

# **Draft Research Policy Government of Namibia**

**Namibia Resource Consultants cc**

**Ministry of Higher Education, Training and Employment  
Creation**

**Namibia 2002**



**Integrated Support to  
Sustainable Development  
and Food Security Programme**



# Draft Research Policy Government of Namibia

## **The Ministry of Higher Education, Training and Employment Creation**

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# Draft Research Policy

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# Draft Research Policy

August 2002

## **Preamble: a Namibian Research Vision**

The Government of Namibia (GRN) is committed to expanding access to knowledge on the part of its people and worldwide. It supports further development of Namibian capacity for internationally-renowned research output. It aims to promote outstanding research training and productive strategic relationships with partners in academia and private research, as well as industry, commerce and government, in Namibia and overseas.

This in turn will accelerate national development aims, as set out in the Second National Development Plan. Access to information and research output across the full range of sectors will inspire and assist the success of educational and economic initiatives. It is therefore important to retain in Namibia research information produced, whether by national or international researchers. Equally, it is important that research information is available in Namibia and published as widely as possible, with existing databases or catalogues published electronically and otherwise.

In Namibia, as worldwide, research institutions have a critical responsibility to provide an environment that promotes integrity, while at the same time encouraging openness, sharing of skills and creativity among researchers. The GRN recognises that in order to achieve this, areas of present or potential research excellence and innovation need to be identified, encouraged and promoted. Sectors and institutions crucial to expanding the access to research and information skills on the part of previously disadvantaged Namibians will be targeted for support.

The aim of this policy is to encourage the development and, where appropriate, the formal designation of research centres and other groups so that they will become a focal point of the national research effort and promotion.

As an essential preliminary stage to the consideration of Namibia's policy framework, the consultancy given the task of drafting this discussion document has produced a System Overview of research activities in Namibia, which sets out in some detail the governing policies, key institu-

tions and proposed structures under the existing Science and Technology Policy. This has enabled this document to be as succinct as possible.

## **Definitions Research**

The working definition of research used in this document is the following: “research is an activity which sets out systematically to broaden the range of information on a given subject, and/or by analysis to cause reassessment of its significance.”

Broadly, “research”, as used below, includes all basic, applied, and demonstration research in all fields of science, engineering, and mathematics. It also includes, but is not limited to, research in culture, economics, education, linguistics, medicine, psychology, social sciences, statistics, and research involving human subjects or animals.

### **Researcher**

People carrying out a broad range of activities call themselves researchers, and in this study the term has been used inclusively. The consultancy understands that a senior researcher in a field has a grasp of the history of development of that field of knowledge, in addition to a continuous overview of new theoretical and data-assembling developments. Such a researcher will make her or his product available through recognised media for peer review.

## **Objectives and framework**

The objective of this draft is “to produce a document setting out sound ideas that flesh out the existing National Policy on Research, Science and Technology. These would be later refined and developed by the Task Force on Research Policy.” (See Annex B: Terms of Reference).

For this purpose this document outlines opposite the governing principles and objectives of the research policy, and the structures and strategies for meeting these objectives.

## Governing principles and objectives of the research policy

- 1** The policy seeks to encourage and facilitate rather than regulate and control. It is well recognised that high quality and useful research requires a facilitating environment and if this does not exist, research will not flourish. It is also recognised that the only effective control that can be exercised over research is self-regulation by the research community itself. This policy seeks therefore to build upon, and support, good research practice.
- 2** The policy recognises that the research environment in Namibia has a number of unique features. It is a country that, because of the richness and diversity of both its environment and its cultures, attracts researchers. It is also a country with a strong research tradition but with a small population. These unusual features require an unusual research supporting architecture. An architecture is proposed that is as liberating as possible for researchers but that which recognises that many research units are too small to survive as self-contained and self-governing units.
- 3** The policy seeks to create the framework for a code of ethics the details of which will be drawn up by Namibian researchers themselves, to which all researchers in Namibia will be expected to subscribe. This code will be fully reflected in the governing framework for all research permits.
- 4** The policy is intended to create an enabling environment for the development of research capacity. This will support young researchers not only in their initial training phase but also during their apprenticeship phase by helping them lay the foundations of their career.
- 5** The policy recognises that an unrestricted environment is a prerequisite for a flourishing research tradition. It also recognises that this imposes responsibilities on the researcher community to ensure that the ethical code is followed and that their results are made available to others in an effective and timely manner. The policy will promote structures that will encourage the research community to adhere to these ideals
- 6** The policy seeks to promote an environment where access to research data is straightforward and where maximum advantage is taken of the possibilities provided by modern information technology systems. Linked to this must be procedures that provide incentives for researchers to deposit their work and data in a timely manner so that it can be accessed by others.
- 7** The policy will provide mechanisms to link researchers across sectors, research areas and communities and encourage multi-disciplinary teams working across institutions
- 8** The policy seeks not to replace, but to supplement existing research funding mechanisms. Through funding and other incentives, it will promote research that supports the overall development objectives of the country. It will also keep under review, a map of current research so that deficiencies in the research effort are easily identified and addressed.
- 9** Recognising the value of regional and international collaborative research, the policy contains measures to promote Namibian research and ensure that research institutes here have a prominent regional role and are involved in multinational programmes.
- 10** The policy seeks to facilitate, wherever appropriate, close links between research and development in order to ensure that the benefits of research carried out accrue to the Namibian people.

To accompany and illustrate the proposed structures and strategies set out in this policy, the consultants have produced an overview of research in Namibia entitled “Research in Namibia: A system analysis”. The page references that accompany each section of this policy document direct the reader to the appropriate page in the analysis.

This policy document is set out in three main sections

- 1 The Policy Architecture
- 2 The Policy Framework
- 3 Funding policies

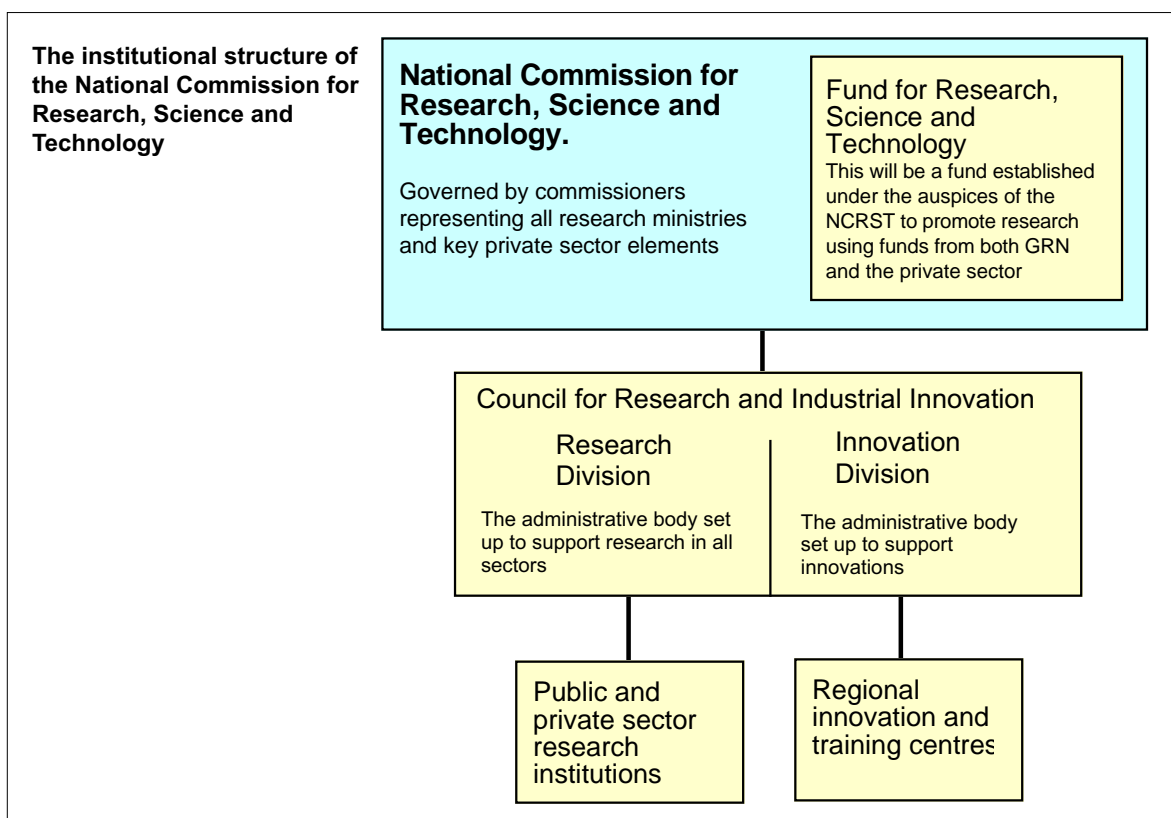
# The Policy Architecture

## The National Commission for Research, Science and Technology

- 1 The science and technology policy document published by the Ministry of Higher Education, Training and Employment Creation (MHETEC) provides the foundations for a sound research policy for the science research sector. Broadly, it proposes an institutional structure for research support, the keystone of which is the National Commission for Research, Science and Technology (NCRST). This would be governed by commissioners representing research ministries and key private sector elements.

The key organisations for research support to be set up under the NCRST are the Fund for Research, Science and Technology (FRST), a funding body, and the Council for Research and Industrial Innovation (CRII). The CRII would be able to co-opt or contract experts onto *ad hoc* standing committees as required in setting up or implementing its functions. The principles guiding the relationship between these two bodies and the research community are set out in the policy and these principles are elaborated in proposals below. This structure is shown diagrammatically in the box below.

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- 2 The NCRST will be set up to support research in all sectors and not only in the area of science and technology. The constitution of the NCRST board and of its subcommittees will reflect this broader representation.
- 3 Within the NCRST, the CRII will be the main executive body of the NCRST. It is proposed under the Science and Technology policy that the CRII should have a division concerned with innovation and a division concerned with research. The activities of the research division will fall broadly into three categories These are:
  - to offer support the research community as a whole by providing services to researchers generally
  - to offer institutional support to research establishments
  - to provide a mechanism for involving the research community in research policy making through the establishment of advisory committees in each research area

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This research support structure is shown diagrammatically in the box opposite.

## The research support functions of the CRII

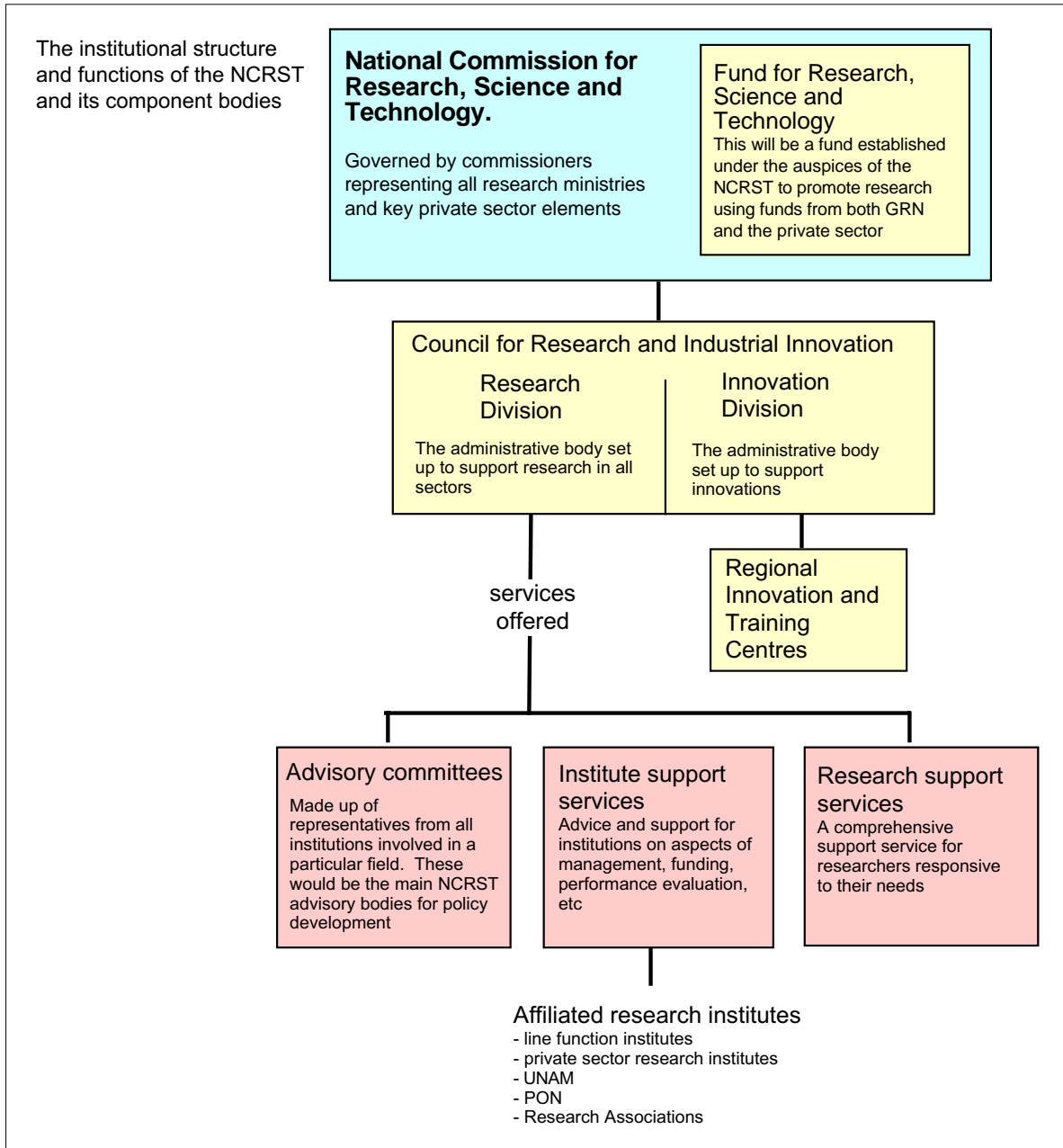
- 4 The CRII will provide a range of practical services to researchers. These will be offered, in the main, via a comprehensive web-based system. These services will fall broadly into two categories
  - day-to-day services to promote good practice
  - the development and continuous review of a system of research priorities based on decisions of the NCRST board.

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- 5 Examples of the routine research support activities offered to the research community are shown in the box on page 8. All these have the broad aim of facilitating research and assuring quality. This list of services is for example only and is not exhaustive. It is anticipated that this function of the CRII will grow with the needs of the community it serves and will be under continuous review.

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- 6 The NCRST and CRII will identify research priorities. An important step in this process will be to canvass the research community as well as the broader community, by electronic, broadcasting and other means as appro-



priate. The CRII will then be able to undertake, together with the research community, a number of activities to promote these research priorities and flesh them out into sound research programmes.

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- 7 An important element in the process of identifying priorities will be to identify and support centres of excellence in particular research arenas which would serve as national centres for research in the arena. A number of these already exist in the form, for example, of the Marine Research Laboratory, the National Botanical Research Institute, the Desert Research Foundation and the Geological Survey. Others, such as a Centre for Renewable Energy Research or a Centre for

**Some research support functions of the CRIL**

Assiatnce with:-	Examples
Data access	<ul style="list-style-type: none"> <li>- Development and maintenance of a metadatabase showing the main research data collections in the country</li> <li>- Advice and guidance to institutions on the construction and maintenance of data collections and related policy</li> <li>- Publish a database of research in progress</li> <li>- Ensure that researchers follow both the spirit and the letter of the library and archive acts</li> </ul>
Permits and research facilitation	<ul style="list-style-type: none"> <li>- Provide guidance and coordination on how a permit process should operate efficiently through institutionalising current good practice</li> <li>- Provide a follow-up service to ensure guideline on, for example, depositing data and samples are adhered to</li> <li>- Provide a mechanism for linking visiting researchers with Namibian institutions</li> </ul>
Promotion of the work of affiliate institutions	<ul style="list-style-type: none"> <li>- Provide web space and links</li> <li>- Market of services of affiliated institutions</li> <li>- Link affiliated institutions with funding agencies</li> <li>- Assist affiliated institutions with managerial tasks such as bidding for funding and projects</li> <li>- Assist affiliated institutions to play a regional role working with counterparts in other countries to attract donor funding of regional projects</li> </ul>
Staff development	<ul style="list-style-type: none"> <li>- Provide a brokering service to put young staff in touch with institutions offering bursaries</li> <li>- Develop guidelines for supporting young researchers</li> <li>- Promote seminars and workshops, in collaboration with UNAM and PON, on research methods and related activities</li> </ul>
Research Ethics	<ul style="list-style-type: none"> <li>- Draw up, with the research community, general guidelines on research ethics</li> <li>- Assist researchers in each sector draw up related sector-specific ethical guidelines</li> <li>- Assist with the following up of transgressors and with action taken against them</li> </ul>
Promotional Activities	<ul style="list-style-type: none"> <li>- Promote and support research events both national and international</li> <li>- Advise and assist with the production of research digests for the layman, particularly for the needs of legislators.</li> <li>- Promote the publication of Namibian research in a quality journal published in Namibia, either building on the work of existing journals or establishing a cross-sectoral Journal of Namibian Research</li> <li>- Establish links with NIED to ensure that key results of Namibian research can be fed back as illustrative material into the school system</li> <li>- Establish mechanisms for linking school science clubs with research institutes</li> </ul>
Patents, copyright and intellectual property rights	<ul style="list-style-type: none"> <li>- Assist Namibian researchers with patenting procedures</li> <li>- Advise and assist with copyright matters</li> <li>- Advise and assist on matters related to indigenous property rights</li> </ul>
Marketing and development	<ul style="list-style-type: none"> <li>- Promote research linked directly to potential commercial and industrial opportunities</li> <li>- Assist and advise researchers and institutions on matters related to the commercial development and marketing of their work</li> <li>- Assist Namibian researchers to develop their work by putting them in contact with innovators</li> </ul>
Quality control issues	<ul style="list-style-type: none"> <li>- Working with the research community, draw up guidelines for institutional evaluation instruments that any institution wishing to demonstrate its worth, could use to evaluate its work. This is important to demonstrate, for example, that public funding would be wisely spent</li> </ul>

the Promotion of Indigenous Knowledge, or a Centre for HIV-AIDS Research, are examples of centres that do not yet exist but which might be considered of potential national significance. The CRII will identify areas where such centres are needed and take steps to promote them.

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8 Because a key feature of the services offered by the CRII is that, in the main, they will be offered via a website, it follows that the management of this service, which will be lean and slim, will consist of people able to maintain a large website and be fully familiar with the operation of such services as listserves, be able to design and manage electronic databases of various kinds and offer assistance and advice on all these to the research community. It is thus essential that support staff, whether permanent or contracted, should have a sound technical understanding of electronic communications and storage mechanisms. It also follows that it is desirable that the manager(s) of this service should themselves have research experience to understand fully the nature of the job.

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9 The research support and innovation divisions of the CRII will work in close cooperation with each other to ensure that any commercial developments that might accrue from research results are facilitated and promoted. Likewise, the CRII will actively promote any research necessary to support promising commercial and industrial innovations.

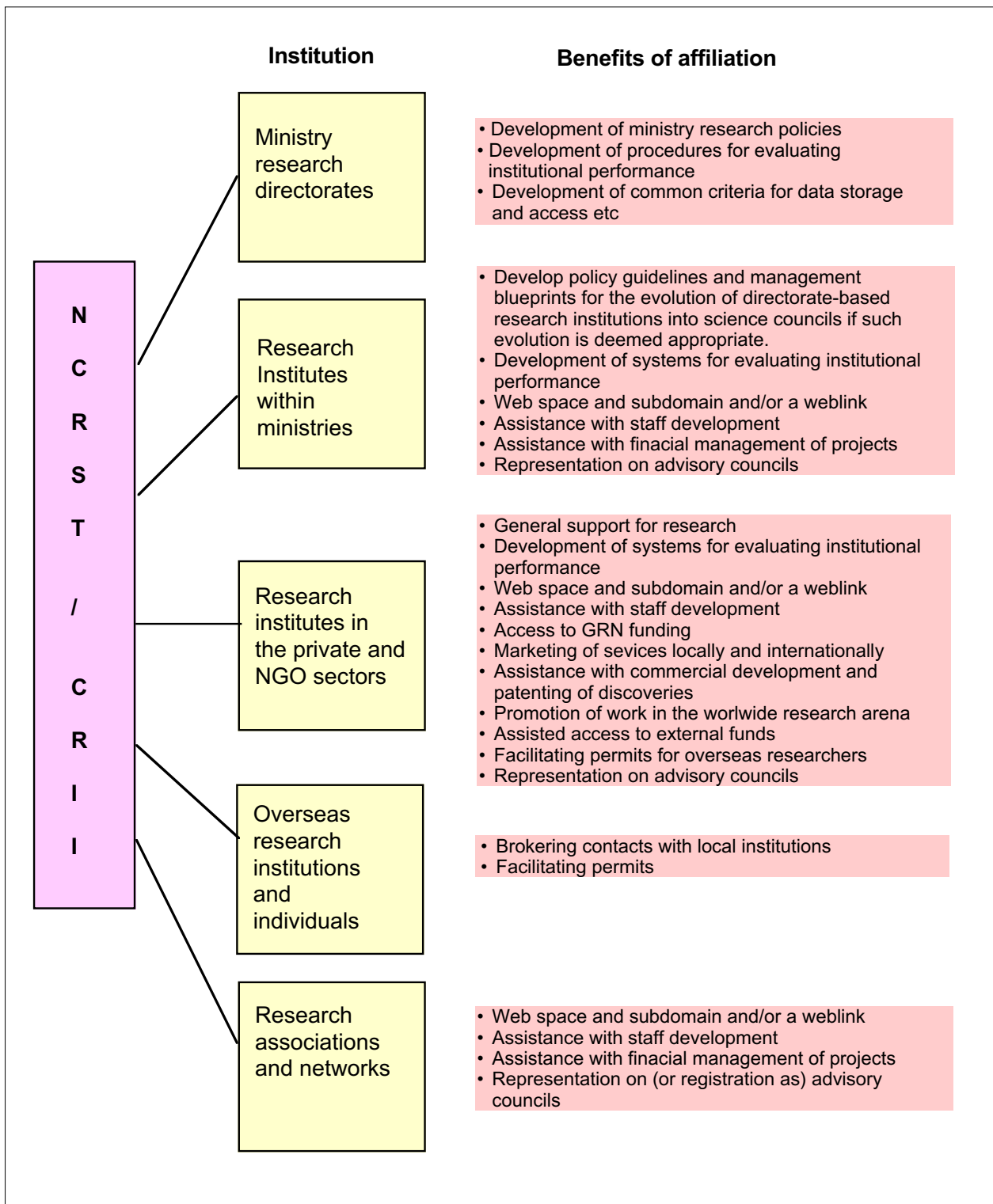
## The institutional support functions of the CRII

10 Institutional support services of the CRII will be available through affiliation by research institutes. The organogram on the next page shows the structure for the affiliation of different categories of institution to CRII. Affiliation will be voluntary and will offer clear tangible benefits that are not available to unaffiliated institutions. The third column in the organogram lists some possible benefits.

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11 The CRII will serve as a conduit linking Namibian research institutions with other institutions worldwide and, in particular, with international and regional research projects. The CRII will provide support and assistance to affiliated institutions wishing to bid for funding related to international projects.

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**13** The private sector concept of financing institutions based on their performance is not well developed within GRN, where the main concerns are usually with input criteria such as salaries and institutional running costs rather than with output based criteria like performance and value for money. This is a particularly inappropriate way of assessing the perform-

ance of a research institution where the quality of the output must be a key determinant of funding. The NCRST will develop systems of institutional performance assessment based on output criteria should be introduced for both public research institutions and private ones in receipt of government funding. This will entail much sensitive negotiation with the institutions. However, a useful outcome will be that the NCRST will have some objective measurement of the worth of the institution to give it the confidence to support any marketing of the institution's services that it might carry out.

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**13** One service offered to affiliate institutions of the CRII will be to lay down minimum criteria for affiliate institutions in their use of ICT to support their work. Support and advice will be given to affiliate institutions in meeting these criteria. The criteria will fall mainly into three areas:

- the use of appropriate databases
- processes for allowing public access to data
- processes for ensuring that all data is recorded and stored in a timely manner

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**14** The CRII will serve as a centre for the marketing of Namibian research expertise. It will maintain a central registry of Namibian research institutes and consultancies together with their areas of expertise and details of recent activities. This will be available on the web and would be the first port of call for those seeking such expertise. Ultimately there will be in place a performance assessment mechanism that would allow a system of recognition of quality to be established for institutes whose services are marketed by the CRII. In the interim it is suggested that the web-based registry carry samples of actual recent work that clients can evaluate themselves.

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**15** Many of the Namibian research institutes and consultancies are recently established and staffed by young researchers, many of whom lack management experience. One function of the CRII will be to assist such institutes gain the management expertise they need through the provision of a service giving individual help and/or workshops at the university or polytechnic commissioned on specific management topics. Examples might be:

- Project design and cost estimation

- Project planning
- Cash-flow regulation
- New research techniques

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This is a particularly important function for any existing government research institute seeking to move towards parastatal or 'section 21' status.

## Councils and committees of the CRII

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**16** The CRII will establish a number of committees to assist it with its work. The nature, composition and terms of reference of such committees will be developed by the NCRST. There will be two kinds of committee serving different purposes, standing committees set up to address specific issues and advisory councils established to facilitate policy development and information flow between the NCRST and the professional research body.

**17** The standing committees of the CRII will be *ad hoc* bodies established to investigate, and subsequently keep under review, particular aspects of research. Two committees that will be established as soon as possible will examine the questions of data access and capacity development respectively. They will be required to report their findings and make proposals on how aspects of research under their purview should be developed. Their membership should be broadly representative of the stakeholders. The CRII will act as their secretariat and they will be supported from the NCRST budget.

**18** The NCRST will appoint, from researchers from a variety of institutions with a common research interest, a series of research advisory councils that will provide a formal conduit for information flow in both directions allowing direct contact between NCRST-CRII management and front-line researchers. Although these research advisory councils will be formally constituted as advisory committees to NCRST, their membership should be determined very largely by the researchers themselves. CRII will act as a secretariat to the councils and they will be supported from the NCRST budget.

The number and scope of such councils will be decided by ongoing discussions between the NCRST and the research communities and will not be formally pre-

scribed. Procedural matters and terms of reference will also remain flexible above a basic prescribed minimum and it is anticipated that much use would be made of a subcommittee structure as a means of addressing specific issues in depth.

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## Government research institutes

**19** It is recognised that there is a wide variety of government research units of different kinds. These include:

- small units within directorates that are responsible for information gathering, storage and interpretation.
- units within directorates that are responsible for carrying out the research, sometimes considerable, as part of the drafting of legislation.
- directorates within ministries whose main function is research and development
- clearly defined institutes within ministries that operate from purpose built facilities that offer essential services to a wide variety of clients and research is an essential component of most of these services. These too can vary from, on the one extreme, an institution such as the National Institute for Educational Development within the Ministry of Basic Education and Culture where research is a comparatively small component of their overall operation, to the National Botanical Research Unit (NBRI) within the Ministry of Agriculture where research is the central activity.

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**20** It is also recognised that many of the government research units, particularly those that are clearly defined institutes such as the NBRI and the Geological Survey, carry out work that is clearly central to the national interest. Nevertheless, the work that they are involved in lies outside the realm of activities that are normally seen as the exclusive concern of government; regulation, policy formulation and resource allocation. The services offered by such research units can be regarded as belonging to that category that could easily be, and in many countries are, outsourced to the private or parastatal sectors

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**21** In Namibia, the ministry research units, and the market they serve, both tend to be too small to be able to sustain viable independent units that could exist, in the main, from income generated from the services that they offer. The CRII will institute a cross-sectoral debate to look at a wide range of strategies that might

allow these research units to move towards a greater degree of autonomy in the way they operate as a means of improving both the efficiency, breadth and quality of the services they offer. A move towards an enhanced degree of financial independence is seen as a key element in this process.

**22** Notwithstanding the debate on the future of government research institutes, the NCRST, working in close collaboration with the ministries concerned, will seek to develop mechanisms for enhancing their performance by a variety of means:

- by developing new management systems that encompass systems of institutional performance assessment based on output criteria.
- by providing administrative and budgetary services that will allow them greater freedom of operation. These will either complement or replace current mechanisms that involve the administrative support of NGOs.
- by encouraging cooperative work between cognate institutions
- by encouraging and facilitating public-private partnerships
- by developing and formalising their consultancy functions
- through the mechanisms already listed, increasing their contract income and so making their operations less dependent on their ministry grant
- by providing assistance with developing any necessary legislation to facilitate moves that enhance the independence of the management of the institutions.

It is not intended that new management strategies such as these will substantially alter the relationship between the research institutions and their line ministries. Their line divisions will still be responsible for their terms of reference and reporting. The role of the CRII will be rather to draw them together and to provide the national vision that determines the direction of their work, and through a variety of mechanisms, improve their efficiency and provide a greater flexibility of operation.

**23** If, at any point in the future, it is deemed desirable that any line ministry research directorate or institute should benefit from a change to parastatal or 'section

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21' status, the CRII will provide the necessary management support to enable the transformation to take place.

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**24** The CRII will play an active role in marketing the services offered by line ministry research institutes, in the same manner as it will market the services of private affiliated institutions.

## The National Library and the National Archives

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**25** The CRII will, together with the National Library and the National Archives, will develop and put in place, mechanisms for enhancing the services that these institutions offer to the research community. These mechanisms will include the following:

- assisting the National Library and the National Archives in their work to ensure that the research community to honour both the spirit and the letter of the Library and Archive Acts
- assisting, by offering ICT services to both institutions, and by whatever other means are felt necessary, the institutions in offering a high quality online data access service to the research community.
- considering what, if any, legislative amendments might be needed to enhance the services offered by the institutions to the research community.
- assisting the National Library to strengthen its key central role in providing access to research data generated throughout government. The role of the CRII in promoting common procedures throughout ministries for the development of research databases is seen as crucial to this aim.

## The National Museum

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**26** The National Museum is seen as the hub of all research related to the cultural heritage of the country. The CRII will work closely with the National Museum to develop a symbiotic relationship that will enhance this role in operational terms.

**27** The National Museum is seen as a key institution to take the lead in the process of popularising research results. Activities such as the 'insectathon' that the Museum has promoted in the past are seen as valuable models that can be developed to include other areas that might include activities such as the Young Scientist competition. The CRII will seek to formalise ac-

## Private and NGO sector research institutions

tivities such as the public lectures on research in progress and the publication of a quality peer-reviewed journal of Namibian research.

- 28** A large number of private and NGO sector research institutions are operating in Namibia. The CRII will seek to encourage and facilitate their work through the services it can offer. These services will include:
- the maintenance of a register of research in progress in Namibia, to avoid duplicated effort
  - the provision of a variety of services to researchers through the research support and institutional support functions of the CRII
  - a brokering agency for putting researcher institutions in contact with sources of funding
  - encouraging collaborative research between institutions
  - facilitating permits for visiting researchers

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## National Research Facilities

- 29** Certain research facilities either already exist in the country or may be created in the future. These are facilities that are regarded as national assets and that should be open for the use by all researchers. These facilities include research institutes serving a particular environment (such as the Etosha National Park) or they may be particular research instruments that are expensive facilities that should be available for use by scientists beyond just the institution in which they are housed. A future example, cited here purely as an illustration of the concept, might be the provision of an electron microscope in, perhaps, the Central Veterinary Laboratory, or the University.

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- 30** The NCRST will have the power to designate certain institutions and instruments as National Research Facilities. The CRII will draw up criteria that facilities must satisfy in order to be so designated, and will identify all institutions or instruments that should become National Facilities.

- 31** The CRII will draw up, in cooperation with the ministry, or other body under which the designated facility falls, procedures for regulating the operation of the facility

## The ICT Environment

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**32** The CRII will actively seek to develop and promote National Research Facilities and will advertise them and open them to researchers from other countries as well as from Namibia.

**33** A combination of factors conspire to inhibit the proper functioning of Information and communication technology (ICT) in support of research. Some of these are beyond the influence and control of the NCRST, others are not. The NCRST and CRII will put in place, as far as it is able, a comprehensive system of ICT support for the research community.

**34** The CRII will, in cooperation with private sector expertise, establish a number of ICT services for researchers that include

- a website that will be the main delivery tool for the research support service of the CRII
- a mirror website for the national Library and Archives to ensure easy access to research databases
- a hosting service, at a minimal cost covering fee, for websites of affiliated institutions
- a mail service for researchers with affiliated institutions accessible both by dial-up and internet.
- other services as may be felt, from time to time, desirable.

These services will be operated, in cooperation with the private sector, outside the GRN network as the necessary restrictions imposed by the government firewall prohibit the easy delivery of such services

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**35** The CRII will, as set out in section 2.2, seek to develop, through a series of linked databases, a system of easy access to the major sector research catalogues held by the national Library, UNAM, PON as well as ministries and private institutions.

**36** The CRII, as one of its services to researchers, in collaboration with the Polytechnic and other appropriate institutions, promote programmes for developing the necessary ICT expertise throughout the research sector.

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**37** The NCRST will, in collaboration with other interested parties within government, seek to develop policy and related legislation relating to data protection and the privacy of the individual. In the absence of such com-

Report page 39      prehensive legislation, the NCRST will develop guidelines, in association with individual database holders, on the way data should be collected, stored and used that does not contravene the generally accepted norms on privacy.

Report page 40      **38** The CRII, in collaboration with the National Library, will seek to develop common standards and procedures across all research sectors.

# The Policy Framework

This section of the research policy outlines the governing principles and objectives of the research policy and the strategies for meeting these objectives.

- Research policies** 1 The CRII will encourage and assist all research institutions to draw up research policies. It will provide guidelines on the construction of such policies that will be based on existing effective practice. Research policies of private sector research institutes should be publicly available on their websites and CRII will assist in publicising such institutes through web links and other means. The policies of individual ministries must dovetail with this cross-sectoral CRII policy and it is suggested they all should adopt a similar format. Private sector institutions are encouraged to address policy issues in the same way.

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## **Components of a ministry research policy**

### **1 Analysis and overview**

An analysis in some detail of the existing situation leading to the main areas that the policy should address.

### **2 The Policy**

The framework giving the principles and objectives and strategies for meeting the objectives.

### **3 The policy architecture**

The formal structures proposed through which the policy is implemented.

### **4 Funding and other resources**

Procedures for fundraising and contracting.

### **5 Recommendations for implementation and monitoring**

Independent quality assessment is important here.

## **2 Research policies at the University and the Polytechnic**

The Science and Technology Policy rightly recognises that these institutions, at the apex of the educational system, have a leadership role to play in the research effort of the country both in the conduct of research and in the development of research capacity. The CRII will seek to assist these institutions in developing these lead roles by activities such as:

- assistance in the development of their research strategies

- targetted funding of specific research projects
- encouraging the institutions to play a more significant role in national research through cooperative work with GRN researchers and the private sector
- promoting and supporting quality peer reviewed local research journals
- facilitating cooperative work with overseas institutions.

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- 3** The NCRST will keep this research policy under continuous review.

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## Reporting research results

- 4** The CRII will work, through a variety of mechanisms, to establish a culture of timely and appropriate reporting of research results across all sectors. A common system of reporting will be advocated which will enable resource centre staff to enter details correctly in an agreed format in research databases.

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- 5** All members of the research community will be encouraged to affiliate to the CRII either individually or through their organisations and networks. The CRII will maintain a directory of researchers in order better to support their research activities and to maximise the benefits to the country from their work. Researchers affiliated to the CRII will be expected to honour both the ethical codes governing their work and also the procedures developed for the appropriate and timely reporting of research results.

- 6** The CRII will ensure that a key feature of all ministry research policies must be the identification of a senior position within each ministry that carries, as part of the job description, the overall management of research. The CRII will develop the details of this part of the job description (see box).

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- 7** The CRII will work closely with the National Library, the Archives and the libraries at UNAM and PON, in order to evaluate existing metadatabases of Namibian research work and take steps to see that they, or similar ones, are fully maintained and web enabled. The CRII will endeavour to ensure that agreement is reached with all research institute libraries that have research data collections on the use of a common field format for entering research data and reports on databases, and to ensure that all databases are compatible

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### Ministry research officer - essential elements of a job description

- Development of criteria for categorising documents and data as classified or unclassified.
- Ensure that copies of all unclassified public research reports, key public policy documents and consultancy reports are lodged in the ministry resource centre.
- Ensure (in cooperation with the ministry of basic education where appropriate) that those in charge of ministry resource centres have the skills to enter the details of all such documents correctly and accurately into the library database.
- Ensure that the database of all publicly available documents is permanently on-line either via the ministry webpage or the national library.
- Ensure that the ministry webpage is regularly maintained and contains a link to its public document database and gives full details of data services offered by the ministry and the contact details of a person designated to assist with access to public data.
- Ensure that those producing public documents are fully familiar with guidelines related to key words and executive summaries that will allow documents to be entered correctly in the database.
- Ensure that unclassified statistical data are publicly available in a timely manner.

8 The CRII will work with all ministries that are responsible for collecting management statistical data, to ensure that such data are made publicly available in a timely manner and in an appropriate form. Basic demographic, health, educational and geographical and financial data that are in the public domain should be web enabled and maintained up-to-date

Report page 51

9 The CRII will, with the relevant ministries address the issue of how confidential and commercially sensitive data may be made public after the removal of identifiers. It will also develop guidelines on how data that are costly to collect and have commercial value can be made available without cost to *bona fide* researchers

Report page 66

10 The CRII will develop sample guidelines on the ownership of research data, particularly data that has been generated by giving added value to public domain data. These guidelines should reflect existing law in Acts such as those governing the activities of the National Library and The National Archives. The guidelines will offer advice and assistance in the forms of wording appropriate for research contracts and permits so that the fate of raw research data is decided before the research commences. The CRII will also develop procedures to ensure that such contracts are honoured by all parties

Report page 67

11 The CRII will undertake an initial survey to determine what procedures must be developed within ministries and libraries, what are their training needs (including the training of researchers themselves, administrators, IT specialists as librarians) in order to ensure that all

research data produced within ministries are made available in an appropriate and timely manner. Appropriate strategies will be agreed with ministries to meet this problem and this matter will be kept under continuous review in order to ensure continued discipline in the procedures for depositing, and gaining access to, data.

Report page 65

**12** The CRII will review current and future legislation on the processing and storing of data and propose amendments as may be required.

Report page 39

**13** The CRII will promote the use of IT in facilitating data access. In particular it will assist research institutions develop appropriate procedures to ensure that their databases are accessible via the internet.

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## Collaborative research

**14** In a small country such as Namibia, where research institutions and teams are small, there is value in collaborative work across institutions. In addition, the value of interdisciplinary research work addressing problems such as the human impact on the environment, is well-recognised. The CRII will actively promote institutional collaboration, particularly between the private and public sectors. Research projects that cross disciplines will be supported. The CRII will use both its good offices as a broker between research institutions and also as a broker for funding, to support these ideals.

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## Research quality and reliability

**15** The main quality assurance mechanisms available to researchers are peer review of their work carried out either at conference presentations, where it can be debated and questioned, or by publication in peer reviewed journals and books that are open to public criticism. Because there are insufficient opportunities for either of these mechanisms to operate well in Namibia, the CRII will actively catalyse and promote more of such opportunities by strategies such those listed below.

- The promotion of the presentation of research papers at regional and international conferences.
- The promotion of international conferences in Namibia.

- The promotion of appropriate structures that will encourage greater contact between researchers across disciplines and provide greater opportunities for the exposure of research done in Namibia to peers within the country.
- Providing greater opportunities for peer-reviewed publication of research locally, by establishing, perhaps in cooperation with an institutions such as UNAM or the National Museum, a quality peer-reviewed multi-disciplinary research journal that gives an opportunity for the results of research on Namibian topics to be published in Namibia. Journals that currently exist to serve a subsection of the research community, may offer an existing foundation for such a venture.
- Supporting the establishment of Namibian research internet journals, to showcase research, and again elicit peer challenge.

Report page 52

**Research priorities** 16 One of the functions of the NCRST will be to set goals and priorities that address the main development objectives of the country. Through strategies such as the selective funding of research projects, attracting potential donor funding, and actively pursuing international research links that address the main development objectives, the CRII will commission and facilitate research in these areas.

Report page 59

17 The CRII will develop a rolling three year programme of research support based on these priorities, which all research institutes, both public and private, will be invited to support.

Report page 59

## Research expertise

18 The CRII will establish a registry of research expertise in the country. This will be used to assist with future manpower planning and will also allow GRN to obtain the best possible advice locally on matters of pressing scientific interest such as the drawing up of legislation to meet its national and international obligations. Such a registry will also allow the CRII better to support Namibian researchers through such activities as the award of grants, links with external institutions and funds, support for travel to conferences, and the provision of training and upgrading opportunities.

## Capacity development

- Report page 26
- 19** The CRII will maintain an up-to-date registry of research in progress in Namibia. This will allow it to identify areas of research need and develop strategies to address these gaps.
- Report page 69
- 20** The future survival of the research sector depends on a strong and experienced research force. While the indispensable contribution of foreign researchers, here as elsewhere, is fully acknowledged, the strength of Namibian research will ultimately depend on the strengths of Namibian researchers. The CRII will work to create an environment that encourages the emergence of well qualified researchers through a variety of strategies.
- Report page 69
- 21** As one of its first acts, the NCRST will establish a standing committee to analyse in depth the significant issues related to the training and retention of Namibian researchers. This committee will then develop solutions to the problems it identifies and will keep the situation under permanent review.
- Report page 73
- 22** The University and the Polytechnic are the main institutions given the task of producing the future research community. The CRII will actively promote research degrees and training in key areas that address national priorities wherever the institutions have the capacity to respond. Additionally, where appropriate, research training abroad at institutes of repute, will be encouraged.
- 23** The CRII will pursue a policy of linking research funding also to research capacity development, particularly at the University and the Polytechnic
- Report page 74
- 24** The CRII will develop guidelines to ensure that affirmative action programmes within research have the necessary support built into them to ensure that they do not produce second-rate researchers through neglect of essential components of a training programme. An essential component of any such programmes is that the young researchers must have a clear view of what is required of them.
- 25** The Polytechnic and the University of Namibia will be encouraged to establish 'clinics' where young researchers can gain assistance with specific problems in their

work. These problems may be linked to specific research methods but they may be helping researchers compensate for deficiencies that they have experienced in their education. Examples of this might be the acquisition of good English writing style, the handling of statistics or the mastery of some IT software.

Report page 73

**26** The CRII recognises the need to ensure that good researchers are rewarded for doing research. It recognises that one consequence of current career structures is that promotion often means that good researchers are moved into administrative positions. The CRII will maintain a watching brief on career structures and salaries and promote management structures that ensure that experienced researchers are properly rewarded.

Report page 73

**27** The CRII will develop a system of guidelines for supporting young researchers that expose them to all the research processes, including the presentation of results for publication or at conferences. This will be linked to a 'young researcher' fund established under the auspices of the FRST.

Report page 73

**28** The CRII will develop guidelines for ensuring that research project proposals have specific capacity development mechanisms built into them.

Report page 73

**29** The NCRST will work in close cooperation with the relevant directorates of both ministries of education in their work to ensure that the education system develops in such a manner as to allow the emergence of an academic cadre, from all sectors of society, that will ensure a continued supply of potential researchers. This cadre should be representative of all sections of society and both genders equally.

Report page 74

**30** The NCRST will, through its various institutes, foster a culture that values and understands research. It will develop a number of strategies through which this can be done. These will include the fostering of competitions such as the 'Young Scientist' and the National Mathematics Competition using both its own funds and supporting the applications of the organisers of such competitions to sources of private sector funding. The CRII will also encourage research teams and institutes to produce regular bulletins of their work in a form that is accessible to the intelligent layman. These will be made available to cadres such as legislators and schoolteachers.

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## Research Ethics

Report page 79

**31** There is a widely recognised need for a generally agreed code of conduct for researchers in Namibia that covers the whole spectrum of research and which can be then given interpretations specific to each sector. This need has already been recognised in that the country is a signatory to a number of international protocols for which related legislation has either been developed, or is being developed. Examples are the international protocol on the Rights of the Child and the Cartagena protocol on biosafety.

Report page 79

**32** The CRII in consultation with the research community, will establish a standing committee with the task of consulting widely among the research community in order to draw up a code of ethics. In this process it will need to take cognisance of a number of existing Acts of Parliament which have a bearing on the conduct of research.

Report page 83

**33** There is concern among the Namibian research community that a number of the ethnographic researchers from outside the country that have come to Namibia on a legitimate permit to conduct research in the more remote communal areas, have been insufficiently sensitive to the customs and traditions of the headman and villagers themselves. The CRII, in consultation with Namibian ethnographers, will draw up a procedural guide for all wishing to conduct research in communal areas.

**34** Immediate areas of concern, of particular importance to research in Namibia, that will be addressed by the CRII ethical standing committee are as follows:

***Research on human subjects.*** Of particular concern is medical, demographic, educational, ethnographic and anthropological research. The issue of informed consent must be clearly defined, particularly when the subjects are minors or groups such as prisoners.

***The use of animals in research.*** Ethical guidelines are needed not only on the use of animals for testing and in laboratories, but on the treatment of wild animals. Unannounced inspections by the veterinary service will be part of the guidelines.

***Research in fragile environments.*** The existing guidelines used by many institutes will form the basis of the policy guidelines.

***The removal of artifacts and specimens.*** Existing guidelines on this will be clarified and become the basis of national policy. This will be linked to a variety of enforcement measures such as the public exposure of individuals and institutions failing to meet the guidelines.

***Genetically modified organisms.*** This field is currently the subject of intense ethical debate. The CRII will ensure that aspects of it that have a bearing on research in Namibia are clarified and kept under review and where necessary, enshrined in law.

***The management of Namibian genetic resources.*** This area is currently under national and regional review. The CRII will contribute to this review and be responsible for ensuring that the research community is aware of the legal framework that will evolve from it

***Timely deposition of results and data.*** This matter has been covered in paragraphs 4 to 11

Report page 79

**35** The CRII will ensure that the various codes of ethical conduct are published on the web and also are incorporated into permits and contracts. The CRII will also maintain a public registry of all visiting researchers and assist host institutes in the process of ensuring that the ethical guidelines are followed.

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## Patents and intellectual property rights

**36** The NCRST will promote whatever guidelines, policy or laws that emerge as necessary to protect the intellectual property. Current copyright legislation is sufficient to protect the rights of authors. This legislation defines a database as a 'literary work' and so gives it the same degree of protection. However, it is likely that Namibia will be affected by international reciprocal arrangements on the exchange of information that may require some adjustment of this legislation. The NCRST will keep this under review.

Report page 38 and 82

**37** The rights of Namibian inventors must be rigorously protected. The CRII will support, as appropriate, the patenting of potentially useful Namibian research findings. The area of registration of industrial and commercial patent and the protection of intellectual property rights are currently under review both nationally and regionally. This review will lead to legislation

Report page 32 and the CRII will assist Namibian researchers seeking the protection of their rights evolving from their work

Report page 32 **38** Of particular concern to Namibia, which has a rich cultural diversity with its associated indigenous knowledge, is the protection of that knowledge and of cultural and spiritual heritage. These are matters that are being considered under legislation related to the establishment of Cultural Councils and to the protection of indigenous knowledge. In both of these the CRII has a legitimate stake and it will represent the interests of the research community in the process of considering this, and related, legislation.

## Marketing and development

**39** The CRII will assist researchers in the most appropriate ways so that they and the country may benefit fully from any potential commercial or industrial application or their work.

**40** The CRII will actively promote research linked to possible commercial or industrial innovations, particularly those that have clear links to the national goals of employment and poverty alleviation.

**41** The CRII through its two divisions, will act as a brokering agency to promote synergy between the research community and the commercial and industrial sectors

## Research permits

Report page 53 **42** In order to ensure that the objectives expressed in the policy document on research ethics are met, a system of permits to facilitate research must be developed and enforced. The CRII will play a central role in this by developing the general principles that will underpin the permit system and guidelines governing their issue. In this process, the CRII will take cognisance of existing good practice.

Report page 53 **43** The CRII will work together with the ministries concerned to produce guidelines for the timely issue of permits in each sector. Researchers wishing to work in Namibia will be able to apply for a permit via the CRII website.

**44** The CRII will encourage Namibia-based researchers to take advantage of either institutional or individual

affiliation to the CRII. This will allow researchers all the benefits of affiliation and at the same time would provide an element of voluntary regulation to ensure that local researchers, as well as visitors, complied with the ethical code of practice and the requirement for the timely and appropriate sharing of results.

**45** The CRII will seek to develop ‘fast-track’ strategies for the issue of permits under certain circumstances. These strategies may delegate the issue of the permit letter to research institutions under certain circumstances where the work is non-invasive, or where the research worker is coming to take part in an existing project.

Report Page 53

**46** The CRII will encourage overseas researchers to take advantage of either institutional or individual affiliation to the CRII. This will allow them the benefits of affiliation and at the same time ensure that they comply with the ethical code of practice followed by Namibian researchers encourage them in the timely and appropriate sharing of results as required by their permits

Report page 53

**47** The CRII will work with research institutions in vigorously pursuing visiting researchers who contravene the spirit or letter of research permits

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## Funding Research

This section of the research policy outlines proposed mechanisms for funding research

### The Fund for Research, Science and Technology

- Report page 59

1 The Fund for Research, Science and Technology (FRST), will be established under the auspices of the NCRST, The fund is to be mandated to receive monies from any quarter inside or outside Namibia (subject to the overall control of the Ministry of Finance). It will be used to fund a national research science and technology programme on a three-year basis.
- Report page 59

2 The National Research Science and Technology Programme will be set out every three years. In drawing up the research element of this programme the NCRST will consult the research community through its advisory committee structure. This will be a rolling programme that will be kept under review, and can be modified at any time by the NCRST as long as it remains within the principles guiding the programme approved by parliament.
- Report page 59

3 The FRST will not only be responsible for funding research programmes from monies allocated by parliament. It will also have a mandate to raise support for research from donors and the private sector.
- Report page 59

4 The mechanisms to be put in place for supporting research through the FRST will not supplant existing mechanisms that are operating satisfactorily. Rather, the FRST will introduce a flexibility into the funding system, so that it offers an opportunity for a much more creative regime for research funding that should add value to the existing system.
- 5 The Fund will examine existing and novel systems of funding research. It will look, in particular, at new and creative ways of raising money such as various levy systems that currently operate or could operate, in order to ensure that best use is made of funding that is, or is potentially, available. The Fund will also explore mechanisms for generating research funding from income from research activities.

**6** The main mechanism for funding research will be project support. Projects will be developed according to national priorities and institutions will be invited to bid for them. Projects will normally be of less than three years' duration, but where appropriate, have mechanisms built into them for extension based on meeting given criteria. The FRST will, in consultation with the research community, put in place a fair system for the transparent evaluation of bids. An agreed reporting system will be built into the award.

Report page 59

**7** Project-based funding offers an opportunity for innovative systems of co-funding with donors and the private sector; if an organisation can raise by itself a given proportion of the cost, the institute would greatly increase its chances of GRN support through the fund.

Report page 60

**8** Research institutes will be encouraged to apply for the funding of 'core' research activities. This is a particularly significant and useful form of support for research institutes. They would be encouraged to bid on an annual or biennial basis for some funding of the basic running costs of the institution. This has several advantages both for the institution and for GRN.

- It evens out the cash flow at the institution. Irregular cash flow linked with bank loan costs is an unfortunate fact of life for private research foundations which depend on bureaucratically unreliable donors
- It allows the institution space to carry out uncommissioned 'added value' research that might take some results it has obtained during commissioned work a stage further, adding value to it by perhaps just a small additional analysis, and leading to publications. This kind of research is particularly good value for GRN money.
- It allows a programme to be agreed with the institution that will involve a planned capacity development programme for one or more young researcher.

Core funding will have to be dependent on new and sensitive systems of institutional evaluation, which will be developed by the CRII. These will be output-rather than input-based. For many institutions, particularly those that are part of line ministries this will be new, but in the long term, a valuable and necessary departure.

Report page 60

**9** The Fund may support a system of bursaries for local or overseas study. Some of these bursaries might come

directly from the fund. However, it is anticipated that in most cases the fund will act as a broker, connecting potential beneficiaries with donor funding both inside and outside the country. The fund will identify external sources of funding and publicise them.

Report page 61

**10** A ‘young researcher’ fund will be established to encourage young researchers to develop their skills and experience in the process of applying for research grants. This fund will be open only to first-time applicants. It will allow them to experience the whole process and will provide them with appropriate guidance and support throughout. As with larger projects, there will be the normal reporting requirements on which feedback from FRST/CRII will be provided. A key element in this support will be funding to present a paper at a local or regional conference.

Report page 61

**11** The concept of ‘seed’ projects will be developed by the fund as a means of evaluating mechanisms for developing substantial long-term research support projects. This will provide initial funding for a feasibility study of the larger longer-term project. It will provide greater clarity on both the project feasibility and the project costs. A seed project need not necessarily lead to a large project, and if the large project is formulated, the contract need not necessarily be awarded to the feasibility study contractee.

Report page 61

**12** Many projects undertaken in Namibia by their nature have a multidisciplinary potential. This applies particularly to those which, for example, that examine the relationship between biodiversity and human settlement, such as in the conservancy movement. Particular encouragement will be given, through funding, for such joint studies.

**13** Uncoordinated, largely donor driven, funding of research leaves gaps that are neglected. The FRST will undertake a gap analysis to determine which areas are poorly supported from other sources, and fund research accordingly.

Report page 61

**14** Some areas of research could benefit greatly by the purchase of some relatively large-scale item of equipment. Such an item, purchased out of GRN funds, or from funds otherwise negotiated by the FRST, would be resident in a particular research institute, but will be available for use by any researcher or team wishing

work with it. Such equipment may be designated a National Research Utility and users would pay a realistic levy towards its upkeep

## Research funding at the University of Namibia and the Polytechnic

**15** Research funding at UNAM and PON comes from two sources. A proportion, currently around 1-2%, of the annual subvention from GRN is available for sponsoring research and publications. The second source of funding is external funding for particular projects. These two sources should remain in place.

**16** The FRST will offer an opportunity for strengthening the research capacity at these institutions by opening up routes to alternative forms of funding as described in paragraph 5ff. Cooperative ventures between these institutions and government and private research institutes will be encouraged through the funding mechanism. This will enhance the capacity development element of research projects and will also ensure that expensive national facilities are used wisely.

**17** The two training institutions will be encouraged, with the support of the FRST, to mount research training programmes. These should be more than the routine research technique programmes taken by all advanced degree students. They would include short courses, open to all institutes, on specific techniques of use to researchers, such as courses on new research techniques or on the use of specific software packages. The institutions should also mount research 'clinics' where young researchers can gain assistance with specific problems linked to deficiencies in their former training.

## Line-function research by ministries

**18** Funding for line-function activities comes from the relevant ministry, and this will continue. FRST and CRII will endeavour to add value to this funding through the processes of institutional support outlined in section 3. The intention of this support is to develop creative ways of facilitating an increase in non-GRN income for line-function research institutes that can be ploughed back direct to the institute rather than to treasury. CRII will, however, encourage a shift in the funding mechanisms of these institutes towards one based on output.

**19** Ministry research institutes will be entitled and encouraged to bid for research projects developed under the auspices of NCRST-FRST as described in paragraphs 5ff.

## Research by NGO and private institutes and by individuals

**20** Research carried out by private institutes and individuals is usually contract or commissioned research. Clients are usually donors and multinational organisations such as the United Nations programmes. Such research tends to lack an overall plan, long-term vision and focus, and often involves repetition of work done for other clients. It is not intended that the FRST will replace any of these processes and funding sources. What will be offered is a mechanism, through the CRII support services, for coordinating such work and for bringing it more clearly within the overall development plan.

**20** The FRST and CRII will encourage public-private partnerships in research. The output of GRN research institutes is currently limited by the number of available research staff on the payroll of the institute. A funding regime that is concerned with output rather than payroll considerations will allow, as a matter of routine, the involvement of private researchers on a short-term contract basis in the work of the institutes. This is particularly useful when the research load of an institute has seasonal variations. This will be achieved by a move, in the long term, towards output related funding rather than line-function institutional funding.

## Supra-national projects

**21** An increasing proportion of donor funding of research is being put into supra-national projects, which draw on regional researchers and/or focus on region-wide issues. In many cases, the various elements of developing, carrying out and evaluating such work are put out to tender. Successful bidders tend to be those that have the institutional capacity to put such a tender together, and which have links with sister institutions in the region and links with well-established institutes in Europe and the USA to provide additional expertise. One function of the CRII will be to promote, in Namibian institutions, both the capacity required to take a lead in this process, and the necessary regional and worldwide links.