to R63,3 million in 2000/01 (1999/2000: R56,3 million) or 13,1% (1999/2000: 13,2%) of total contract income, with the major sources of income from Europe, North America and SADC, with the CSIR's operations in the USA and UK performing well. Growth of 1,0% beyond target was achieved, which reflects an increase of 12,3% over the previous year (1999/2000: 38,5%), with a five-year compound growth of 24,2%. Our international strategy is to position ourselves as a reputable provider of technology solutions, through establishing long-term relationships with multinational companies and knowledge-intensive organisations.

A review of the CSIR's international business activities during the year under review recommended an expansion of activities outside South Africa in a focused way.

We continued to build business relationships with a number of key international organisations such as the TNO (Netherlands), Fraunhofer-Gesellschaft (Germany), CNRS (France), and CSIR-India.

Active in the region

As a key provider of technology solutions in SADC, we focus on regional linkages through networks and alliances, internationally financed projects and regional business development. Examples are highlighted in the companion document: Technology Impact.

We were again contracted to act as the Africa regional focal point for the World Association of Industrial and Technological Research Organisations (WAITRO) to manage the administrative activities of WAITRO's African member organisations.

GOALS, TARGETS AND PERFORMANCE RESULTS IN OVERVIEW

GOAL	KEY PERFORMANCE INDICATORS	TARGET	PERFORMANCE RESULTS
GOAL 1: GROWING OUR BUSINESS THROUGH FOCUSED BUSINESS DEVELOPMENT LOCALLY, INTERNATIONALLY	Increase total income	0,6%	Exceeded (5,1%)
	Increase total external contract income	5,6%	Exceeded (13,5%)
	- Private sector growth	3,0%	Exceeded (14,2%)
	- Public sector growth	16,9%	Not met (13,5%)
	- National safety and security	-7,0%	Exceeded (12,1%)
	- International sector growth	11,7%	Exceeded (12,3%)
	Net margin	R8,5m	Achieved (R8,9m)
	Cash & cash equivalent holdings	R10,1m	Exceeded (R79,5m)
	Ratio of external earnings to total income	60,7%	Achieved (62,4%)
	Commercialisation		
- Improve internal processes and implement new joint ventures with job creation as an outcome	Identify and implement opportunities with University of Pretoria	Achieved	
- Develop mechanisms to promote the transfer of technologies to the appropriate industrial sectors	Review of Intellectual Property Management	Achieved	
GOAL 2: EMBEDDING QUALITY THROUGH EVERYTHING WE DO	Customer satisfaction	CSIR objective 75%	Exceeded (81,4%)
	International Peer Reviews 2000/2001		
	- Building and Construction technology	Performance at least comparable to industry in core activities and international norms	All three reviews completed Results indicate good progress made
	- Water, Environment and Forestry technology		
	- International business activities		
	Peer recognition	Participation on an ongoing basis in relevant national awards and competitions	Winner of the Presidential Award for Export Achievement in the R&D category (M&Mtek) NSTF* individual award, Sadi Motsuenyane (TFD)
	Excellence assessment	Participation on an ongoing basis in the South African Excellence Foundation's (SAEF) assessment process	Continued in founding role to provide leadership and resources to SAEF
GOAL 3: CSIR PEOPLE: TRANSFORMATION EXCELLENCE	Safety, Health and Environment		
	- SHE* audits	Rate of 85%	Exceeded (89,6%)
	- Disabling Injury Frequency Rate	Less than 1 per annum	Achieved (0,4)
	- ISO 14001	Obtain and retain certification for all CSIR business and corporate units by 2001	Nine business units certified (Six still to be certified)
	Staff satisfaction	CSIR objective 75%	Good progress (73,7%)
	Staff Diversity		
	- Total staff complement	2 797	Good progress (2 534)
	- Black professional staff	24,4% of total prof staff	Good progress (22,9%)
	- Female professional staff	33,6% of total prof staff	Good progress (32,0%)
	- Total black staff	38,9% of total staff	Exceeded (39,3%)
- Total female staff	39,5% of total staff	Achieved (39,5%)	
Bursaries and internships			
- Black bursars	75% of total bursars	Good progress (73,3%)	
- Female bursars	40% of total bursars	Good progress (38,8%)	
- Interns	80% black, 50% female	Exceeded (85,8% black, 60,8% female)	
Training			
- Staff development	Enhance rapid skills & competence development	Good progress (747 staff attended focused courses) up till March 31 through CILLA*	
- Adult Basic Education	Five year target set in 1996 to equip 140 less educated employees with basic reading, writing and arithmetic skills	Achieved	
GOAL 4: ENHANCED IMPACT ON SOUTH AFRICA'S SUSTAINABLE DEVELOPMENT AND PRESIDENTIAL IMPERATIVES	Active and relevant involvement in national priorities	- Invest strategically in rural development and implement poverty alleviation projects on behalf of government - Ongoing support for the National SMME support programmes - Help to create a public understanding of S&T	Implementing poverty alleviation and rural development projects in most provinces Actively supporting national SMME support programmes through working with Namac, Ntsika and Khula, DTI and DACST Participated in national science festivals and journalism award
	Active and relevant involvement in the National Imperatives (NI) programme	Actively lead, participate in and support the Science Councils' activities in the NIs	Good progress in CSIR's crime prevention, rural development, SMME development (job creation), poverty alleviation and urban renewal programmes Focus area for attention - Science Councils' Collaboration. CSIR is lead agency for Crime Prevention

**GOAL 5:
HARNESSING THE
INFORMATION
REVOLUTION**

Development of strategic framework for IT activities

- Architecture standards policy
- Policy and procedures to align activities across the CSIR
- Lowering of total cost of ownership of internal IT platforms

Achieved

Information protection and Acceptable Policy published
Strong compliance in standardisation of hardware and software resulted in faster response time to problem solving and lower overall cost of LAN support

Fostering a strong IT culture
Managing of strategic IT initiatives

- User training
- Co-ordinate knowledge management
- Develop and pilot a generic set of IT measures area for attention

Trained 2 300 employees
Organisation-wide document management system mandated
Pilot achieved

Effective deployment of web technology as commercial vehicle and key management communication tool

- Set web standards and strategies to encourage effective use of intra/internet
- Identify e-commerce applicability to CSIR business
- Refinement of CSIR Management Model

360° reviews of intra/internet sites encourages alignment with web standards and image
E-commerce site launched

Continued refinement of the investment of our Parliamentary Grant to ensure IT richness of development offerings thrusts and offerings

- Enhance IPT*
- Track IT-rich investment

Web version due for release shortly
Overall investment is increasing

* NSTF: National Science & Technology Forum SHE: Safety, Health and Environment CILLA: CSIR Innovation Leadership and Learning Academy IPT: Investment Process Tool

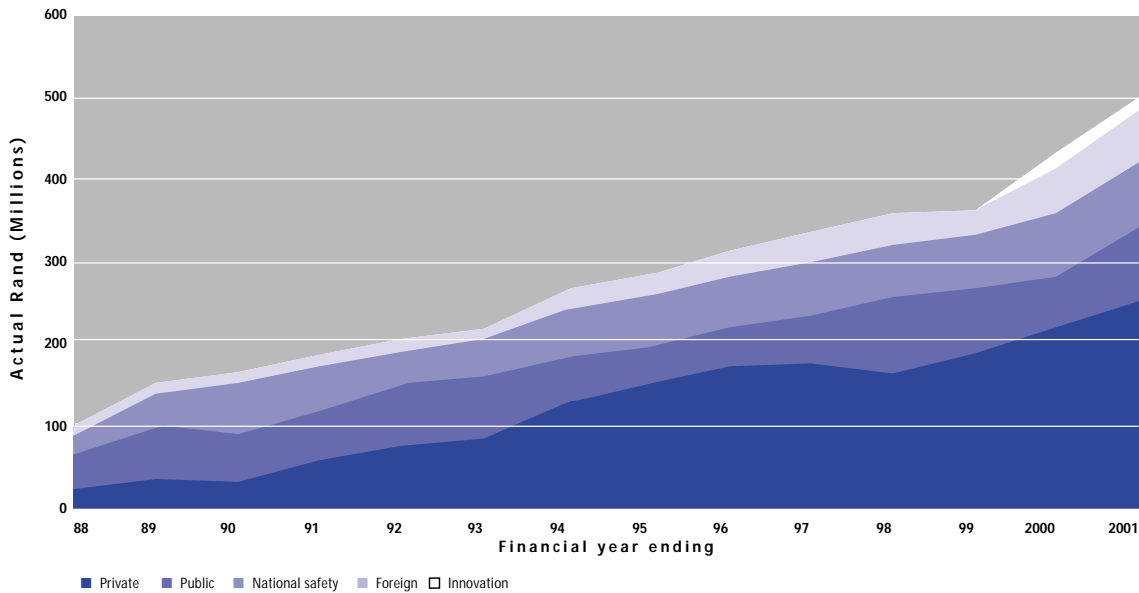
Competitive funding mechanisms and integrated projects

The CSIR networks extensively to optimize opportunities for growth made available through competitive funding mechanisms. These include the Innovation Fund and the Poverty Alleviation Projects introduced by the Department of Arts, Culture, Science and Technology; a variety of funding schemes of the Department of Trade and Industry and others administered by the National Research Foundation, such as

THRIP (Technology and Human Resources for Industry Programme) and the Indigenous Knowledge Systems Fund.

During the year under review, the CSIR led, or acted as a consortium partner in 24 (2000:17) Innovation Fund projects and completed a further two. A major collaborative agreement was signed, focusing on the challenges facing mining operations (Futuremine) with THRIP being a significant funder together with industry and the CSIR.

SOURCES OF EXTERNAL CONTRACT INCOME



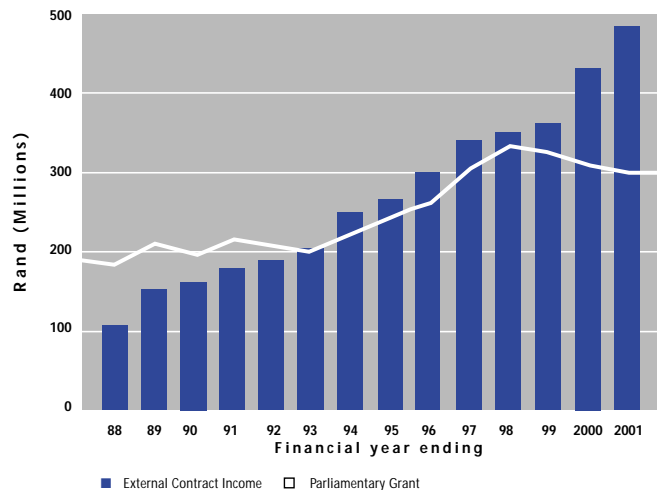
CUSTOMER SATISFACTION 1 April 2000 - 31 March 2001

	ON BRIEF	ON BUDGET	ON TIME	QUALITY	OVERALL
CSIR OVERALL	84,9%	75,5%	81,9%	82,5%	81,4%

External Contract Income per sector 31 March 2001	5 year compound growth	Actual 2001 R'000	Target 2001 R'000	2000 R'000	1999 R'000	1998 R'000	1997 R'000
External contract income	10,0%	484 031	450 366	426 601	356 339	347 982	334 213
Annual growth		13,5%	5,6%	19,7%	2,4%	4,1%	11,3%
Private sector	7,5%	244 811	220 814	214 445	183 983	173 582	180 601
Annual growth		14,2%	3,0%	16,6%	6,0%	(3,9%)	5,7%
Public sector	17,2%	103 993	106 936	91 628	74 965	76 223	46 567
Annual growth		13,5%	16,7%	22,2%	(1,7%)	63,7%	(1,1%)
National safety and security sector	3,4%	71 976	59 712	64 213	56 729	64 967	78 247
Annual growth		12,1%	(7,0%)	13,2%	(12,7%)	(17,0%)	28,4%
International sector (including Africa)	24,2%	63 251	62 904	56 315	40 662	33 210	28 798
Annual growth		12,3%	11,7%	38,5%	22,4%	15,3%	34,7%

Financial Indicators 31 March 2001	Actual 2001 R'000	Target 2001 R'000	Actual 2000 R'000
Total income (excl investment income)	790 916	754 135	750 549
Growth	5,4%	0,7%	9,1%
Parliamentary grant	301 849	299 867	317 334
Parliamentary grant received	301 111	299 867	315 649
Less: Grant received for projects started before year end but not completed	(3 743)	-	(4 481)
Add: Grant recognised as income for prior year projects completed in this year	4 481	-	6 166
Growth	(4,9%)	(5,5%)	(2,5%)
External Operating income (incl Contract income, royalties & other income)	489 067	454 268	433 215
Growth	12,9%	4,9%	19,9%
Expenditure	794 712	754 132	750 040
Growth	6,0%	0,8%	8,8%
Net Margin	8 921	8 495	11 036
Growth	(19,2%)	(23,0%)	(5,4%)

CSIR PARLIAMENTARY GRANT AND EXTERNAL CONTRACT INCOME



Goal 2: Embedding Quality in Everything We Do

The CSIR strives for continuous improvement, based on performance standards and benchmarking.

The CSIR is actively involved in the South African Excellence Foundation (SAEF) self-assessment process.

Customer satisfaction

In this financial year the CSIR undertook surveys of past and potential clients to supplement the current client survey conducted in the previous year and the ongoing Moment of Truth monitoring.

The main areas requiring attention as perceived by the potential clients were service delivery, client relationship management and contract management. The organisation was seen to be relevant and technically competent.

The "Moment of Truth" system continued to provide invaluable feedback as interactions take place with key clients. The system measures "on brief, on budget, on time" and the quality of deliverables. Actions to improve client satisfaction levels are implemented to address areas of concern.

Being environmentally sustainable

Safety, health and environmental (SHE) audits were conducted by the CSIR's audit team (Health and Safety) and South African Bureau of Standards (SABS) (Environmental Management) respectively. The aggregate for individual ratings by business units during the year reported upon was 89,6%.

The disabling injury frequency rate for 2000 was 0,4 (0,84:1999) against an aim of achieving a rate of less than 1 per annum, to comply with our corporate 4 star standard.

The disabling injury frequency rate is the lowest since the beginning of SHE in the CSIR. The claims with the Compensation Commissioner were managed down to a record of 58 (1999:80) for the year under review.

Nine of our business units (5:1999) were certified and retained certification after six months in accordance with the international SABS ISO 14001 code for an Environmental Management System. Our target is for all business units to have attained and retained certification by the end of 2001.

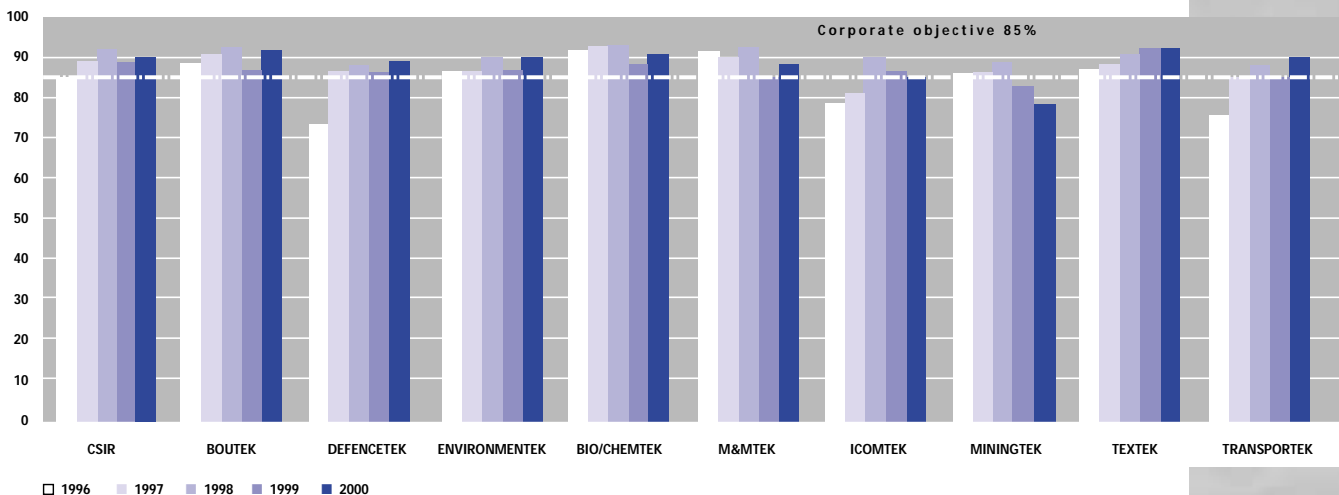
Peer review of activities

The CSIR conducts regular international peer reviews of its activities to improve efficiency and effectiveness, to benchmark current practice and establish best practice.

During the past year reviews were conducted on our water, environment and forestry technology business unit, our building and construction technology business unit, and of our international business activities. A review panel on intellectual property added new views and value to the CSIR thinking and practise relating to intellectual property management and use.

An internal review is being carried out of our overhead/functional cost structures, while a major organisational e-engineering plan is being investigated. The CSIR's Parliamentary Grant investment process is also being reviewed with the aim of continuous improvement.

5-YEAR SAFETY, HEALTH, ENVIRONMENTAL AUDIT HISTORY



Goal 3: Human Resource Development and Transformation

We strive to attract and retain people with critical skills to support achievement of the CSIR's mandate in a changing market environment. Our current approach to managing research and innovation also requires that we strengthen competencies in our external networks as well as internally. Our transformation drive, therefore, focuses on shifts in skill levels as well as demographic representivity.

The recent measurements of our human capital endowment reflect an increase in higher level skills as we improve levels of demographic representivity. This, however, comes with the reduction in less qualified staff and improvement in the number of professional staff as divisions restructure to align their businesses with market demands. The percentage of Doctorates has increased from 6,7% in December 1999 to 7% in December 2000. Similarly with Masters, the increase is from 11% in December 1999 to 12,5% in December 2000.

The total staff complement of the CSIR, as at March 2001, was 2534, of which 1164 were professional staff. Progress was made in increasing the number of Black professionals. This staff category achieved a share of 22,9% as at March 2001, against a share of 21,9% as at December 2000.

Organisational development

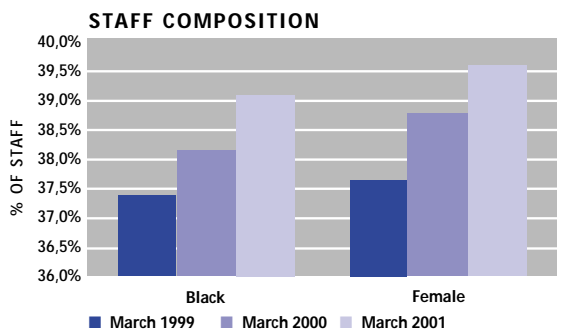
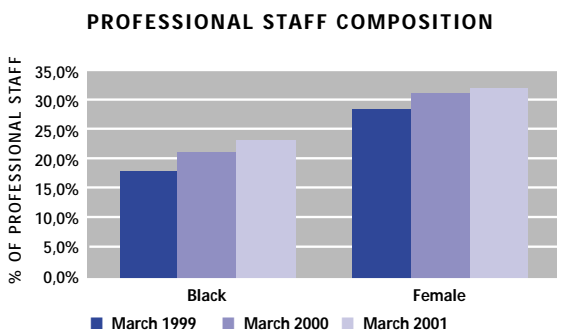
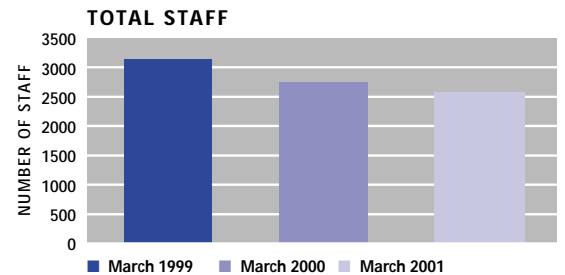
In line with organisational strategy, the role and function of Human Resource Management and Development has been refocused to strengthen the networking and e-business modes of operation as required by the emerging CSIR strategy. The emerging organisational model emphasises greater dependence on the introduction of self-help IT systems.

Organisational ethics

The CSIR is committed to honesty and transparency in its business operations and expects its staff members to act accordingly. Disciplinary procedures are in place to handle any transgressions of these principles. During the year under review no material losses occurred through criminal conduct or wasteful expenditure.

Employment equity

Following an Employment Equity Audit by government, an employment equity plan for each business unit has been developed. At the same time particular assignments have been set up to address equity gaps. These include training in diversity management, organisational culture assessment, and fast-tracking initiatives. Preparations have been made to respond to the employment equity audit by the Department of Labour during the 2001/2 financial year.



Learnership scheme

This new initiative aims to attract top students at high school and undergraduate levels to a science and technology career. It is a prestigious bursary scheme and is centred on the premise that bursaries and student funding are key drivers of transformation and equity in the Science, Engineering and Technology (SET) field. It focuses on issues of race and gender and on retention rates of talented students as future employees of both the CSIR and its strategic partners.

This scheme was initiated by integrating CSIR and University of Pretoria bursary funds on a R1 for R1 basis extending over five years. The annual intake is 20 students (only 15 in 2001) with a bursary cash value of R40 000 per student per year.

Skills development

The CSIR has submitted skills development plans to the Department of Labour as required by the Skills Development Act. An overall strategy was developed to guide the audits and development of plans at business unit level to ensure alignment with broader organisational goals. The skills audits done in the CSIR indicate that the CSIR exceeded the required minimum spending levels recommended in the Act.

Training for excellence

The CSIR continues to place strong emphasis on the development of its staff within the framework of their career development, performance management and the broader transformation imperative. This is done by supporting staff in furthering their tertiary education, and through the CSIR Innovation Leadership and Learning Academy (CILLA).

Currently, over 400 staff are engaged in pursuing further tertiary qualifications, including some 48 doctoral students.

In its second year of operation, CILLA has increased the throughput of learners by some 87% on the previous year. The range of CILLA training has also broadened considerably, with a focus on leadership, support for organisational initiatives and the re-orientation towards a knowledge intensive technology organisation.

The CSIR is seeking accreditation for its continuing education offerings in terms of the new Skills Development legislation

Labour relations

The CSIR, NEHAWU and other internal labour representative forums succeeded in maintaining productive relations. The annual wage negotiations with NEHAWU were successfully concluded early in December 2000.

Medical aid scheme

The CSIR's Medical Aid Scheme came into being on 1 April 1997. The objective is to provide sustainable health care and

at the same time limit costs to an affordable level. The scheme is based on co-responsibility between employer and employee.

The Fund is administered by Discovery Health and governed by a Board of Trustees consisting of Mr Albert Jordaan (Chairman), Dr Namane Magau, Ms Suzette Harmse, Mr Gert Mostert, Mr Hugo Mouton and Mr Raymond Raats.

Pension fund

Our Pension Fund is registered in terms of the Pension Fund Act, Act 24 of 1956, and is a defined contribution plan. The fund index as at 1 April 2001 reflected a growth of 2,85% (1999/2000: 23%).

The Fund is also governed by a Board of Trustees, consisting of Mr Albert Jordaan (Chairman), Ms Suzette Harmse, Ms Helena Heysteck, Mr Philip Masemola, Mr Daniel Mosito, Mr Thabo Pooe, Mr Gerhard Smith and Ms Linda Vilakazi-Tselane.

Goal 4: Making an Impact on Sustainable Development and the National Imperatives

The CSIR has been involved in sustainable development for the past seven years through its drive in Technology for Development. Involvement during this time has been mainly in the rural development, indigenous knowledge systems, job creation and crime prevention domains. During the past year, the CSIR broadened the scope to encompass the National Imperatives of Crime Prevention, HIV/AIDS, Job Creation, Rural Development, National Human Resource Development (NHRD), Urban Renewal and Regional Integration.

In responding to sustainable development, we accept that a holistic approach is required and that technology is only one of the components. We therefore prefer to work in this domain in a partnership and collaborative mode. Partners include other Science Councils, National, Provincial and Local Government, Development Agencies, Funding Agencies, NGO's, and communities at the grass roots level, among others. In line with our mandate, we typically design and drive pilot projects to position ourselves as a technology partner and to generate knowledge which is packaged into replicable solutions and passed on to implementing agencies.

In the past year, the CSIR was called upon by the Department of Arts, Culture, Science and Technology to implement four rural poverty alleviation projects and has been allocated twelve more projects, which are to start in 2001/2002. The CSIR has been involved in two high impact integrated projects. At Lubisi an exit strategy was implemented and at



Manguzi uptake pathways were developed with the University of Zululand for continued involvement with the Manguzi Development and Information Centre.

In technology support to crime prevention, the CSIR launched the National Crime Prevention Research Resource Centre, funded by DACST, and is managing a nation-wide network on behalf of national government. We provided technological support to the Scorpions unit and to the State Information Technology Agency (SITA) and to the South African Revenue Services (SARS) in support of effective border control. A partnership between the National Department of Transport and the CSIR's Roads and Transport Technology business unit is also engaged in Poverty Alleviation projects focused on labour-intensive road construction projects.

Helping to create an understanding of science and technology

In helping to promote greater awareness and understanding of the role and value of science and technology, we participated in the Department of Arts, Culture, Science and Technology's 2001 Science, Engineering and Technology Week activities and in SciFest (the annual science festival held in Grahamstown).

We again co-sponsored the Science and Technology Journalism Awards. These awards give recognition to journalists and science writers who succeed in helping to create awareness and understanding of the role and relevance of science, engineering and technology to the economic prosperity of our country.

Goal 5: Harnessing the Information Revolution

Clarification was obtained on potential IT architecture, trajectories and options for the CSIR in light of the new challenges of a knowledge economy and the threats and opportunities of e-business. A number of Enterprise System vendors are being further investigated in terms of replacing/re-engineering core business systems.

Other initiatives included the piloting of web-enabled workflow tools to automate CSIR processes and facilitate the initiation, routing and approval of electronic rather than paper based forms.

Renewed attention was given to the effective management of key IT risks and challenges such as the CSIR's information protection policy, retention of key staff and transformation.

Our Web Council launched an additional facility for our Internet, the CSIR's Product and Services e-commerce site, providing potential clients with easy access to the CSIR's products via the web. In addition, we started the process of upgrading the Internet site aimed at presenting CSIR offerings in various market sectors.

A focus area of the past year was to ensure that the University of Pretoria/CSIR strategic convergence is properly supported through effective IT infrastructure, systems, information and knowledge and is congruent with the Gauteng Innovation Hub.

Managing our Parliamentary Grant

The parliamentary grant allocated to the CSIR for the 2000/2001 financial year amounted to R301,1 million (1999/2000 R315,6 million), which represented a decline of 4,6% in nominal terms and 11% in real terms. This grant continues to be the key investment resource of the CSIR. It is used to create and strengthen operational and technological core competencies and capacity to support our involvement in national initiatives.

The investment priorities in the CSIR are based on national and market needs and technology trends, as well as the ability of the organisation to effectively deploy any such investment and deliver appropriate products and services. The CSIR's investment process is currently being reviewed with the aim of continuous improvement.

During the financial year, the Parliamentary Grant was largely invested in the technological core competencies of manufacturing and materials, information technology, environment, bioscience and biotechnology and infrastructure (including housing and transport). A portion was also invested in organisational/operational core competencies including human resource development, leadership and managerial competency, excellence in R&D and innovation. The companion document to this Report, Technology Impact, profiles a number of scientific and technological developments supported through the Parliamentary Grant investment.

Core investment by government continues to be a very important instrument to leverage the CSIR's contribution to national priorities. Continued pressure on the fiscus, however, also dictates pragmatic attention to other revenue resources. Thus, with more than 60% of our overall income funded from external sources, the CSIR compares very favorably with similar institutions internationally. Few international parastatal research organisations have the ability to generate more than 50% of their operating income externally.

Organisation Changes

During the year under review, two business units, Manufacturing & Materials Technology and Textile Technology, were joined to form one unit under the umbrella of Manufacturing & Materials Technology (M&Mtek). The Information and Communications Technology unit, formerly known as Mikomtek, completed a major strategic and structural re-engineering and began operating as icomtek.

Changes to our Management Board

Mr Albert Jordaan was appointed as Acting President on the resignation of Dr Geoff Garrett with effect from January 2001.

Mrs Tina Eboka, previously Director of the Textile Technology business unit, has been appointed as Director of the Water, Environment and Forestry Technology business unit.

Acquisitions

Denel signed a contract with the CSIR on 29 March 2001 for the transfer of the Research and Development portion of Denel's Mechem division. Denel will retain the mine-clearance services developed by Denel under the Mechem name.

Key initiatives

CSIR/UP Alliance

The CSIR/UP Alliance entered a new phase of its development with the establishment of the Southern Education and Research Alliance (SERA) brand. The SERA name and visual identity embody a number of important aspects of the Alliance, including the essence of the two organisations (education and research), its location in a global context, which is visually depicted by the globe in the logo, and the two organisations working together to create a world-class and globally visible flagship for South Africa.

The Strategic Governance Committee (of the CSIR Board and the University of Pretoria Council) approved the Memorandum of Understanding between the two organisations which stipulates that both the CSIR and the University of Pretoria will retain their autonomy, with SERA seeking to add value to and complement the two parent organisations through maximizing synergies and reducing overlaps and potential conflicts.

SERA (Pty) Ltd, will be established to serve as a vehicle for formal contracting on behalf of SERA. Its primary focus is the exploitation of Intellectual Property in both the CSIR and UP through commercialisation and the licensing of patents. Johan Hattingh, former Corporate Audit Manager of the CSIR and Director of Technifin (Pty) Ltd, has been appointed Chief Executive Officer of SERA (Pty) Ltd.

The Innovation Hub

The Innovation Hub is a joint venture between SERA and the Gauteng Provincial Government's Blue IQ initiative (the latter a commitment by the Provincial Government to invest in 10 mega-projects in the areas of tourism, technology, trans-

port and high value-added manufacturing, to create a truly 'smart' province).

The purpose of The Innovation Hub is to support the creation, nurture, growth and globalisation of technology-led and innovative businesses and enterprises to enhance the innovative capacity and economic development of Gauteng.

During the year under review, The Innovation Hub Management Company (Pty) Ltd was registered and the Board and management team appointed. Mr Neo Moikangoa, Executive Vice President: Policy and Technology for Development of the CSIR, has been appointed chairperson of the Board of The Innovation Hub. Dr Neville Comins, formerly Director: Business Development (Integrated Projects) of the CSIR, has been appointed CEO of The Innovation Hub Management Company (Pty) Ltd.

AIDC

The Automotive Industry Development Centre (AIDC) has committed itself to being the first anchor tenant at The Innovation Hub's site scheduled for occupation in 2003.

The AIDC was established to increase the global competitiveness of the South African automotive industry, and to broaden its automotive engineering capability. The AIDC is the flagship project of the Gauteng Automotive cluster and is funded by the Gauteng Provincial Government's Blue IQ project in partnership with the CSIR, at a total cost of some R100 million over a three year period.

Commercialisation

During the year under review, the CSIR concentrated its higher-level commercialisation efforts on the further development of models for the successful commercialisation of CSIR offerings.

Such models now include the holding of equity by the CSIR in operating companies based on CSIR technologies and the application of venture capital instruments to enhance venturing. An additional technology group was incorporated into Technovent (Pty) Ltd, which now has five technology groups as subsidiaries, and one joint venture. The new technology group is Agrimage (Pty) Ltd, which provides satellite imagery for precision farming, an area that has experienced rapid growth in South Africa as a result of pressures to cut production costs.

We reviewed, with the support of an international review team, our Intellectual Property management and the role of Technifin (Pty) Ltd in this important area. Together with the University of Pretoria, a new model for the management of all aspects of the CSIR's intellectual capital is being systematically rolled out.

Our Subsidiaries

The activities of the CSIR's subsidiaries, as set out in Annexure A are, respectively, to invest in and develop research and implement and transfer technology to industry, to provide finance to develop technology and venture capital to exploit it. The aggregated deficit of the subsidiaries amounted to R7,3 million (2000: R7,1 million).

Post Balance Sheet Events

No material facts or circumstances have arisen between the dates of the balance sheet and production of this report, which affect the financial position of the organisation as reflected in these financial statements.

Forward to the Future

The CSIR has its business priorities firmly in place to maintain its status as a world-class supplier of technology, while at the same time contributing meaningfully to South Africa's national imperatives. Our challenge is to build on the successes of the past, capitalise on our strengths and forge new alliances to ensure that we continue to make an enduring difference in the lives of all our people.

Board Approval

The annual financial statements of the CSIR for the year ended 31 March 2001, as set out on pages 14 to 55 of this report, have been approved by the CSIR's executive management and the CSIR Board at its meeting held on 13 June 2001. The Board is of the opinion that the CSIR is financially sound and operates as a going concern.

These statements are signed on behalf of the CSIR Board by:

Mr Roger Jardine
CSIR Board Chairman

Mr Albert Jordaan
CSIR Acting President

Five Year Financial review

31 March 2001

	2001	2000	1999	1998	1997
	R'000	R'000	R'000	R'000	R'000
FINANCIAL INDICATORS					
Total reserves	385 174	376 253	365 217	353 555	346 245
Long-term liabilities	4 000	9 000	14 350	-	-
Total assets	619 154	550 886	542 583	490 212	453 862
Net assets	390 730	385 253	379 567	353 555	346 245
INCOME AND EXPENSE INDICATORS					
Parliamentary grant recognised as income	301 849	317 334	325 469	336 255	304 030
External operating income	489 067	433 215	361 194	352 519	348 337
Expenditure	794 712	750 040	688 098	704 791	642 222
Net post-acquisition loss of joint ventures	(36)	23	-	-	-
Investment income	12 753	10 550	13 097	23 327	58 526
Net income	8 921	11 036	11 662	7 310	68 671
CASH FLOW					
Net cash flow from operating activities	72 824	53 540	83 755	57 645	73 043
Net cash outflow from investing activities	(45 229)	(36 600)	(108 643)	(48 081)	(43 544)
Net cash flow from financing activities	(3 444)	(5 350)	14 350	-	(175 068)
Cash and cash equivalents beginning of year	55 374	43 784	54 322	44 758	190 327
Cash and cash equivalents end of year	79 525	55 374	43 784	54 322	44 758
RATIO ANALYSIS					
Asset management					
Net asset turn	2,1	2,0	1,8	2,0	2,1
Return on net assets	2,3%	2,9%	3,1%	2,1%	19,8%
Current ratio	1,6	1,7	1,2	1,5	1,7
Performance					
Total income (exc. investment income) per employee	312,1	274,9	222,8	227,6	212,6
Total external operating income per employee	193,0	158,7	117,2	116,5	113,5
Total income (exc. investment income) per R1 operating expenditure	2,3	2,4	2,6	2,1	2,2
Remuneration as a % of total expenditure	52,0%	53,5%	55,5%	48,8%	50,6%
Net cash generated from operating activities per employee	28,7	19,6	27,2	19,0	23,8
Independence ratio	62,4%	58,3%	53,5%	52,8%	57,2%

DEFINITIONS

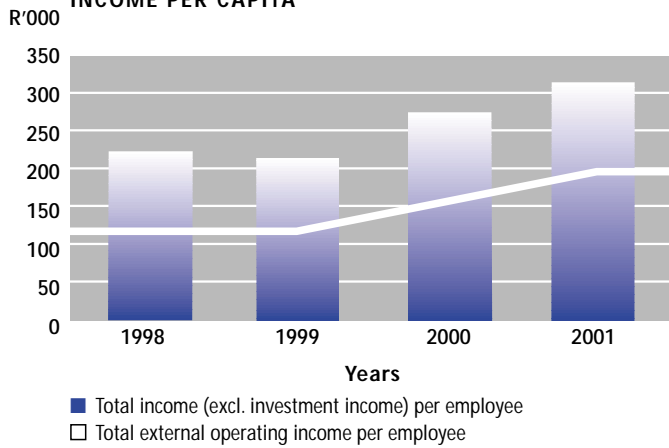
Net asset turn - Total income (incl. investment income) divided by net assets

Return on net assets - Net income expressed as a percentage of net assets

Current ratio - Current assets divided by current liabilities

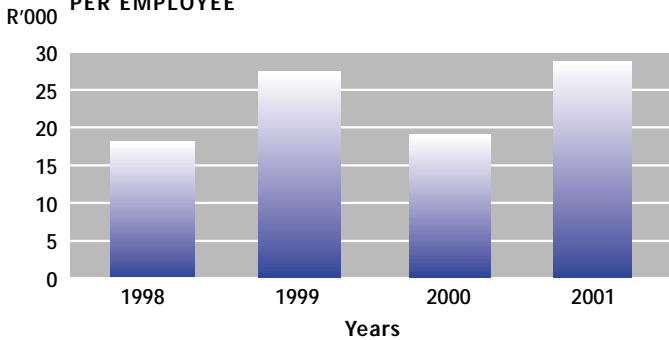
Independence ratio - Total external income (incl. investment income) divided by total income.

INCOME PER CAPITA



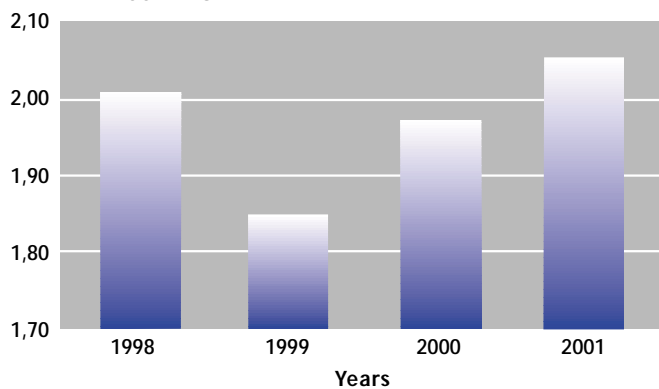
Income per employee showed an improvement due to the increase in total income of the CSIR and a decrease in the number of personnel.

NET CASH GENERATED FROM OPERATING ACTIVITIES PER EMPLOYEE



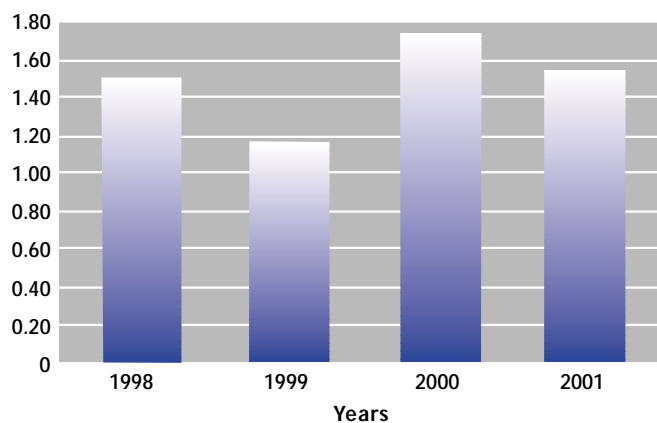
Net cash generated per employee increased due to the decrease in the number of personnel and the decrease in working capital.

NET ASSET TURN



The increase in net asset turn is the result of the increase in external income coupled with lower expenditure on property, plant and equipment.

CURRENT RATIO



The current ration showed a decrease due to the increase in advances received and accounts payable.

Income Statement

for the year ended 31 March 2001

	Notes	GROUP		CSIR	
		2001 R'000	2000 R'000	2001 R'000	2000 R'000
Turnover	3	844 211	775 902	788 728	749 131
Other income		2 620	1 619	2 188	1 113
Profit on disposal of property, plant and equipment		-	305	-	305
Profit on disposal of subsidiary		709	-	-	-
Total operating income		847 540	777 826	790 916	750 549
Expenditure					
Employees' remuneration		437 981	418 683	412 994	400 633
Depreciation	7	37 547	40 946	35 924	40 045
Operating expenses		367 931	324 542	341 750	309 362
Loss on disposal of property, plant and equipment		4 044	-	4 044	-
Total expenditure		847 503	784 171	794 712	750 040
Net operating surplus/ (deficit)for the year before investment income	4	37	(6 345)	(3 796)	509
Income from investments	5	13 048	11 232	12 753	10 550
Net post acquisition loss of joint ventures		(906)	(973)	(36)	(23)
Net operating surplus for the year before taxation		12 179	3 914	8 921	11 036
Taxation	6	(373)	-	-	-
Net surplus for the year		11 806	3 914	8 921	11 036

Balance Sheet

31 March 2001

	Notes	GROUP		CSIR	
		2001 R'000	2000 R'000	2001 R'000	2000 R'000
ASSETS					
Non-current assets		324 036	326 650	348 444	343 352
Property, plant and equipment	7	274 005	283 814	267 841	278 996
Interest in subsidiaries	8	-	-	44 255	31 969
Investments	9	36 625	36 316	32 000	32 110
Interest in joint ventures	10	13 406	6 520	4 348	277
Current assets		290 914	214 209	270 710	207 534
Accounts receivable	11	155 308	110 597	145 869	107 158
Inventory and contracts in progress	12	47 655	45 461	45 316	45 002
Deferred taxation	13	44	-	-	-
Cash and cash equivalents		87 907	58 151	79 525	55 374
TOTAL ASSETS		614 950	540 859	619 154	550 886
EQUITY AND LIABILITIES					
Reserves		370 447	356 214	385 174	376 253
Accumulated funds		356 957	345 151	374 424	365 503
Self Insurance fund		10 750	10 750	10 750	10 750
Non-distributable reserve					
Foreign currency translation Reserve		2 740	313	-	-
Outside shareholders interest and loan payable	14	19	-	-	-
Non-current liabilities		8 983	13 989	5 556	9 000
Long-term liabilities	15	7 427	13 989	4 000	9 000
Acquisition consideration due	16	1 556	-	1 556	-
Current Liabilities		235 501	170 656	228 424	165 633
Advances received	17	69 510	31 226	69 510	31 226
Accounts payable and accruals	18	111 387	92 179	104 788	87 346
Taxation	6	261	-	-	-
Provisions	19	54 343	47 251	54 126	47 061
TOTAL EQUITY AND LIABILITIES		614 950	540 859	619 154	550 886

Statement of Changes in Equity

for the year ended 31 March 2001

	Notes	Accumulated Funds	Self Insurance Reserve	Non distributable Reserve
GROUP				
Balance at 31 March 1999		341 987	10 000	62
Changes in accounting policy				
- adoption of AC 134	2	-	-	-
Restated balance		341 987	10 000	62
Net surplus for the year		3 914	-	-
Transfer to self insurance fund		(750)	750	-
Exchange differences arising on translations of overseas operations		-	-	251
Balance at 31 March 2000		345 151	10 750	313
Net surplus for the year		11 806	-	-
Exchange differences arising on translations of overseas operations		-	-	2 427
Balance at 31 March 2001		356 957	10 750	2 740
CSIR				
Balance at 31 March 1999		355 217	10 000	-
Changes in accounting policy				
- adoption of AC 134	2	-	-	-
Restated balance		355 217	10 000	-
Net surplus for the year		11 036	-	-
Transfer to self insurance fund		(750)	750	-
Balance at 31 March 2000		365 503	10 750	-
Net surplus for the year		8 921	-	-
Balance at 31 March 2001		374 424	10 750	-

Cash Flow Statement

for the year ended 31 March 2001

	Notes	GROUP		CSIR	
		2001 R'000	2000 R'000	2001 R'000	2000 R'000
Cash flow from operating activities					
Cash receipts from external customers		589 066	457 007	453 363	437 126
Parliamentary grant received		301 111	315 649	301 111	315 649
Cash paid to suppliers and employees		(830 624)	(737 007)	(694 403)	(709 785)
Cash generated from operating activities	A	59 553	35 649	60 071	42 990
Investment income received		13 048	11 232	12 753	10 550
Taxation paid		(156)			
Net cash inflow from operating activities		72 445	46 881	72 824	53 540
Cash flow from investing activities					
Property, plant and equipment acquired		(32 727)	(31 932)	(29 570)	(26 980)
Proceeds from the disposal of property, plant and equipment		854	7 911	757	7 885
Increase in net interest in subsidiaries		-	-	(12 286)	(17 095)
Acquisition of subsidiary	B	(138)	-	-	-
Disposal of subsidiary	C	751	-	-	-
Increase in interest in joint ventures		(7 792)	(7 493)	(4 130)	(300)
Increase in investments		-	(120)	-	(110)
Net acquisition of long-term patents		(1 354)	(1 824)	-	-
Net cash outflow from investing activities		(40 406)	(33 458)	(45 229)	(36 600)
Cash flows from financing activities					
Decrease in long-term liabilities		(4 956)	(4 799)	(3 444)	(5 350)
Increase in outside shareholders interest		19	-	-	-
Net cash outflow from financing activities		(4 937)	(4 799)	(3 444)	(5 350)
NET INCREASE IN CASH AND CASH EQUIVALENTS		27 102	8 624	24 151	11 590
Cash and cash equivalents at beginning of the year		58 151	49 527	55 374	43 784
Effect of foreign exchange rate changes		2 654	-	-	-
CASH AND CASH EQUIVALENTS AT END OF THE YEAR		87 907	58 151	79 525	55 374

Notes to the Cash Flow Statement

for the year ended 31 March 2001

	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000
A. Reconciliation of net operating surplus/(deficit) for the year before investment income to cash generated from operations				
Net operating surplus/(deficit) for the year before investment income	37	(6 345)	(3 796)	509
Adjusted for:				
Depreciation	37 547	40 946	35 924	40 045
Loss on disposal of property, plant and equipment	4 044	-	4 044	-
Profit on disposal of property, plant and equipment	-	(305)	-	(305)
Provision for permanent diminution in the value of investments	-	3 800	-	3 800
Unrealised loss/(gain) on forward exchange contracts	(487)	903	(487)	903
Profit on disposal of subsidiary	(709)	-	-	-
Goodwill written off	2 049	-	-	-
Provision for share write off	115	-	110	-
Amortisation of technology licensing projects	930	766	-	-
Operating surplus before changes in working capital	43 526	39 765	35 795	44 952
(Increase)/Decrease in accounts receivable	(46 007)	3 083	(38 201)	5 185
Increase in inventory and contracts in progress	(2 375)	(8 925)	(314)	(8 861)
Increase/(decrease) in advances received	38 284	(15 866)	38 284	(15 866)
Increase in accounts payable and provisions	26 125	17 592	24 507	17 580
Net working capital changes	16 027	(4 116)	24 276	(1 962)
Cash generated from operations	59 553	35 649	60 071	42 990

Notes to the Cash Flow Statement

for the year ended 31 March 2001

	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000
B. Acquisition of subsidiary				
On 1 April 2000, the Group acquired 100% of the issued share capital of Quotec Ltd. The purchase price of the subsidiary was R4,2 million of which R2,2 million was paid in cash and the balance is payable on the fulfillment of profit warranties.				
Property, plant and equipment	203	-		
Accounts receivable	258	-		
Inventory and contracts in progress	222	-		
Cash and cash equivalents	2 081	-		
Deferred tax liability	(7)	-		
Accounts payable and accruals	(580)	-		
	<u>2 177</u>	-		
Goodwill	2 049	-		
Total Consideration	<u>4 226</u>	-		
Satisfied by :				
Cash	2 219	-		
Acquisition consideration due on date of purchase	2 007	-		
Total Consideration	<u>4 226</u>	-		
Net cash outflow arising on acquisition				
Cash consideration	(2 219)	-		
Cash and cash equivalents acquired	2 081	-		
	<u>(138)</u>	-		

Quotec Limited contributed R4,8 million of revenue and R0,9 million of profit before tax for the period between the date of acquisition and the balance sheet date.

Notes to the Cash Flow Statement

for the year ended 31 March 2001

	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000
C. Disposal of subsidiary				
The CSIR held 100% of the issued share capital in Snowden Mining Industry Consultants (Pty) Ltd. The share held was transferred to Miningtek Consultants and Services Limited on 31 October 2000. The transfer of the share was done in accordance with the agreement between the CSIR and the joint venture partners.				
The net assets of Snowden Mining Industry Consultants (Pty) Ltd at 31 October 2000 were as follows:				
Property, plant and equipment	394	-		
Long-term liabilities	(1 606)	-		
Accounts receivable	2 041	-		
Inventory and contracts in progress	403	-		
Bank overdraft	(751)	-		
Accounts payable and accruals	(1 190)	-		
	(709)	-		
Profit on disposal	709	-		
Total Consideration *	-	-		
Satisfied by :				
Cash*	-	-		
Net cash inflow arising on disposal				
Cash consideration	-	-		
Bank overdraft transferred	751	-		
	751	-		

* The share was disposed of for R1

Notes to the Annual Financial Statements

31 March 2001

1. Principal accounting policies

The annual financial statements are prepared on the historical cost basis, in accordance with generally accepted accounting practice and incorporated the following principal accounting policies, which have been consistently applied in all material respects.

1.1 Basis of consolidation

The annual consolidated financial statements incorporate the annual financial statements of the CSIR and its subsidiaries. The operating results of the subsidiaries are included from the effective date of acquisition and up to the effective dates of disposal. All significant inter-company transactions and balances have been eliminated.

Goodwill represents the excess of the cost of an acquisition over the fair value of the group's share of the net assets of the acquired subsidiary at the date of the acquisition. Goodwill arising on the acquisition of subsidiaries are written off on acquisition.

1.2 Associate companies

Associate companies are those companies in which the group has a significant influence and which it intends to hold as long-term investments. Associate companies are accounted for on the equity method from their most recently audited financial statements or unaudited management information as at 31 March 2001.

Goodwill arising on the acquisition of associate companies is accounted for in the same way as goodwill on the acquisition of subsidiaries.

1.3 Joint Ventures

Investments in jointly controlled entities are accounted for by the equity method from their most recently audited financial statements or unaudited management information as at 31 March 2001. The carrying amount of such investments is reduced to recognise any decline, other than a temporary decline, in the value of individual investments.

Where a group enterprise transacts with a joint venture, unrealised profits and losses are eliminated to the extent of the group's interest in the relevant joint venture, except where unrealised losses provide evidence of an impairment of the asset transferred.

Goodwill arising on the acquisition of joint ventures is accounted for in the same way as goodwill on the acquisition of subsidiaries.

1.4 Investments

Investments, other than in associates or joint ventures, are stated at cost less any provisions for diminution in value. Dividends are accounted for on the last day of registration in respect of listed investments and when declared in respect of unlisted investments. On disposal of an investment, the difference between the net disposal proceeds and the carrying amount is charged or credited to the income statement.

1.5 Research and development

Research costs are charged against income as and when incurred. Development costs of clearly defined products, of which the future technical feasibility and commercial viability has been proven to the satisfaction of the Board, are capitalised (refer not 1.7.3). The extent of capitalisation is limited to an amount equal to the present value of expected net future income.

1.6 Foreign currencies

1.6.1 Foreign entities

The financial statements of foreign subsidiaries are translated into South African currency as follows:

- Assets and liabilities at rates of exchange ruling at the reporting entities' financial year end.
- Income, expenditure and cash flow items at the average rates of exchange during the relevant financial year.

Differences arising on translation are reflected in non distributable reserves in the foreign currency translation reserve.

1.6.2 Foreign currency transactions and balances

Transactions in foreign currencies are converted to South African rand at the rate of exchange ruling at the date of the transaction.

Monetary assets and liabilities denominated in foreign currencies are stated in South African currency using the rates of exchange ruling at the financial year end. The resulting exchange differences are dealt with in the income statement.

1.6.3 Financial assets and liabilities

Gains and losses from forward exchange contracts are dealt with in the income statement. Fair values of financial instruments are disclosed in the financial statements.

1.7 Property, plant and equipment

1.7.1 Land and buildings

Land and buildings are stated at cost. Buildings are regarded as investment properties and are not depreciated, but provision is made for a permanent diminution in value. Provision for maintenance is charged against income.

1.7.2 Plant, equipment and vehicles

Plant, equipment and vehicles are stated at cost less accumulated depreciation.

1.7.3 Development expenditure and intellectual property

Development expenditure and intellectual property consist of capitalised development costs as approved by the Board. Capitalisation is limited to the present value of expected net future income (refer not 1.5).

1.7.4 Finance leases

Assets acquired under finance lease agreements are capitalised at their cash cost equivalent and a corresponding liability is raised. Lease payments are allocated between the lease finance cost and the capital repayment using the effective interest rate method.

1.7.5 Depreciation

Depreciation is based on cost and calculated on the straight line method at rates considered appropriate to write off book values over the estimated useful lives of the assets, except for:

- Assets costing R2000 or less, which are written off in the year of acquisition.
- Assets specifically acquired for a contract, which are depreciated over the life of the contract.
- Strategic assets of limited commercial application, which are written down to expected future commercial recoverable value at acquisition, with the remaining book value depreciated over the estimated useful lives of the assets.
- Development expenditure and intellectual property, which are depreciated over a maximum period of three years.

The estimated lives of the main categories of property plant and equipment are as follows:

Plant	- 10 years
Equipment	- 5-10 years
Computer equipment	- 3-7 years
Vehicles	- 5 years
Development expenditure and intellectual property	- 3 years

The recorded value of these depreciated assets is periodically compared to the anticipated recoverable amount if the assets were to be sold. Where an asset's recorded value has declined below the recoverable amount, and the decline is expected to be of a permanent nature the decline is recognised as an expense. To determine the recoverable amount, discounted future cash flows are considered.

1.8 Retirement Benefits**1.8.1 Pension fund**

The CSIR operates a defined contribution plan, the assets of which are held in a separate trustee-administered fund. The benefits payable by the fund in the future, due to retirements and withdrawals from the fund, are contributions by members to the fund together with fund interest at a rate determined by the valuator with the consent of the trustees. The rate is so determined that the value of the total of the fund shall not exceed the value of the total assets of the fund. The CSIR's contributions to the plan are charged to income statement when incurred.

1.8.2 Post retirement benefits other than pensions

The CSIR formed an independent medical aid scheme on 1 April 1997. This fund has accepted responsibility for all future liabilities of members in terms of the scheme rules.

1.9 Inventory and contracts in progress

Raw materials and finished goods are stated at the lower of cost and net realisable value. Cost of stock is determined by the average method. Contracts in progress are stated at the lower of cost and net realisable value. Net realisable value is calculated as a percentage of the sales value of work completed, after provision for losses relating to the stage of completion and any foreseeable losses to completion of the contract.

1.10 Investment in technology

Investment in technology licencing projects and dividend producing rights are capitalised at cost and are amortised over their expected useful lives or written off based on their viability, whichever is the shorter.

1.11 Deferred taxation

Deferred tax is accounted for using the balance sheet liability method in respect of temporary differences arising from differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax basis used in the computation of the taxable profit.

Where the tax effects of temporary differences, including those arising from tax losses, give rise to a deferred tax asset, the asset is recognised only if it is probable that future taxable income will be sufficient to allow the tax benefit of the loss to be realised.

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1.12 Provisions

Provisions are recognised when the group has a present legal or constructive obligation as a result of past events, for which it is probable that an outflow of economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

1.13 Government assistance

Government assistance is recorded as income when it becomes receivable and are then recognised as income on a systematic basis over periods necessary to match the assistance with the related costs it is intended to compensate. This constitutes a

change in accounting policy (refer not 2).

1.14 Turnover

Turnover comprises:

- The net invoiced value of research, development and implementation contracts, excluding value added tax
- Income acknowledged on contracts in progress as calculated per note 1.9
- The annual Parliamentary grant adjusted for grant received for projects started before year end but not yet completed
- Royalties
- Consolidated turnover excludes sales to Group companies

	GROUP				CSIR			
	2001 R'000	%	2000 R'000	%	2001 R'000	%	2000 R'000	%

2. Changes in accounting policy

During the year under review the CSIR changed its accounting policy for income recognition of government assistance. Government grants are now recognised as income on a systematic basis over periods necessary to match the grants with the related costs which they are intended to compensate. This change is necessary to comply with generally accepted accounting practice. In the past the CSIR recognised government assistance as income in the year it was received. The effect of the change on the net surplus of the current and prior years was Rnil, but the change resulted in disclosure changes in turnover, expenditure, advances received and accruals.

3. Turnover

Parliamentary grant	301 849	36	317 334	41	301 849	38	317 334	42
Parliamentary grant received	301 111	36	315 649	41	301 111	38	315 649	42
Less:								
Grant received for projects started before year end but not completed	(3 743)	(1)	(4 481)	(1)	(3 743)	(1)	(4 481)	(1)
Add:								
Grant recognised as income for prior year projects completed in this year	4 481	1	6 166	1	4 481	1	6 166	1
Contract income	535 595	63	450 045	58	484 031	61	426 601	57
Private sector	267 775	32	226 325	29	244 811	31	214 445	29
Public sector	103 993	12	91 628	12	103 993	13	91 628	12
National Safety & Security sector	71 976	8	64 213	8	71 976	9	64 213	9
International sector (including Africa)	91 851	11	67 879	9	63 251	7	56 315	7
Royalties	6 767	1	8 523	1	2 848	1	5 196	1
Total turnover	844 211	100	775 902	100	788 728	100	749 131	100

	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000
4. Net operating surplus/(deficit) for the year before investment income				
The net operating surplus/(deficit) for the year before investment income is arrived at after taking the following items into account:				
Auditors' remuneration	1 444	1 369	1 225	1 220
Audit fees	1 372	1 304	1 164	1 162
Expenses	72	65	61	58
Exchange gains/(losses)	517	-	316	(534)
Fees paid for services	77 425	70 854	74 253	69 791
Patent costs	1 676	1 099	1 676	1 099
Legal costs	1 175	1 706	1 040	1 644
Consultants	74 574	68 049	71 537	67 048
Rentals paid for	15 177	12 253	13 379	11 732
Buildings	1 721	1 872	438	1 534
Equipment	13 456	10 381	12 941	10 198
Board members' emoluments For services on the Board	168	156	168	156
Goodwill written off on acquisition of Quotec Ltd	2 049	-	-	-
Amortisation of technology licensing projects	930	766	-	-
5. Income from investments				
Interest	13 048	11 232	12 753	10 550
Earned	13 201	11 298	12 756	10 550
Paid	(153)	(66)	(3)	-
6. Taxation				
South African normal taxation	211	-	-	-
Current taxation: Current year	261	-	-	-
Deferred taxation: Current year	(50)	-	-	-
Foreign taxation	162	-	-	-
Current taxation	156	-	-	-
Deferred taxation	6	-	-	-
	373	-	-	-
The CSIR and its subsidiary, South African Inventions Development Corporation (SAIDCOR), are exempt from South African normal taxation.				
The taxation is based on the taxable income of the subsidiary companies liable for income tax.				
South African normal rate of taxation	30%			
Current and deferred taxation - effective rate Based on income of taxpaying subsidiaries	30%			

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7. Property, plant and equipment

	Depreciation for the year R'000	2001			2000		
		Cost R'000	Accumulated Depreciation R'000	Net book value R'000	Cost R'000	Accumulated Depreciation R'000	Net book value R'000
Group							
Land and buildings	-	173 953	-	173 953	164 065	-	164 065
Equipment	36 923	371 833	273 391	98 442	382 458	264 191	118 267
Vehicles	624	4 266	2 656	1 610	3 714	2 232	1 482
	37 547	550 052	276 047	274 005	550 237	266 423	283 814
CSIR							
Land and buildings	-	173 953	-	173 953	164 065	-	164 065
Equipment	35 590	363 323	270 163	93 160	377 014	262 870	114 144
Vehicles	334	3 050	2 322	728	2 942	2 155	787
	35 924	540 326	272 485	267 841	544 021	265 025	278 996

	2001 Net Book Value			
	Land and Buildings R'000	Equipment R'000	Vehicles R'000	Total R'000
Group				
Opening Balance	164 065	118 267	1 482	283 814
Additions	9 888	22 006	833	32 727
Acquired on acquisition of a subsidiary	-	203	-	203
Disposals	-	(4 862)	(36)	(4 898)
Disposed of on disposal of a subsidiary	-	(343)	(51)	(394)
Depreciation	-	(36 923)	(624)	(37 547)
Exchange differences	-	100	-	100
	173 953	98 448	1 604	274 005
CSIR				
Opening Balance	164 065	114 144	787	278 996
Additions	9 888	19 371	311	29 570
Disposals	-	(4 765)	(36)	(4 801)
Depreciation	-	(35 590)	(334)	(35 924)
	173 953	93 160	728	267 841

Land and buildings are unencumbered and full details of the titles are available at the registered office of the CSIR.

Equipment and vehicles with a net book value of R670 208 (2000: R998 000) are encumbered (see note 15). This represents the total net book value of all equipment and vehicles encumbered.

	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000
8. Interest in subsidiaries				
Shares at cost	-	-	36 778	32 551
Indebtedness	-	-	7 477	(582)
by subsidiaries			27 259	13 058
provision against loans			(11 238)	-
to subsidiaries			(8 544)	(13 640)
			44 255	31 969

See Annexure A for details

9. Investments	Number of shares held		Class of Shares	Executive's valuation of shares R'000			
	2001	2000		2 005	2 120	2 000	2 110
Unlisted Shares							
Breathtex (Pty) Ltd	12 000	12 000	Ordinary	5 800	5 800	5 800	5 800
Provision for share write off				(3 800)	(3 800)	(3 800)	(3 800)
Virus Protection Systems (Pty) Ltd	25	25	Ordinary	110	110	110	110
Provision for share write off				(110)	-	(110)	-
Aluminum Squeeze Castors (Pty) Ltd	10 000	10 000	Ordinary	10	10	-	-
Provision for share write off				(5)	-	-	-
Naledi Ya Africa (Pty) Ltd	250	250	Ordinary	-	-	-	-
Pan-A-Cam (Pty) Ltd	18	-	Ordinary	-	-	-	-
Executive's valuation of shares R'000	2 005	2 120					
Investments in technology				4 620	4 196	-	-
Deposits (funds on call)				30 000	30 000	30 000	30 000
				36 625	36 316	32 000	32 110

Notes to the Annual Financial Statements

31 March 2001

	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000
10. Interest in joint ventures				
Cost of Investments ¹	8 543	6 764	500	300
Loans to joint ventures	6 742	729	3 907	-
Share of post-acquisition losses	(1 879)	(973)	(59)	(23)
	13 406	6 520	4 348	277

¹ Included in the cost of the investments is an amount of R 8 042 902 for convertible unsecured debenture stock in Miningtek Consultants & Services Limited. The stock is convertible at an extraordinary general meeting of the shareholders. The CSIR will not have the right to vote at such a meeting, if called. The debenture stock can be converted into a further 100 fully paid ordinary shares. Additional shares will be issued to the other block of shareholders so that after conversion, ownership remains in the same proportion as before conversion.

Details of the joint ventures at 31 March 2001 are as follows:

Name of Joint Venture	Place of incorporation	Portion of ownership interest	Portion of voting power held	Principal activity	Carrying value		Financial year end
					2001	2000	
Biosys (Pty) Ltd	South Africa	50%	50%	Development of botanical extracts	441	277	31 March
Miningtek Consultants & Services (Pty) Ltd	British Virgin Islands	50%	50%	Mining industry consultancy	11 882	5 856	31 March
Aeroflo (Pty) Ltd ²	South Africa	100%	50%	Development of helicopter filters	1 083	387	31 March

² The CSIR and the National Energy Corporation of South Africa (NECSA) decided to form the Aeroflo joint venture. At year end the NECSA was still awaiting ministerial approval for taking up 50% of the shares in Aeroflo (Pty) Ltd. This has led to Aeroflo (Pty) Ltd being a subsidiary as defined in Section 1 of the Companies Act. As it is the group's intention for the NECSA to obtain 50% of the shares in Aeroflo (Pty) Ltd, the control is seen to be temporary. Accordingly Aeroflo (Pty) Ltd has been accounted for as a joint venture. The information required by par 62 to 64 of schedule 4 to the Companies Act are included in the disclosure below.

Where financial statements were not available unaudited management accounts were used to account for joint ventures.

The following are details of the significant joint ventures' assets, liabilities and income:

	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000
Current assets	26 462	10 810	451	319
Long-term assets	16 750	4 501	271	-
Current liabilities	16 759	6 323	6	268
Long-term liabilities	27 848	9 626	-	799
Income	44 143	23 931	164	39
Expenses	45 614	25 878	236	81

	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000
11. Accounts receivable				
Trade receivables	127 404	87 841	119 470	86 572
Prepaid expenditure	5 791	3 042	5 265	3 042
Forward exchange contracts	487	-	487	-
Other receivables	21 626	19 714	20 647	17 544
	155 308	110 597	145 869	107 158
12. Inventory and contracts in progress				
Inventory	5 763	3 208	4 464	2 749
Contracts in progress less provision for losses	41 892	42 253	40 852	42 253
	47 655	45 461	45 316	45 002
13. Deferred taxation				
Balance at the beginning of the year	-	-	-	-
Tax loss	134	-	-	-
Provisions	36	-	-	-
Prepayments	(120)	-	-	-
Accelerated capital allowances	(6)	-	-	-
	44	-	-	-
14. Outside shareholders' interest and loan payable				
Loan to shareholders	19	-	-	-
The loan is interest free, unsecured and there are no fixed terms of repayment. The outside shareholders' interest is R50. (2000: RNil)				
	19	-	-	-

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	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000
15. Long-term liabilities				
Unsecured and interest free				
IDC	2 820	3 257	-	-
The loan is repayable annually commencing on 30 June 1996 in amounts equal to 45% of the nett royalty income and/or the nett deemed royalty income from specified projects. From 30 September 1999 the annual payment will be equal to 70% of the nett royalty income. The loan repayments will be terminated at the earlier of 30 November 2002 or the date upon which the payments exceed the loan amount.				
AECI				
The loan is repayable from 30 April 2000 as follows:				
30 April 2000 - R5 350	9 000	14 350	9 000	14 350
30 April 2001 - R5 000				
30 April 2002 - R4 000				
Less: Portion repayable within one year in current liabilities (note 18)	(5 000)	(5 350)	(5 000)	(5 350)
Miningtek Consultants & Services (Pty) Ltd	-	1 000	-	-
The loan has no fixed terms of repayment				
Secured and interest bearing				
Capitalised finance leases	607	732	-	-
Total leases	780	1 019	-	-
Less: Portion repayable within one year included in current liabilities (note 18)	(173)	(287)	-	-
The leases are repayable in monthly installments at interest rates that vary between 14.5% - 21.62%. The last payment will take place in 2005. The current finance leases are secured over equipment with a nett book of R670 208 (2000: R998 000) (see note 7).				
	7 427	13 989	4 000	9 000
16. Acquisition consideration due				
Unsecured and interest free				
Shares bought in Quotec Limited	2 334	-	2 334	-
Less: Portion repayable within one year in current liabilities (note 18)	(778)	-	(778)	-
On 1 April 2000, the Group acquired 100% of the issued share capital of Quotec Ltd. The purchase price of the subsidiary was R4,2 million of which R2,2 million was paid in cash and the balance is payable in foreign currency on the fulfillment of profit warranties.				
	1 556	-	1 556	-

	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000
17. Advances received				
Advances on contracts received from clients	69 510	31 226	69 510	31 226
	69 510	31 226	69 510	31 226
18. Accounts payable and accruals				
Accounts payable and accruals	105 436	85 639	99 010	81 093
Forward exchange contracts	-	903	-	903
Short-term portion of long-term liabilities (note 15 & 16)	5 951	5 637	5 778	5 350
	111 387	92 179	104 788	87 346
	Opening balance	Additional provisions made	Incurred, charged and reversed	Closing balance
19. Provisions				
CSIR				
Provision for salary and related expenses	43 706	29 615	(22 802)	50 519
The provision for salary and related expenses include provisions for leave pay and bonuses. The provision represents management's best estimate of the liability at year end.				
Provision for own insurance fund	3 355	1 246	(994)	3 607
The provision for own insurance fund represents management's best estimate of the insurance liability for past events not covered under the insurance policy at year end.				
Provision for legal costs and litigation	-	-	-	-
The CSIR is currently involved in a legal dispute, the outcome of which is uncertain. Provision for all known costs is included in accounts payable and accruals (note 18). Detail information is not disclosed on the grounds that that it can be expected to prejudice seriously the outcome of the dispute.				
	47 061	30 861	(23 796)	54 126

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	Opening balance	Additional provisions made	Incurred, charged and reversed	Closing balance
19. Provisions (continued)				
Group				
Provision for salary and related expenses	43 896	29 680	(22 840)	50 736
The provision for salary and related expenses include provisions for leave pay and bonuses. The provision represents management's best estimate of the liability at year end.				
Provision for own insurance fund	3 355	1 246	(994)	3 607
The provision for own insurance fund represents management's best estimate of the insurance liability for past events not covered under the insurance policy at year end.				
Provision for legal costs and litigation	-	-	-	-
The CSIR is currently involved in a legal dispute, the outcome of which is uncertain. Provision for all known costs is included in accounts payable and accruals (note 18). Detail information is not disclosed on the grounds that that it can be expected to prejudice seriously the outcome of the dispute.				
	47 251	30 926	(23 834)	54 343
	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000

20. Operating lease commitments

Financial commitments under non-cancellable operating leases will result in the following payments falling due:

Within one year:

Land and Buildings	554	-	-	-
Equipment	9 698	-	9 411	-
Vehicles	37	-	-	-

Within two to five years:

Land and Buildings	705	-	-	-
Equipment	12 063	-	11 574	-
Vehicles	19	-	-	-

GROUP		CSIR	
2001 R'000	2000 R'000	2001 R'000	2000 R'000

21. Retirement benefits of employees

CSIR Pension Fund

The Fund is registered in terms of the Pension Funds Act, 1956, and is a defined contribution plan. The CSIR's liability to the Fund is limited to paying the employer contributions. Life cover and dependants' pensions are fully secured by a continued income and life insurance policy.

Employer contributions of R24,5 million (2000: R24,8 million) and employee contributions of R14,7 million (2000: R14,9 million) were paid over during the year. Employer contributions are charged against income when incurred.

Mine Officials Pension Fund and Chamber of Mines Pension Fund

At the time of the merger with the Chamber of Mines Research Organization in 1993 certain COMRO employees elected to remain members of the Mine Officials Pension Fund and Chamber of Mines Pension Fund. In terms of the agreement with the Chamber of Mines this election holds no liability for CSIR other than paying the monthly employee contributions. The funds are defined benefit plans.

In respect of the employees who have formally converted their secondment to a CSIR appointment, employer contributions of R311 825 (2000: R351 400) and employee contributions of R171 715 (2000: R192 255) were paid over during the year. Employer contributions are charged against income when incurred.

Associated Institutions Pension Fund (AIPF) and Temporary Employees Pension Fund (TEPF)

These Funds are defined benefit plans. The formula used to determine pensions is based on the pensionable earnings of the final year, and the aggregate period of uninterrupted membership.

The CSIR has 6 (2000: 9) employees who are members of the AIPF and 1 (2000: 4) employees are members of the TEPF. Both funds are controlled by the State which has assumed responsibility for the unfunded portions of these Funds. Employer contributions of R105 217 (2000: R159 258) and employee contributions of R44 876 (2000: R60 499) were paid over during the year to the AIPF and TEPF.

Post- retirement medical benefits

The CSIR formed its own Medical Aid Scheme, based on managed health care principles, with a strong emphasis on co-responsibility between employer and employee. The objective is to provide sustainable health care and simultaneously limit the cost, present and future, to a level which is affordable.

The CSIR Board approved a cash payment of R190 million in 1997 to the medical aid scheme, thereby transferring the liability for retirement benefits of members to the scheme. The future proceeds of this payment is expected to substantially cover the actuarial valuation of the liability of R280 million.

The actuarial valuation process which started in the year under review is not yet completed. Although the process is not completed the actuary indicated that the reserves held by the Scheme together with the employer's obligation to make payments in respect of post-retirement medical benefits should be adequate to fund current liabilities and the Scheme's liability in respect of post-retirement medical benefits.

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	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000

22. Insurance and risk management

The insurance and risk management policies adopted by the CSIR are aimed at obtaining sufficient cover at the minimum cost to protect its asset base, earning capacity and legal obligations against unacceptable losses. All fixed assets are insured at current replacement value. Risks of a possible catastrophic nature are identified and insured while acceptable risks of a non-catastrophic nature are self-insured. Self-insurance has been instituted where the cost-to-benefit relationship exceeds the risk and the incidence of losses are of a minor and infrequent nature. Self-insured risks are reviewed on an annual basis to ensure cover is adequate. An amount of R10,75 million (2000: R10,75 million) is held in a self-insurance fund to cover these risks. This amount is disclosed as part of accumulated funds in the balance sheet. No major losses were experienced during the year under review. Claims of a general nature were adequately covered.

23. Contingent liabilities

There are contingent liabilities in respect of

Bank guarantees in respect of third party liabilities	15 605	5 194	15 605	5 194
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The CSIR was involved in an unfavourable arbitration case.

The interim ruling excluded the final allocation of costs.

All known legal costs have been provided for.

24. Capital commitments

Authorised but not contracted	9 550	6 620	9 550	6 620
This capital expenditure is to be financed from internal sources				

25. Comparative figures

Where necessary comparative figures have been reclassified to ensure comparability.

26. Financial Instruments

26.1 Forward exchange contracts

The Group enters into forward exchange contracts to buy specified amounts of foreign currencies in the future at a predetermined exchange rate.

Forward exchange contracts are entered into mainly to cover import orders. The Group has no policy to enter into forward exchange contracts for anticipated foreign receipts.

The Group does not use derivative financial instruments for speculative purposes.

Accounts receivable and accounts payable at 31 March 2001 include foreign trade receivables of R22,3 million (2000: R18,7 million) and foreign trade payables of Rnil (2000: Rnil). The full amounts of foreign trade payables for 2000 were covered by forward exchange contracts at year end.

	GROUP		CSIR	
	2001 R'000	2000 R'000	2001 R'000	2000 R'000
The following table summarises by major currency the amounts to be paid under forward contracts:				
US Dollars				
3 - 6 months at rates averaging USD 7.8654 (2000: USD 6.34)	34 129	19 006	34 129	19 006
British Pounds				
3 - 6 months at rates averaging GBP 11.5634	61	-	61	-
6 - 12 months at rates averaging GBP 11.84	186	-	186	-
Euro				
3 - 6 months at rates averaging EUR 7.1705	3 585	-	3 585	-
6 - 12 months at rates averaging EUR 7.7283	3 505	-	3 505	-
	41 466	19 006	41 466	19 006

26.2 Options

As part of a technology transfer agreement with INTERVID LTD an option agreement was entered into between INTERVID LTD and the CSIR, whereby the CSIR has an option to subscribe for 2 000 000 ordinary shares in the share capital of INTERVID at a price of R3 per share until 30 May 2002.

During the year the CSIR, in terms of the option agreement, elected to subscribe for 1 000 000 ordinary shares. The shares were subsequently sold and the profit recognised.

26.3 Credit risk

Financial assets that could subject the Group to credit risk consist principally of cash at bank and cash equivalents, deposits and accounts receivable and loans to joint ventures and subsidiaries. The Group's cash equivalents are placed with high credit quality financial institutions. Accounts receivable and loans to joint ventures and subsidiaries are presented net of the allowance for doubtful receivables or loan write-offs. Credit risk with respect to trade receivables is limited to the large number of customers comprising the Group's customer base and their dispersion across different industries and geographical areas. Accordingly the Group does not have significant concentration of credit risk.

The carrying amounts of financial assets included in the balance sheet represent the Group's exposure to credit risk in relation to these assets.

The group does not have any significant exposure to any individual customer or counter party.

26.4 Fair values

At 31 March 2001 the carrying amount of cash and cash equivalents, deposits, accounts receivable, accounts payable, contracts in progress, advances received and short term borrowings approximated their fair values due to the short term maturities of these assets and liabilities. Long-term loans to joint ventures and subsidiaries are interest free with no fixed repayment terms and therefore the fair value of these loans cannot be calculated.

The fair value of acquisition consideration due can not be determined due to the uncertainty of the foreign currency exchange rates and the dates of payment of the acquisition consideration. The fair value of the loan to outside shareholders can not be determined as the loan is interest free with no fixed terms of repayment.

Annexure A: Interest in Subsidiaries

31 March 2001

Consolidated subsidiaries	Country of incorporation	INTERESTS OF THE CSIR			Financial year end	Shares at cost	
		Issued capital	Effective holding			2001 R'000	2000 R'000
			2001 %	2000 %			
Direct investment							
South African Inventions Development Corporation (SAIDCOR)	South Africa	27 220	100	100	31 March	27 220	27 220
Snowden Mining Industry Consultants (Pty) Ltd*	South Africa	-	-	100	31 March	-	-
Technovent (Pty) Ltd	South Africa	5 000	100	100	31 March	5 000	5 000
CSIR International (Pty) Ltd	British Virgin Islands	326	100	100	31 March	326	326
CSIR North America Inc**	United States of America	5	100	100	31 March	5	5
Quotec Limited	United Kingdom	100	100	-	31 March	4 227	-
						36 778	32 551
Indirect Investments							
Included in SAIDCOR:							
Technology Finance Corporation (Pty) Ltd (Technifin*)	South Africa	5 200	100	100	31 March	4 400	4 400
Included in Technifin carrying value:							
Quality Electronics Developments (Pty) Ltd	South Africa	1 000	76	76	30 June	-	-
Included in Technovent(Pty) Ltd							
AMP Ceramics (Pty) Ltd*	South Africa	-	100	100	31 March	-	-
Brilliant Security Solutions (Pty) Ltd**	South Africa	-	75	75	31 March	-	-
Plasmatherm (Pty) Ltd*	South Africa	-	100	100	31 March	-	-
Thermaspray (Pty) Ltd*	South Africa	-	100	100	31 March	-	-
Pipeline Performance Technologies (Pty) Ltd***	South Africa	-	100	-	31 March	-	-
Agrimage (Pty) Ltd***	South Africa	-	100	-	31 March	-	-

* Issued capital R1 and shares at cost R1. the share held was transferred to Miningtek Consultants and Services Limited on 31 October 2000.
 ** No statutory audit was performed
 * Issued capital R1 and shares at cost R1 ** Issued capital R100 and shares at cost R75 *** Issued capital R100 and Shares at cost R100
 The group has interests in seven dormant companies. Details of these interests are available at the company's registered office.

Net indebtedness to subsidiaries				INTERESTS OF THE CSIR Net investment		General nature of business
2001 R'000	2000 R'000	2001 R'000	2000 R'000	2001 R'000	2000 R'000	
8 544	13 640	-	-	18 676	13 580	Investment in research development and implementation of technology.
-	-	-	-	-	-	International mining industry consulting organisation.
-	-	1 042	4 403	6 042	9 403	The company sources technologies and entrepreneurs from the CSIR, other S&T institutions, universities or any developer of technologies and develops them into viable businesses with the aim of spinning them off for capital gain.
-	-	6 293	6 293	6 619	6 619	The company serves as a holding company for CSIR international activities.
-	-	2 602	2 362	2 607	2 367	Supports and consults to the pipeline industry.
-	-	-	-	4 227	-	The principal activity of the company is that of consultants on technology auditing, technology evaluation and technology transfer on behalf of clients in the public and the private sectors.
8 544	13 640	9 937	13 058	38 171	31 969	
						<p>The acquisition and transfer of technology to industry by licensing new inventions, providing finance to develop technology and venture capital for the exploitation thereof.</p> <p>Holder of intellectual property in electronic technologies. This subsidiary is not consolidated because the Board of the CSIR is of the opinion that it would be of no real value to the users of the annual financial statements in view of the insignificant amounts involved. The investment was written off during 1997.</p> <p>Designs and supplies high-quality ceramic injection-moulded products to a variety of end-users and equipment manufacturers.</p> <p>Commercialises and exploits a range of intrusion alarm systems.</p> <p>Provides plasma nitriding surface-hardening services to industry.</p> <p>Develops and applies ceramic and metal thermal spray coatings and offers customised solutions to industry.</p>
-	-	6 084	-	-	-	The management of pipelines and water networks using technology solutions.
8 544	13 640	16 021	13 058	-	-	Providing satellite images to farmers for precision farming.

We have been able to grow as an organisation by being responsive and relevant to the needs of clients and stakeholders. We have touched the lives of our fellow South Africans by striving to embed quality in everything we do.

The CSIR. People with vision, partnerships with purpose, technology with impact.

C S I R B O A R D

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**BUSINESS
DEVELOPMENT**

**FINANCE AND
COMMERCIALISATION**

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RESOURCES**

**POLICY AND
TECHNOLOGY
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MANUFACTURING AND MATERIALS TECHNOLOGY

MINING TECHNOLOGY

ROADS AND TRANSPORT TECHNOLOGY

WATER, ENVIRONMENT AND FORESTRY TECHNOLOGY

To learn more about the CSIR and its activities, please visit our website at
<http://www.csir.co.za>

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