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LIST OF ACRONYMS USED IN THIS REVIEW

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<tr>
<td>ARC</td>
<td>Agricultural Research Council</td>
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<td>CSIR</td>
<td>Council for Scientific and Industrial Research</td>
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<td>DACST</td>
<td>Department of Arts, Culture, Science and Technology</td>
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<td>DST</td>
<td>Department of Science and Technology</td>
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<td>HSRC</td>
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<td>Indigenous Code of Conduct</td>
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<td>IKS</td>
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<td>Indigenous Knowledge Holder</td>
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<td>IKP</td>
<td>Indigenous Knowledge Production</td>
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<td>KFD</td>
<td>Knowledge Fields Development</td>
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<td>MRC</td>
<td>Medical Research Council</td>
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<td>MST</td>
<td>Ministry of Science and Technology</td>
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<td>NIKMAS</td>
<td>National Indigenous Knowledge Management System</td>
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<td>NIKSO</td>
<td>National Indigenous Knowledge Systems Office</td>
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<td>NRF</td>
<td>National Research Foundation</td>
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<td>NRS</td>
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<td>PMC</td>
<td>Programme Management Committee</td>
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<td>RISA</td>
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<td>ToR</td>
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EXECUTIVE SUMMARY

- In February 2014 the three reviewers were selected based on expertise to undertake a review of the Indigenous Knowledge Systems Programme (IKSP) managed by the National Research Foundation (NRF) of South Africa. The Terms of Reference were forwarded in late February; including the scope of the review, covering the core objectives of IKSP, namely, knowledge production and human capacity development in the main identified themes, and facilitating collaboration in “knowledge production, human capacity development and knowledge use” among the key stakeholders. We were also tasked with assessing the “management of the Programme” and its positioning in terms of contribution towards the overall “IKS Policy and the National Innovation System in South Africa”. Finally the “human capital and financial needs” of IKSP as managed by the NRF were to be reviewed; and recommendations made regarding the “future strategic direction” of the IKSP.

In late May 2014 the review panel met in Pretoria and conducted extensive interviews with over 25 key stakeholders, plus students, and staff from the Department of Science and Technology and the NRF. The review panel had also considered the underlying methodology we would adopt so that the fundamentals of our approach would be clear and transparent.

- The work of drafting the review commenced during the week ensuring that a preliminary draft was available for presentation to a meeting of NRF staff on the final day of our meetings (30th May); and helpful discussion ensued.

- This full draft of the review is divided into six sections, plus four appendices; and the six main sections are as follows
  1) Background to the review, including the policy and intellectual context for the current IKSP, a brief overview of the Programme to date, a summary of the review’s approach and methodology and a copy of the power point slides presented to the NRF on 30th May;

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1 The reviewers thank Andrew Kaniki – Executive Director – KFD and Kaluke Mawila – Director responsible for the IKS Programme, for their factual feedback on the first draft and also David Manamela for his support and encouragement throughout the whole review process.
2) Indigenous Knowledge Production: The panel agrees that this was the primary and most significant theme of the review. This section is based on evidence from stakeholders, and includes discussion of the strengths, weaknesses and challenges that were identified in our discussions;

3) Management of the Indigenous Knowledge Systems Programme: The panel agrees that management does not stand on its own, but should be linked back to the aims of the Scheme, and the objective should be the production of new Indigenous Knowledge;

4) Capacity building and outcomes: The panel provides an interpretation of capacity building, in terms of training of new researchers, the development of capacity among indigenous knowledge holders, and the transmission of such new knowledge via new school curricula;

5) Translational research: The panel has identified successful examples of new knowledge being translated into commercial benefit, but also notes examples where the Scheme had not worked as well as it could.

6) Recommendations: The panel has grouped its 18 recommendations according to the four main themes identified, as divided into the short, intermediate and longer term.

The key findings are summarised under the four main themes, below:

1. Knowledge Production

IKS is currently not well conceptualised and understood among grant applicants to the scheme. One area of concern is that although there is strength in diversity, the current Programme is skewed towards bio-medical research (more applications are from the bio-medical sciences). While the common term used, ‘traditional or community knowledge’, potentially provides flexibility and a broad common sense understanding of IK and IKS, it does not provide an appropriate level of guidance to potential applicants. Now that the Scheme has been operating relatively successfully for a number of years, there are enough good examples to provide better definitions of IKS. A national discussion that involves key stakeholders could consolidate these towards developing a common understanding (if not a definition) of IK and IKS, with a benchmark of the production of new knowledge.
2. Scheme management

The management of the scheme itself needs to be grounded in the conceptualisation of IKS. Ideas canvassed by the panel and interviewees include developing a set of funding rules that cover and integrate matters such as the selection criteria, the assessment process, the external peer review, indigenous ethical framework and strengthened conflict of interest policies for the PMC.

3. Capacity-building

The panel commends the numerous successes in terms of student training through the grant-linked bursary scheme. The panel, informed also by inputs from some of the stakeholders interviewed, noted the limited efforts made so far towards translating the new research findings from the IKS Programme into classroom curricula, particularly at the school level. Formal guidance is required in terms of best practice. One notable example from which we can begin to highlight and share best practices is the Epistemologies project led by Prof Ogunnyi at the University of the Western Cape. Another is the work led by Prof Thenjiwe Meyiwa (HSRC) on facilitating the incorporation of local knowledge in Mathematics in schools in the Eastern Cape.

Currently there seems to be zero or at best limited capacity building of Indigenous Knowledge holders (the focus is on postgraduate student training). Younger Indigenous community members interviewed felt that they do not benefit at present. A clearer strategy is needed to guide internal capacity building among indigenous knowledge holders through bursaries or other schemes. Alternatively, applicants to the scheme could be encouraged, through funding, to have built into their research projects, components of indigenous knowledge holders’ training.

4. Translational Research

A number of stakeholders proposed a separate scheme dealing with technology and innovation (alongside one focusing on Indigenous knowledge creation and development). With a few notable examples (mostly focusing on IKS and Bio economy, including African traditional medicine, food security and cosmetics), the current Programme does not seem to
have significant impact on the lives of Indigenous communities. It is also important to note that these topics formed the majority of funded projects, with fewer applications addressing IKS from social science and epistemological perspectives. Another issue raised by some stakeholders was the need for genuine co-production of knowledge between researchers and Indigenous knowledge holders (for example around Indigenous measurements systems, the renaming of plants/products and so forth) and the incorporation of Indigenous knowledge into the mainstream health system.

**Recommendations**

The 18 recommendations are listed at the conclusion of the report, according to those four themes, and, where appropriate, will be divided between short-term (urgent), medium-term and longer-term.

**BACKGROUND TO THE REVIEW**

The Indigenous Knowledge Systems (IKS) Focus Area Programme was established in 2001 by the National Research Foundation (NRF) with “ring-fenced” funding from the then Department of Arts, Culture, Science and Technology (DACST), now the Department of Science and Technology (DST). Originally the Programme was designed to achieve *inter alia* three important objectives: to promote research in order “to deepen understanding of IKS”; to deepen understanding the role of IKS “in community life”; and, to contribute “towards sustainable development of not only South Africa, but the African region as a whole” (DST and NRF 2014, p.3).

Under the National Indigenous Knowledge Systems Office (NIKSO), established in 2006, which drives the overarching IKS policy, the NRF, through its Knowledge Fields Development (KFD) Directorate of the Research and Innovation Support and Advancement (RISA), was “re-contracted to manage the knowledge development (and associated human capacity)” elements of that policy. As a consequence in 2008 the IKS Programme Management Committee (PMC) was established, to lead the conceptualization of the new research funding Programme, which continues to this day. The PMC has broad
responsibilities, including: “Defining the scope and content of the directed calls”; “Assessing applications submitted in response to …both the directed and demand driven calls; and both advising on funding and acting as peer reviewers. The panel noted the safeguards in place if any PMC members were also applicants.

In this review, as in the Terms of Reference document (DST and NRF 2014, p.4, footnote 1 – hereafter called the “Terms of Reference” – see Appendix One), the term IKS Programme refers specifically to the NRF managed Programme (and not to other Programmes such as the Centres of Excellence that may incorporate elements of IKS, and other funding instruments and interventions managed directly by DST itself). For example, the panel was advised that DST-NIKSO manages related initiatives such as the National Recordal System, which is discussed below.

Through its guiding principles the IKS Programme is expected to achieve the following objectives:

1. The development of new epistemologies and research methodologies on IKS
2. The advancement, promotion and protection of IK and IKS
3. The utilisation of IK production in the emerging knowledge economy
4. The generation of new technologies in line with national priorities
5. The recording and documentation of IK and IKS
6. The creation of wealth and the development of human capacity, skills and wealth.


At a high-level, IKS “supports and promotes IKS knowledge development (i.e. research grants) and capital development (i.e. student support)”, in the context of an overarching vision to create for South Africa: “World-class research; Transformed society; and, Sustainable environment” (Framework Document 2013, Section 3.3).

The immediate context of the review was provided by the challenges related to the high proportion of unsuccessful applicants under the 2011/12 IKS call for applicants, with seven applications only, funded from a total of sixty-nine; and a delay in finalising the process for the establishment of a Centre of Excellence in IKS. The panel understands that some important part of the reason for the relatively low number of successful applications was a
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cering low level of real, active and equal partnership involvement by IKS knowledge holders, a subject to be addressed in Section One of this review. The panel notes that there was greater clarity in the 2013/14 Call for IKS proposals regarding the degree of real, ‘active’ partnership required. *(Framework Document 2013 Section 4).* Another aspect was the varied understandings of IK and IKS among applicants, with many previous applications addressing mostly Bio-prospecting with non-IKS methodologies and epistemologies therefore making their way into the Programme. This points to the need for the NRF to facilitate (if not drive) a national (and ultimately regional) Programme towards developing a more nuanced and common understanding of IK and IKS; and to communicate this better through both ‘western’ and more community-based media and communication channels.

The broad and fundamental ideational context for the review was provided by the DST’s Indigenous Knowledge System Policy Document as adopted by Cabinet in November 2004 (hereafter cited as *IKS Policy 2004*). The then Minister of Science and Technology, Mr Mosibudi Mangena, emphasised the “breadth and scale of South Africa’s valuable indigenous knowledge resources”; the importance of the “spirit of collaboration” across all stakeholders in the field, building upon the “individual knowledge holders”; the growing emergence of international processes recognising Intellectual Property rights, including in “Traditional knowledge and folklore”; and the translation of findings into making real and substantial improvements “in the lives of many citizens and their living conditions” (*IKS Policy 2004*, p.3). Gaps were identified, relating to access and equity, especially in terms of acknowledging the role of women as indigenous knowledge owners, and in an overall way ensuring the full participation of black people in training and research contexts (*IKS Policy 2004*, p.32).

**Knowledge Production**

Between 2009 and 2014, a total of 196 applications were received and of these, about 35 (18%) proposals were funded (see Knowledge Fields Development (KFD) *Indigenous Knowledge Systems (IKS) Self Evaluation Report 2009-2014*, pp3-4 – hereafter cited as *IKS 2009-2014*). The panel was also advised that while the NRF has received R10m per annum, there were difficulties and delays in receiving this funding; and in 2012 the DST did not transfer the R10m. Coincidentally that was the year when there were only three fundable proposals! Proposals covered the following themes.
• IKS and Bio economy (African traditional medicine, food security and cosmetics
• IKS Epistemology (Ubuntu and cosmology, taxonomies, pedagogies and methodologies)
• IKS and Climate Change
• IKS and Energy
• IKS Practices of Khoi, Nama, Griqua and San communities.
• Novel and creative thinking that will shift the boundaries of IKS knowledge production and that address national priorities in South Africa.

The Reviewers met to consider these issues and hear evidence from a wide range of stakeholders at the NRF headquarters in Pretoria from Monday 26-May to Friday 30 May. A detailed schedule of meetings is at Appendix Two. Three confidential submissions were also received and the input included in our summary.

Overarching approach and methodology adopted by the review

We learn from others, so it is this world-view that has informed the review. To ‘Talk less, listen more, and hear all voices’ framework guided our deliberations. But then the issue becomes: how does this framework guide our work especially in terms of developing the main findings and drafting recommendations? The panel agreed that it was important to examine the data and the voices to ensure that the findings reflect the diversity of the views that were expressed and the diversity of voices that were heard across the four days of meetings. From this perspective, the recommendations were drafted through the following process:

❖ Collating and interpreting the data.
❖ Drawing recommendations from best practices, as highlighted by the participants in the review process, and from the DST/NRF documentation provided to the panel (see Appendix One).
❖ Drawing recommendations from the practices that can be observed in the global literature, including on similar funding Programmes that are designed to develop indigenous knowledge and to build indigenous research capacity.
Some findings and recommendations have emerged from the examples that were provided to the panel through discussion with the stakeholders who spoke to us and from international best practices that were also drawn to our attention by stakeholders.

The Review also notes that knowledge itself is a very broad concept, which incorporates multiple approaches, or ways of knowing, towards the object under study, as follows:

1. Acquaintance with facts, truths, or principles, as from study or investigation; general erudition: *knowledge of many things*;
2. Familiarity or conversance, as with a particular subject or branch of learning: *A knowledge of accounting was necessary for the job*;
3. Acquaintance or familiarity gained by sight, experience, or report: *a knowledge of human nature*;
4. The fact or state of knowing; the perception of fact or truth; clear and certain mental apprehension;
5. Awareness, as of a fact or circumstance: *He had knowledge of her good fortune.*

The panel interviewed about 60 people including the NRF management team, grant holders, Programme Management Committee members, stakeholders in the IKS sector, University research management officials, community representatives, and undergraduate and postgraduate students. We read and analysed literature ranging from policy documents, IKS funding instruments, NRF self-evaluation reports, to grant holders’ annual reports, and, in some cases, the publications of grantees. See *Appendix Two* for the list of interviewees and the schedule of interviews.

The panel agreed that there were four main themes that emerged from the data presented to us, and that the themes should as far as possible, be approached in terms of ‘best practices’, ‘key gaps’ and ‘main challenges’. These themes were highlighted in an initial way at a feedback session to NRF staff on the final day of the panel’s meeting on Friday 30 May.

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2 See online Thesaurus: [http://dictionary.reference.com/browse/knowledge](http://dictionary.reference.com/browse/knowledge)
SECTION TWO: THEME ONE, INDIGENOUS KNOWLEDGE PRODUCTION

This section responds to the Terms of Reference concerning “knowledge production”; the facilitation of knowledge production such as through “collaboration”; and the extent to which it involves Knowledge holders/owners; and the subsequent outputs and products (Terms of Reference, p.6).

We reviewed knowledge production also in the context of the research policy principles that inform the crafting of the calls for proposals. These principles are repeated in calls for proposals as follows:

- “Both basic (e.g. epistemological studies) and applied research will be encouraged although there will be a stronger focus on experimental research which will lead to technology transfer and patents (i.e. innovation and entrepreneurship).
- Active participation and equal ownership of IKS practitioners and communities in all research activities must be evident.
- All project outputs (e.g. publications, patents etc.) must appropriately acknowledge those who contributed intellectually (e.g. knowledge holders as holders of intellectual property and not as mere subjects or informants).
- Research results should be translated, if appropriate, into policy formulation and action for economic development, sustainable development and improved quality of life for all South Africans, especially the poor.
- Appropriate benefit-sharing agreements between the relevant parties should be put in place should the above point apply.
- Capacity development (including equity and redress) must be embedded in the research projects.” (NRF Call for Applications Indigenous Knowledge Systems (IKS) Programme 20 December 2011)

Appendix Three shows the total number of applications by financial year and themes. The major reason for rejection of proposal across the financial years was that the applications failed to show how knowledge holders, knowledge owners, IK communities or practitioners were partners in the research process. In the financial year, 2013 to 2014 the introduction of seed funding to further develop promising proposals yielded an increase in the number of
funded proposals. At the same time, grant holders explained that the funds allocated for the projects were not sufficient to cover running costs. Allocation of funds to successful grants is thus a serious challenge that needs attention. What is also of note is the declining number of applicants. A possible reason for the declining numbers could be that IKS research is a relatively new area and thus there are relatively small numbers of researchers interested in IKS. A second reason highlighted mostly by reviewers of applications to the scheme and some members of PMC was that some applications which were obviously not IKS related (mostly focusing on Bio-prospecting) were submitted for funding. As stated above, this points to the need for the NRF to facilitate (if not drive) a national (and ultimately regional) Programme towards developing a more nuanced and common understanding of IK and IKS.

**Documentation of IK and IKS**

There is also evidence of the recording and documentation of IK and IKS through the IKS Programme, as provided in the DST/NRF documentation. The panel noted that Prof AJ Afolayan of the University of Fort Hare, Alice, had successfully investigated the domestication of wild vegetables, their nutritive value and potential economic benefit, in the Eastern Cape Province. He was also funded to study the antioxidant qualities of stem bark extracts of the *Ziziphus muronata subsp. Mucronata* (buffalo thorn bush); a plant “traditionally” utilised for the treatment of infections as reported in ethnobotanical surveys.

In a parallel effort, the Ministry of Science and Technology (MST) launched the National Recordal System (NRS) March 2013 – in response to the Government’s *IKS Policy 2004*. The details of the NRS were provided by the Project Manager: “The system is unique in that it records African IK in its original oral format, links it to a complex metadata schema, and provides the necessary mechanisms for both positive and defensive protection – the first of its kind internationally” (Press Release Minister of Science and Technology March 2013 – *Minister Hanekom launches Recordal System for Indigenous Knowledge*). The panel noted that one of the challenges that still need to be addressed is how to make the database accessible to the public. The development of a telephone interface is currently under way. While not strictly part of the IKS Programme managed by the NRF, it seemed to the panel and several interviewees, that it would be a significant gain in capacity building if any accessibility issues and perhaps the communication strategy more generally, were co-
ordinated between the DST and the NRF. This also speaks to the Terms of Reference regarding the NRF’s place in the bigger IKS picture.

The panel noted that while the *IKS Policy* 2004 (chapter 8) addressed the importance of integrating museums and libraries into the process of gathering, documenting and promoting traditional knowledge, there were some concerns expressed to the panel that meaningful steps had not been taken towards collaboration, especially between the DST and NRF in the development of infrastructure capacity in IKS.

**Develop, Promote and Protect IK and IKS**

Grant holders highlighted *two main views* on the best ways of developing, promoting and protecting IK and IKS. *One view* argues for a parallel development of IK and IKS on equal standing with conventional knowledge system, while a *second view* promotes the interfacing or integration of IK and IKS with mainstream or conventional knowledge systems, . In this category is the co-production of knowledge approach. Linked to this was a third approach which emerged from some of the projects seen by the panel and reported by various interviewees involving substituting IK and IKS with Western terminology (names, concepts and knowledge) and the panel saw this as inappropriate and possibly unethical research.

*(1) Interfacing or Integrating Knowledge Systems:* Research Director: Education and Skills Development, at the Human Science Research Council (HSRC), Prof Thenjiwe Meyiwa received two grants to empower Mathematics education teachers to incorporate local knowledge in the classroom and to integrate indigenous knowledge in the curricula. Prof Meshach Ogunnyi of the University of Western Cape developed an argumentation based course to enhance teacher’s understanding of the nature of science and IKS and their ability to integrate both science and IKS in the classroom.

*(2) Developing Parallel Knowledge Systems:* As noted, there is also a view among some grant holders and stakeholders that African IKS has to be independent and that spaces for independent African epistemologies should be created. IKS research should
be informed by world-views that emanate from knowledge owners and indigenous communities’ assumptions about the nature of knowledge, reality and values. Amongst the grant holders and stakeholders, is the view that IK should not be mainstreamed into conventional knowledge but should be allowed to interact with other knowledge systems on equal standing. Grant holders holding these views are developing research approaches and data collection methods that emanate from indigenous world-views. **Prof Abel Pienaar**, who is in the field of teaching and learning in the School of Nursing Sciences at North West University, is of the view that IKS should co-exist with western sciences, because they are two distinctly different systems.

Prof Pienaar and his research team work with the Khoi and San communities in the Northern Cape. Their research projects (Seboka) focus on IKS health systems in mainstream health communities. They work closely with traditional healers and view them as experts. His view is that researchers should focus less on making indigenous plants look like western products, and should rather focus on using the plants as they are used in the African context. Approximately 70% of plants are used for psychospiritual purposes. It is estimated that about 82% of indigenous people still prefer indigenous health managed system and community-based care. Thus it is essential that primary health systems are revitalized and that respect is cultivated for both community and mainstream primary health care systems. Based on visibility of the two health systems, researchers recommend two funding models: one for the extraction of plant ingredients and the other to fund indigenous knowledge co-created with indigenous knowledge holders using indigenous epistemologies and informed by African values and principles. The *Kgotla* method of data collection was developed from the application of an indigenous world-view on the research process. The method is used by university students and researchers who conduct IKS research in communities and organisations in South Africa.

**Dr Catherine Namomo**, of the Department of Archaeology, at the University of the Witwatersrand (Wits), also uses the parallel knowledge approach in her project. Hers is a community-based (Limpopo) project with the aim of connecting the community
to the research and the knowledge gathered. The community is known for its rock art and wish to use the rock art to promote tourism in area.

The project also engages community members in the collection of oral histories. Sixteen community members were trained to gather stories from five tribal authorities in order to tap into different sources of history. Community members were also asked to take photographs. The information they collected and the photographs are stored in a heritage archive in the community and is managed by community members. This is only available to members of the community, information gatherers and researchers. The information is presented in a way that is agreeable to communities. To attract tourists, a museum will be established in the community. Information will be made available in English, the local language and Afrikaans. The museum will comprise a public room that can be used for meetings and networking. The information gathered through the research is made available to the community. Through this research an indigenous heritage management system was developed and informs the management of the site.

These two examples illustrate the co-creation and co-production of knowledge that engage IK holders and communities as equal partners.

**Bio-Prospecting:** There is also a view that what may be submitted as an IK proposal turns out to be Bio-prospecting. In Bio-medical research in some cases, what is indigenous is only ‘the plant’. Once in the laboratory, the indigenous plant loses its indigenous name, its history, consequently, its benefits to the community is lost. There is a strong view among stakeholders that while there may be legislative protections for IKS in place, the juries prudence and policing has not developed sufficiently to combat bad research practice that amounts to illegal bio-prospecting.

A submission from **Mr L Matsobe, of the Mokgola Community in Zeerust** provides evidence of a ‘bad’ research practice:

According to the community representative, early in 2000, the community collected leaves from a tree which elderly community members had used for medicinal purposes and for making tea and presented it to the DST to find out if there was any commercial benefit to be derived. Three years elapsed before the DST came back to the community to ask for
permission to do research using the tree. The community was informed that the DST would only focus on the tea and not on the medicinal properties of the tree. The community agreed to the research proposal and meetings were apparently set up with the Medical Research Council (MRC) and the NRF. The community agreed that everyone should benefit from the project and they formed a steering committee to protect their interests. The steering committee consists of eight young members and a representative of the tribal council. They believed that the project would allow the community to go forward. After several meetings they signed an agreement with the MRC and providing them with trees to use in their research. The MRC’s focus was now on whether or not the trees can survive in other climates. The MRC researchers also conducted interviews with elderly community members about the best time to harvest the leaves and traditional healers were later involved in the project. They agreed to share basic knowledge. The MRC asked the community to identify land where trees could be planted that had access to water, which they did. Researchers came up with a scientific name. No further progress has been made.

Some of the issues raised by the community representative (which could potentially be regarded as bad research) in relation to this project included:

- The researchers changed the name of the tree without consulting the community.
- The community has not received any updates from the DST, MRC or NRF about the progress of the project.
- The community requested that two or three young people from the community should be considered for internships. Nothing has happened in this regard.
- To date, the research findings although published and a potential commercial success, have not been shared with the community.

Adequacy of Themes that Guide Knowledge Development

As shown in Appendix Three, the majority of projects funded are on IKS and Bio economy (African traditional medicine, food security and cosmetics; IKS and Climate Change; IKS and Energy; IKS Practices of Khoi, Nama, Griqua and San communities). There is a

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3 The panel notes that as the NRF does not normally engage in such detailed preparation processes it may be helpful to clarify this process that has occurred with the MRC and the DST in order to remove any confusion.

4 Again the panel notes that there may be confusion regarding the role of the NRF – clarification would help all concerned.
disappointing underrepresentation of projects in Education and pedagogy/curriculum; and projects on IKS Epistemology (Ubuntu and cosmology, taxonomies, pedagogies and methodologies). There is a concern that the themes included in the scheme (through the calls for proposals, for example) is too specific and ignores a significant part of IKS that does not fit into the listed themes. Among others, the absence of themes on gender and youth was registered as a major omission.

Challenges in IKS

Challenges in the development of knowledge evident in the limited number of projects funded and declining applications come from a lack of a nuanced conceptualization of what IKS is; unequal power relations between academic researchers and knowledge holders and communities, marginalization of IKS by universities and knowledge gaps on what IKS and its methodologies are.

As noted in the Background section of this review, one of the biggest challenges of the NRF management and IKS Programme is the limited number of projects that are funded and the declining number of applicants. This has been attributed to the absence of or poor articulation of what IK is what IKS research is and what the expected IKS research methodologies are. Consequently, the majority of applicants do not fully understand what is expected. In addition reviewers of applications hold varied world-views that inform what counts as IK, IK research, what counts as knowledge and how knowledge can be researched; the nature of reality and values. One of the strong views on the subject is on naming. There is view that NRF should boldly articulate and name IKS ‘African Indigenous Knowledge System’. This is in line with other practices where visibility comes out through naming, for example Indigenous Chinese knowledge, Indigenous Chinese medicine or Indigenous Indian Medicine. It was reported that when the policy was drafted, it was felt that African IKS should remain in the background in order to encourage nation building. There were views that time has come to develop frameworks and models that do not shy away from indigenous African knowledge. IKS should be renamed African IKS. Linked to this is the fact that in South Africa, the use of Chinese and Indian traditional medicine is legal, while the use of African traditional medicine is not. In addition there is need for clear consistency in the key terms and their uses in policy documents and research projects. For example terms such as knowledge holder, knowledge
owners, knowledge dispensers and community practitioners are sometimes used interchangeably.

**Partnerships between Knowledge Holders and Academics**

One of the requirements in the calls for applications is *that joint, active participation and equal ownership between academic scientists and IK holders/practitioners/community members must be evident in the application (where an IK holder either participates as the Principal Investigator or co-investigator)*. While this is good practice, in the submissions there was no evidence of a funded project where IK holders/practitioners/community members were Principal Investigators in a joint project with academics. Consequently, the research problem and its research questions; the methodologies, analysis and dissemination modes, are determined by the academic researchers. The academic language that drives the research application, the research process and the dissemination was also inhibiting to IK holders/practitioners/community members. Academics on the other hand think that Universities do not have the mechanisms that support and promote research partnerships and co-authorships with IK holders/practitioners/community.

The IK holders/practitioners/community members generally become informants or data sources, their knowledge is not interfaced into the research process as researchers pursuing their own research questions that are informed by their own world views. Consequently, IK holders generally are not co-authors and seldom are they acknowledged in publications arising from their collaborative research efforts with academics. Worse still, they generally lack access to the knowledge produced because it is packaged in forms and language that they cannot comprehend or that is useful for their community needs.

There is evidence however that those IK holders/practitioners/community members are capable of initiating their own research projects and can be Principal Investigators of their own projects.

The conclusion to be drawn is that there are currently no projects that are managed by knowledge holders or IKS-based organizations that have received funding. To date, no applications from community-based organizations have been received. The funding
framework needs to be revised to make provision for the allocation of a percentage of the IKS funds to projects managed by knowledge holders or IKS-based organizations.

The Place of IK in the African University

There is a strong sense that researchers in academic institutions prefer Western knowledge and have a tendency to marginalize and even stigmatize IKS. Non-conventional research methods are rejected by University ethics committees preferring to Westernize IK. There is a concern by students that those who study IK are stigmatized and also receive less funding compared to other students receiving bursaries from other sources. Because of the few researchers in the area and the limited IKS literature available, students as well as academic researchers also felt isolated. Academics are battling with developing and learning appropriate methodologies of researching IKS. Trans-disciplinary, multidisciplinary and interdisciplinary approaches that seem appropriate for IK research are still evolving and therefore relatively new to the academy. With time and continued resourcing, including through NRF support, these can grow and eventually be mainstreamed into academic research.

Knowledge Gaps in IKS Policy

The panel heard evidence that the IKS Scheme is facilitating the development of indigenous knowledge. It also heard of the challenges and frustrations faced by researchers working on multi-disciplinary projects, such as the fact that such research requires being multi-skilled and the researchers are obviously better skilled in some areas than in others. It would be helpful to provide more systematic information about the challenges posed by multi-disciplinary research to intending applicants and stakeholders and some strategies for building research teams that respond to the various skills called for in the research. Such information could be derived from examples generated by the IKS Scheme and from case studies in the international literature. More ambitious goals such as creating true partnerships between knowledge systems, and achieving integrated knowledge, are rather distant at present. In our view working towards a separate code of ethics, an Indigenous Code of
Conduct (ICC) that would incorporate protocols for working with indigenous communities and community organisations, would be an important activity on its own terms as well as a ‘milestone’ on the road to the creation of a new sense of partnership and integrated knowledge. In our view the NRF could take broad institutional ownership of this process, and should involve its indigenous knowledge stakeholders at a high level in the drafting of such a Code. Currently the panel heard of a ‘wall’ between indigenous and mainstream knowledge systems. This presents multiple challenges such as of integrating knowledge systems; building parallel knowledge systems; the interfacing of knowledge systems; and, of making indigenous knowledge part of the global knowledge. That raise the question whether some or any of the current research undertaken by plant scientists, anthropologists and archaeologists belongs in the IKS Programme. This type of research is ongoing and can be funded by other schemes. Although researchers try to engage communities, their efforts are not well structured. The same applies to biomedical research.

**Strengths:**

There are welcome signs that new knowledge is being produced, and appropriate methodologies in generating that new knowledge, that may have global significance.

**Gaps:**

Nuanced conceptualisation of IK and IKS research and related epistemologies; Clear advice on the problems, issues and challenges in working in a new and emerging field

**Challenges:**

To maximize the potential opportunities to contribute to global discussions on the rights of indigenous communities in multicultural societies specifically as they relate to knowledge creation while managing complex national debates in terms of scientific research, multidisciplinarity and the opportunities for IKS to flourish.
SECTION THREE: THEME TWO, MANAGEMENT OF THE SCHEME

This section attempts to address the issues raised by the Terms of Reference: “Assessing the effectiveness and efficiency of the management of the Programme.” (ToR, p.6). In responding to this issue, the panel acknowledges that management does not stand on its own, but should be linked back to the aims of the schemes and the organizational structures and tools necessary for effective and efficient implementation process. The implementation tools reviewed include the business plan, the call for proposals, the application form, the assessment criteria and the report format. We evaluated the efficiency of the model by assessing whether Programme finances were sufficient, whether they were provided in a timely manner and whether there were costs that grant holders incurred as a result of late disbursements. With regard to effectiveness, we reviewed the extent to which the main objectives of the Programme have been achieved; whether actual performance met the required benchmarks; and, the extent to which there are any unresolved major issues related to management and governance of the Scheme.

Overview: Overall the panel was told that this was a potentially good funding model, but the implementation process is not yet fully efficient or effective, as those interviewed felt that implementation was not ideal. Stakeholders did not highlight a lot of positives about the overall management of the scheme. Most felt that this was fine, with the exception being the majority of the students who felt very positive about the Scheme, and the opportunities it provided. From the evidence in front of them, the panel members also feel that the building blocks are there for the development of a good management system, but that more needs to be done to make this an efficiently and effectively managed scheme. From our perspective, the strength of the funding model is that it is being utilised to produce new knowledge and that diverse students, including those from marginalised backgrounds, are benefitting. However, the funding model should be explained clearly to the IKS community (researchers and IK holders) in the funding documents. For example, the overall objective of the Programme, which should be the production of new indigenous knowledge, could be broadly defined in terms of the two different perspectives outlined in Section Two.
Governance of the Scheme - : The Institutional Governance Model – as outlined on page five of the DST/NRF Management Model document (2008) - is potentially a very good model. From the inputs provided, the panel has identified several ways of improving these relationships and yielding better communication. These include providing greater clarity over roles and responsibilities in terms of secretariat responsibilities for the management and meetings; and possibly lessening the frequency of the required joint management meetings from four per year to three or even two per annum. The reporting requirements of the NRF should also be clarified. While formal annual reports are sensible, the precise role and function of the quarterly reports is unclear. It does not seem to align with financial cycles and fiscal probity requirements nor with the timing of the IKS funding calls (which we have noted are also somewhat problematic).

The Scheme Management system is also based on a good model, but some challenges and gaps that need to be addressed were identified, as follows: Assessment of Applications:
Assessment of application is by a panel using a scorecard that is made available to all applicants. The score card outlines the selection/evaluation criteria as follows:

1. Entry level hurdles: scoring=Yes=Pass continue to next criterion Or No=fail (application not considered for funding. Under this criterion, the application should address the scope of the call and illustrate that there is a joint active participation and equal ownership between the academic scientists and IKS holders/practitioners/community members either as the principal investigators or co-investigators.

2. Track record of applicant

3. Proposal: A minimum score of 2 on a weighted score of 4 is required on each of the following: conceptual framework; knowledge production and feasibility of the study in order for the application to be considered for funding.

4. Equity and redress

5. Outcomes/Impacts: A minimum score of 1 is required on Plans for data storage, usage and or dissemination in order for the application to be considered for funding.

6. Legal and Ethical considerations: A minimum score of 2 is required if relevant on benefit sharing agreements in order for the application to be considered for funding.
Many interviewees expressed the wish to have greater clarity as to why proposals were rejected. They reported that they had not received feedback in this regard, and that this would be helpful in revising and conceptualising further submissions to the Scheme. This is a very useful scorecard for academic researchers that can guide review of unsuccessful proposals if a consolidated scorecard were made available for the applicants. One of the limitations of the scorecard is that the criterion on legal and ethical considerations undermines the need for benefit and equal sharing agreements between academic scientists and IKS holders/practitioners/community members. The criterion, *a minimum score of 2 is required if relevant* assumes that there will be partnerships between academic scientists and IKS holders/practitioners/community members where there will be no benefits. Is that possible?

The point was made that when an IK holder makes a plant known and available to academics, that in itself is a knowledge transfer for which process there are no clear guidelines on what the IK holder may expect in return. There may be need to review this criterion and also make explicit types of benefits to academic researchers and IKS holders/practitioners/community members that may arise from the funding including models of sharing benefits. It was also noted that academic institutions have structures that enable promotion of academics on the basis of grant funding. There was a proposal for a promotion policy that will allow non-academics to be eligible for research relevant promotion.

On the whole, the scorecard is biased against IK holders whose knowledge does not necessarily conform to the academic language such as conceptual frameworks, and range of methodological approaches employed as described in the scorecard. In the IKS *Self-Evaluation Report 2009-2014*, the reviewers note that the biggest challenge that remain unresolved is the IK holders perception that the IKS research model and its instruments was designed for academics, with little consideration for what role an IK knowledge holder should play throughout the research process or specification of measurable broad or specific objectives for the beneficitation of IK holder/practitioner/communities that partner with academic. The IKS funding is thus seen as perpetuating the normalized scientific method process which the IKS funding instrument is intended to defy (IKS Self Evaluation Report 2009-2014: 7). Lack of adequate financial support for IK holder/practitioner/communities have resulted in confusion and tensions between the partners and in some cases causing delays in signing consent forms by parties involved and in others causing disruptions that

The guiding principle for the assessment system should be positive knowledge sharing and collaboration, which should be incorporated in the scoring system. In other words the administrative and management should be grounded in the IKS Scheme objectives. Currently the lack of an independent peer-review process in addition to the work of the PMC is problematic. There is a “blurring” of the Scheme governance and assessment processes that should be separate – according to international best practice.

The panel notes the shortage of people who can review IKS applications and reluctance among academics to perform this work, possibly because it is an unpaid task. This gap is imposing additional burdens on the PMC. Other ways of supporting PMC include: clarifying conflict of interest issues when they themselves are also applicants (e.g. not including any PMC members that are applicants for the current round); and providing more detailed guidance regarding how to apply the selection criteria evidenced in the score card (e.g. clarifying how track records should be interpreted for those that have no academic outputs; and/or career interruptions for child-rearing). Details of the funding rules should form part of the assessment process. (This should be related back to a clear and well-communicated conceptualization of IK and IKS).

A related issue is the lack of clarity about the assessment criteria and clear communication to potential applicants about how applications are assessed (also addressed in Section One above). Some interviewees expressed unhappiness about the fact that they are not advised of changes to the Scheme and therefore their applications are unsuccessful. This could be addressed by developing a handbook detailing assessment that would underpin the current scoring system. Applicants should have access to the handbook, through the NRF web-site and any other avenues utilized to connect with stakeholders. In addition, feedback should be provided to unsuccessful applicants about why their applications were unsuccessful.
Funding

Interviewees felt that funding for IKS was inadequate. For example, annual progress reports highlighted budget constraints arising from new challenges during implementation. A student related how *pula molomo*, a community requirement for researchers to reciprocate in return for engaging communities in interviews required additional funds that could not be availed. There were suggestions that each project should be allocated a reserve of at least 5-10% in the form of a contingency budget each year to support emergencies. A related issue was raised by a group of traditional healers, some of them PMC members, who lamented the unequal treatment of ‘students’ in the IKS scheme. For example, while university students (working with university-based researchers) receive grant-linked bursaries, students working under the tutelage of traditional healers and other IK holders in communities do not.

A number of grant-holders felt that the timing of calls for proposals is erratic and pointed out that this makes it difficult for academics to plan the year (in the context of their other academic and social issues). It also slows down the implementation of the Programme and management. It also slows down research Programmes, which results in delays in the meeting of scheme objectives. Initial grants should be extended to four or five years, from the current three; the current annual reporting, progress reporting and financial accounting systems are robust enough to support this increase. Alternatively, if the three-year grant cycle were to be retained, consideration could be given to reviewing reporting (such as lessening the reporting requirements).

Application Form

Currently, according to stakeholders, a number of applications do not reflect a serious engagement with ethical issues involved in working with local communities and IK holders. The application forms could make this requirement more explicit than it already is and more stringent (to avoid the ‘bad research’ practices described in Section Three above). Applicants should be required to elaborate more on ethical issues and their planned responses in terms of relationships with local communities and knowledge holders.
Stakeholders, particularly those representing communities and IK holders argued that the language of communication and engagement within the scheme and the format for submitting applications (i.e., online submissions) tends to be prohibitive to them. For example, access to the internet (in terms of availability and cost) and the language makes it difficult, if not impossible for many of them to submit applications on their own behalf. To address this calls should be made available in all official languages and in the interim, the language used could be demystified and made accessible to a wider audience beyond the academic community. In addition, the format in which proposals are submitted (only electronic) has to be revised to make provision for people who do not have access to the internet.

**Code of ethics**

In Section Three we noted an example of a project which could, from the perspective of a community representative, be characterised as ‘bad research’ or unethical. From various inputs, we understood that most applicants, and indeed funded projects, tend not to engage meaningfully with ethical issues involved in working with local communities and IK holders. To address this, we feel that a separate code of ethics should be developed for the IKS Programme. Currently, projects have to get general ethics approval at university level, with little input necessary from the community. The code of ethics could include among other things consultation structures and processes on how to approach communities, who to approach; whose project it is; who determines the research questions; the methodologies to be used; the benefits from projects, who benefits; how benefits filter through to the community; documentation storage and ownership of the knowledge and language of communication. A range of documents is available from other countries doing IKS research (Canadian and New Zealand examples are readily available).

The implementation of an Indigenous Code of Conduct should also be considered. The Review panel acknowledges that constructing a system of traditional rights is a challenge, given the diversity of cultures and groups in South Africa and viewpoints.
Business plan and Success rates

In order to measure the success of the Programme, benchmarks have to be developed. Without benchmarking it is difficult to achieve accountability. For example, in terms of the overarching policy of the Programme, there should be greater clarity about the expectation of the percentage of the successful projects.

Programmes require an underpinning business plan, which should include measurable indicators and expected outcomes. Therefore data about the expected (or historic) number of applications and the expected success rate should be released ahead of time to stakeholders. That is part of the benchmarking process. Uneven success rates may indicate a mismatch of expectations between applicants, the assessment panels (notably the PMC) and the funders (NRF-DST).

When launching a new scheme, it is not always possible to know what the success rate of the Programme will be, until several rounds have occurred and the quality and appropriateness of the applications have been judged; but if there is a benchmark you have a sense of whether you are achieving or failing; and researchers will be better placed to decide whether to apply, and if so, how to draft their applications

Strengths

Good level of engagement with the Indigenous Knowledge Community (IKC), including through PMC, and as grant holders.

Gaps

Acknowledgement of specific Indigenous Ethical Issues; and strategies for managing and preventing unethical research dealings with communities.

Challenges-

The challenge here involves how to target and engage the IKH at a high level and to engage ‘western-based’ science and social science/humanities researchers at an appropriate level in the same Scheme. This requires clarity of aims and intentions and an appropriate degree of flexibility in the Scheme management and overarching governance.
SECTION FOUR: THEME THREE: CAPACITY BUILDING AND OUTCOMES

This section of the review responds to the regarding the “human capacity development in the identified themes of the Programme”, (ToR, p.6). The panel understood human capacity development to refer to (1) the training of new generations of researchers in IKS, (2) the development of the capacities of indigenous knowledge holders and communities; all with specific reference to equity in respect of women, youth and blacks. (3) It is also connected with the transmission of new knowledge to the future generations through formal and informal curricula.

The panel, as noted above, was faced with a dilemma in assessing the performance of the IKS Programme given the lack of specific clarity around IKS outcomes except at the broadest levels (e.g. IKS Policy 2004). There was considerable scope for interpretation, plus as noted in Section One, strongly divergent views amongst the stakeholders whom we interviewed.

Student Training

NRF funded research by both Masters and Doctoral students has also generated a good volume of knowledge evidenced by the approximately 500 papers and presentations and databases of IKS and Science teaching resource materials. Other projects focus on integrating IKS with Food security and Climate Change and traditional medicine and modern medicine. Some of the students’ topics include:
The Use of indigenous plants in the treatment of domestic animals
Pre-primary and secondary school teachers’ effectiveness in integrating natural and physical science
How traditional plants are used for distressing and religious purposes
The role copper production played in Africa over 2000 years
Programmatic Approaches to Indigenous knowledge and epistemologies
Activity toxicity and compounds of traditional medical plants
Perceptions about communication between traditional healers and their clients during consultation sessions
The documentation of artefacts found in the Kruger National Park
Integration of IK with Modern medicine

Funding of Masters and doctoral students is a very positive outcome given the limited number of South Africans in senior leadership positions either as project leaders, chairs or executive managers in IKS Programmes. Looking into the future, IKS trainees could be groomed to take up these positions. The challenge, however is that there is a lack of well-understood career trajectories for students in IKS. Most of those interviewed were hired in jobs not related to IKS training.

**Equity in Respect to Women and Blacks**
While issues such as human capital and knowledge production, and equity and transformation were highlighted in the Terms of Reference the topic of gender was emphasised more clearly in respect of student funding than in the information provided on the funded grants more generally, as in ToR 8.1.3: “The extent to which the IKS Programme contributes to transformation in terms of race and gender of students and those from marginalized communities”.

The panel has therefore used data from student grants. From the table below, of a total of 46 students who received bursaries only 14 (30%) were women. Clearly there is an under representation of women receiving bursaries from the IKS funding. There are also very few women doctoral students.
Students benefiting from the Grant-linked bursaries

<table>
<thead>
<tr>
<th>Degree</th>
<th>Black Male</th>
<th>Black Female</th>
<th>White Male</th>
<th>White Female</th>
<th>Total</th>
</tr>
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<td>2</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Doctoral</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Masters</td>
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<td>5</td>
<td>2</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Hons</td>
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<td>1</td>
<td>3</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>TOTAL</td>
<td>25</td>
<td>13</td>
<td>7</td>
<td>1</td>
<td>46</td>
</tr>
</tbody>
</table>

Source: Fourth Quarterly report 201/2012DST/NRF Indigenous Knowledge Systems

Building the capacities of indigenous knowledge holders and communities

Most IK holders interviewed in this review, including some PMC members, lamented the fact that the bursary scheme within this scheme only caters for university-based students attached to academic researchers, while student learning under traditional healers and young people and others who are learning from older IK holders in communities as well as from the research are not catered for. They also pointed to the lack of targeted training aimed at developing capacity among young people in communities from the research teams conducting research in their communities.

Addressing these would require, first, changing the funding model and rules, where indigenous knowledge holders would receive direct funding, and attached to that, funding for training young people/students attached to their projects. Linked to the latter, funding would need to be made available for bursaries for such young people and students.
Translating research to the classroom

How can research findings be translated to the classroom? One issue raised in the review is that research findings from IKS funded project are seldom translated into curricula (the exceptions have been highlighted in Section Two). Further, community members feel that they currently do not benefit from the projects and findings, including from capacity building within funded projects. To address these issues, best practices need to be identified, documented and shared across institutions and communities. A clearer strategy is needed to guide capacity building among indigenous knowledge holders through bursaries or other schemes. Another challenge is to address the disparity in the funding for university students and students of for traditional healers, for example.

Challenge

To provide better guidance in terms of indigenous knowledge methodologies to students by working with indigenous communities on topics that may be of particular relevance to indigenous communities. An example of this is the Kruger Park research project undertaken by an honours student. Although the researcher knew intuitively that he had to engage the community, he had no guidance in how to approach or involve the community. As his project progressed, he broadened the scope of this methodology and research. His engagement with the community was limited because of his lack of knowledge on how to proceed. The panel was impressed with his enthusiasm, and his intuitive efforts to engage communities and families whose ancestors may have lived in or near the Park. A future Indigenous Code of Conduct could foreseeably include guidance on methodological approaches towards engaging with removed or otherwise absent communities.

Here we acknowledge the complexities of working in a post-apartheid society where many of the traditional relationships were dislocated by apartheid policies and it is harder to trace the lineage of Indigenous communities back to traditional lands and there are severe challenges in identifying the community role in projects that are recurring in areas where there are now no indigenous communities, but there are significant historical legacies such as burial grounds, evidence of historical community occupation and practices.
These questions require further investigation, but the challenge is there for the capacity building of both sides – the student learning side and the indigenous knowledge owners’ benefit.

The other issue here about capacity building is just – in our view – there needs to be greater support for students working in isolated environments (such as the Medical Research Council) or smaller universities in isolated settings, and greater thought needs to be given providing intellectual nourishment and support for such students. This can take the form of online resources or chat rooms, which are for the benefit of those students only so that they can engage in a conversation online or workshops/seminars provided online from other institutions. Additional funding should be considered for student engagement and workshops. Student bursaries should be extended to Gr 12 learners, because IK is moving into secondary schools.

SECTION FIVE: THEME FOUR, TRANSLATIONAL RESEARCH

This section of the review conforms to the Terms of Reference that ask the panel to “Assess how well the Programme is positioned to contribute to the IKS Policy and the National Innovation System in South Africa and the return on Investment”, meaning the Programme’s “Influence considering its emergent and anticipated impact?” (Terms of Reference, p.6).

One of the success stories of the NRF managed IKS Programme that evidences the creation of wealth and skills development is the Honey Bush Project:

“Prof E. Joubert of the Agricultural Research Council investigated the establishment of the Genadendal community as an independent producer of Honey Bush Tea. The project has been completed and the first Honey bush tea was harvested from three cultivated demonstration plots, situated in Genadendal and Bereaville. The first quality control tool for the Honey bush industry was developed to ensure effective quality assessment and control of its sensory properties” (NRF/KFD Progress Report 2012, p. 7)
The panel understands that this research has generated not only new knowledge but also commercial outcomes and patents, and the devising of new business models to empower the communities.

Ms Mavis Mathabatha, who initiated the *Moringa* project in her village, Tooseng in Limpopo provides an outstanding example of valuable and important projects initiated and led by IKS holders/practitioners/community members. In 2005 she started the Moringa project in her village, Tooseng in Limpopo. The *Moringa* tree has various uses and is known for its medicinal properties and nutritional value. The panel was told that the project started with the feeding of 350 orphans in a community and within six months the children ‘started to blossom’. In 2009 she received funding to supply every household in the community with Moringa supplements. Community members reported that they had more energy. In 2010 she won the Department of Agriculture’s Woman Entrepreneur of the Year award. She is currently in the process of patenting products derived from the tree, which include tea, energy power and capsules. The CSIR was involved in the manufacturing of the capsules and the University of the Witwatersrand was involved in the research about the properties of the plant. She has already received orders from European countries and will start exporting from 2016. She started an agro processing plant in collaboration with the Department of Agriculture, the Agricultural Research Council (ARC), the DST and the Department of Trade and Industry. All products will be certified. The agro-processing plant is situated on a 25 hectare agricultural holding and she currently employs 27 women, 25 men and 17 youths. She is very positive about the scheme and envisions repeating the project in every province and to empower more women.

**Summary**

Some scientists and other indigenous knowledge holders, however, expressed concerns about outcomes and lack of benefits accruing to indigenous knowledge holders. It was mentioned that in terms of outcomes, research is having very little impact on the lives of indigenous knowledge holders. There were however some good examples of how the scheme has
benefitted indigenous knowledge holders. The panel noted the *Moringa* project and how women have benefitted from this; another example provided was the honey bush tea. Academics and those involved in curriculum development also benefitted. Some sceptics – community member provided trees for analysis to the MRC – five or six years ago, but the project seems to have stagnated.

A number of good indigenous methodologies have emerged in the work of students, for example, *lekgotla* based on the values of humanity, dignity, respect, dialogue and open communication, and the spirit of Ubuntu (I am because we are). There is little doubt that the IKS is having an impact on the generation of new knowledge and the creation of new products. It would be useful to gather systematic information regarding the research outputs and products that have been created so far by the Scheme and to ensure this information is disseminated as widely as possible. This would strengthen the Scheme’s legitimacy, and provide a platform for future research.

The panel was made aware that the Scheme has been relatively successful in covering the Intellectual Property and copyright sides of projects funded under IKS and if there were ongoing issues they were not highlighted for our attention. Further consideration, however, could be given to acknowledging and/or engaging Indigenous Knowledge Holders as potential authors of research outputs. The panel noted that while the “Acceptance of Grant” documentation was very thorough and comprehensive it did not accord ‘authorship or contribution’ rights the same level of significance as Intellectual Property. We therefore believe the status and significance of authorship/contribution rights should be clarified and included in such scheme documentation going forward. Many professional associations and research journals are increasingly requiring the ‘named’ or senior authors to provide a full list of those who contributed to the production of the research output. Consideration could be given to requiring such acknowledgement of the IKH’s involvement in the research. One avenue could be via the ICC, or it could be included in the proposed Funding Rules for the IKS.
Strengths

New products are being created; new knowledge produced and research outputs are emerging.

The Scheme allows for top up funding if the need is demonstrated, thus providing additional support for those working at a high level.

Gaps

No provision for authorship involvement or acknowledgement of IKH.

Greater transparency required around the good opportunity to gain additional funding in order to encourage researchers to engage in translational – next step – research.

Challenges

How can research findings be translated to the classroom? Guidance needed in terms of best practice. No capacity building of knowledge holders. Younger community members feel that they don’t benefit.
SECTION SIX: RECOMMENDATIONS

Theme One IKP

Short term:

1.1 Creation of an Indigenous Code of Conduct (ethics code), to provide guidance on the protocols for working in the Indigenous Knowledge space, under the leadership of the NRF with co-ownership by IKH. We note the MRC’s IKS Lead Programme Research Ethics and Principles document as an initial starting point, or preamble, to a fuller, more detailed document.

1.2 Serious consideration should be given to IKS being renamed ‘African IKS’

1.3 Better explication of the aims, goals and aspirations of IKS, including the challenges and opportunities of working in Indigenous Knowledge. Acknowledgement that there are genuinely different approaches, including co-partnership and separate (i.e. distinct) systems.

Longer-term:

1.4 Consider the extent to which research already funded under other Schemes should be eligible for support under IKS

Theme Two Management of the Scheme

Short term

2.1 Implement an independent peer review process

2.2 Implement a strengthened conflict of interest policy for the PMC

2.3 Gather all information together regarding the Scheme in a booklet, including the definitions of key terms, the aims and objectives of the scheme (allowing for targeted rounds), the selection criteria, the opportunity for top up funding, and an outline of the assessment and peer review processes

2.4 Provide an assessment handbook for PMC that is publicly available
2.5 Reconsider the timing of meetings between NIKSO and NRF; clarify the management processes for those meetings, and the agreed requirements for the reporting process and content of those reports

*Intermediate and longer-term*

2.6 Develop a consultation process for a second Scheme that focus on translational research across all disciplines, based on a draft set of funding rules

*Theme Three: Capacity building and outcomes*

*Short term*

3.1 Detailed guidance and potentially additional ‘top up’ funding regarding how new knowledge can be disseminated into class rooms. This may involve targeting of cross-disciplinary teams of IKH, scientists and educators?

3.2 Detailed protocols to be established concerning how to work with Indigenous Communities that are now ‘absent’ from the lands and territories being researched.

3.3 Resources developed to support students working in isolation; this could include online resources or funding for annual get togethers such as short or summer school type courses

3.4 Extend bursaries to Grade twelve learners as IK is moving into the secondary school curriculum

*Theme Four: Translational Research and Outcomes*

*Short term*

1.1 Immediately investigate how IKS is benefitting Indigenous communities

1.2 Emphasise the importance of co-production in future rounds of IKS, and allocate it as a selection criterion in assessing applications; alongside separate pathway work initiated by IKH

1.3 Give consideration to ways of publicising and highlighting excellent student work. One idea is the awarding of (cash) prizes to outstanding theses and/or project work

*Longer term*
4.4 Investigate the establishment of an IKS Scheme that focusses on translational activities (see also 2.5)
APPENDIX ONE: TERMS OF REFERENCE AND LIST OF DOCUMENTATION PROVIDED TO THE REVIEWERS

TERMS OF REFERENCE

REVIEW OF THE NATIONAL RESEARCH FOUNDATION MANAGED INDIGENOUS KNOWLEDGE SYSTEMS PROGRAMME
<table>
<thead>
<tr>
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<th>Description</th>
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<tr>
<td>DST</td>
<td>Department of Science and Technology</td>
</tr>
<tr>
<td>IKS</td>
<td>Indigenous Knowledge Systems</td>
</tr>
<tr>
<td>IK</td>
<td>Indigenous Knowledge</td>
</tr>
<tr>
<td>KFD</td>
<td>Knowledge Fields Development</td>
</tr>
<tr>
<td>NIKSO</td>
<td>National Indigenous Knowledge Systems Office</td>
</tr>
<tr>
<td>NRF</td>
<td>National Research Foundation</td>
</tr>
<tr>
<td>PMC</td>
<td>Programme Management Committee</td>
</tr>
<tr>
<td>RE</td>
<td>Reviews and Evaluation</td>
</tr>
<tr>
<td>RISA</td>
<td>Research and Innovation Support and Advancement</td>
</tr>
<tr>
<td>RRG</td>
<td>Review Reference Group</td>
</tr>
</tbody>
</table>
Review of the National Research Foundation managed Indigenous Knowledge Systems Programme

May-June 2014
1. **ASSIGNMENT TITLE**

Review of the National Research Foundation (NRF) managed Indigenous Knowledge Systems (IKS) Programme.

2. **BACKGROUND**

In 2001 the NRF established the IKS Focus Area Programme with ring-fenced funding from the former Department of Arts, Culture, Science and Technology (DACST), now the Department of Science and Technology (DST). The intention of this Programme was to promote and support research to deepen understanding of IKS and its role in community life. It was envisaged that IKS would contribute towards sustainable economic development of not only South Africa, but the African region as a whole. In 2004, the DST commissioned a review of the NRF managed of the IKS funding Programme. The review panel recommended that the funding model and the Programme be replaced by a new one.

In the same year 2004, the Cabinet of the Republic of South Africa approved an IKS Policy. Subsequently, the National Indigenous Knowledge Systems Office (NIKSO) was established in 2006. The IKS Policy is an enabling framework to stimulate and strengthen the contribution of IKS to social and economic development in South Africa. In driving the IKS policy, NIKSO has initiated a number of Programmes and initiatives coordinated through three units, namely, *Knowledge Development and Innovation; Knowledge Management; and Advocacy and Policy Development*. The NRF through the Knowledge Fields Development (KFD) Directorate of the Research and Innovation Support and Advancement (RISA) was re-contracted to manage the *knowledge development* (and associated human capacity) Programme and related initiatives of NIKSO and the IKS policy. In light of the recommendation of the 2004 review, the NRF-KFD and NIKSO agreed in 2008 to constitute an IKS Programme Management Committee (PMC), which assisted in the conceptualisation of a new research funding Programme. KFD manages this revised IKS research funding (and human capacity development) Programme on
Review of the National Research Foundation managed Indigenous Knowledge Systems Programme
May-June 2014

behalf of the DST. The first call of the redesigned NRF managed IKS Programme\(^5\) was posted in 2009. According to the revised Programme, a mid-term review is to be undertaken every three years.

3. **ASSIGNMENT PRINCIPAL AND REVIEW REFERENCE GROUP (RRG)**

The Assignment Principal (AP) is the NRF represented by the Deputy Chief Executive Officer (CEO): RISA. The Assignment Principal will appoint a Review Reference Group. The members of the Review Reference Group will comprise:

- Assignment Principal;
- Executive Director: Reviews and Evaluation (RE), NRF;
- DST representative;
- One member of the PMC;
- One IKS expert/stakeholder who is a non-member of the PMC and has not benefited from the Funding Programme.

The role of the AP together with the RRG will be to provide strategic oversight to ensure that the review is concluded in line with the terms of reference. They will have the following roles to fulfill:

- Approve the terms of reference;
- Advise on the budget;
- Approve the reviewers;
- Approve the review plan and time frame for the review process;
- Consider and suggest suitable interviewees to interact with the reviewers;
- Consider and recommend acceptance to the NRF of the draft and final report by the reviewers;

\(^5\) Used interchangeably with IKS Programme. Given that NIKSO and KFD run parallel IKS Programmes and activities, a distinction is made between IKS activities/initiatives managed by NIKSO and the NRF. Throughout this document, IKS Programme specifically refers to the NRF managed IKS Programme whose primary scope is knowledge development and excludes other Programmes that have elements of IKS such as SARChI and Centres of Excellence.
• Consider and recommend acceptance of the NRF-KFD management response to the report; and
• Meet under the direction of the Chair of the RRG, as required.
4. PROGRAMME MANAGEMENT

The role of the NRF-KFD as Programme management will be to:

- Provide a list of stakeholders;
- Nominate possible reviewers;
- Participate as a subject in the review;
- Provide review documents including the self-evaluation report; and
- Receive the final report and write the management response.

5. SERVICE PROVIDER

The NRF Directorate Reviews and Evaluation will act as the service provider. The responsibilities of the service provider will be to:

- Provide input to the draft terms of reference;
- Prepare the letters of invitation for the approved members of the RRG and reviewers for the signature of the Deputy CEO: RISA and distribution;
- Develop an on-site Programme for the review, including a budget;
- Source the necessary documentation from KFD and make it available to the reviewers four weeks prior to the commencement of the on-site review;
- Manage, coordinate and administer the entire review process, including logistics;
- Provide support to the reviewers;
- Receive the draft and final reports from the reviewers;
- Forward the draft and final report from the reviewers to the RRG for consideration and recommendation for approval by the NRF Executive; and
- Place the final review report on the NRF website within a reasonable time after acceptance.
6. THE PURPOSE OF THE REVIEW

The purpose of the review will be to:

- Provide a retrospective assessment of the performance of the IKS Programme from April 2009 to March 2012 in terms of its objectives, namely:
  - Knowledge production and the related human capacity development in the identified themes of the Programme;
  - Facilitating collaboration in knowledge production, human capacity development and knowledge use among the different categories of IKS stakeholders, particularly Knowledge Holders; Researchers; and Communities;
- Assess the effectiveness and efficiency of the management of the Programme;
- Assess how well the Programme is positioned to contribute to the IKS Policy and the National System of Innovation in South Africa, and the return on investment⁶;
- Review human capital and financial needs for knowledge production in relation to the NRF managed IKS Programme; and
- Make recommendations regarding the future strategic direction of the IKS Programme on the basis of the above.

7. THE SCOPE OF THE REVIEW

This review will cover the period from April 2009 to March 2012. The review will focus on the performance and management of the NRF managed IKS Programme in relation to its aims and objectives and make recommendations for the future. This review is limited to the NRF managed IKS Programme and excludes other NIKSO initiated Programmes like Innovation; Knowledge Management; Advocacy and Policy Development.

⁶ Influence of the Programme considering its emergent and anticipated impact?
8. REVIEW DIMENSIONS

8.1. The reviewers are requested to conduct the review to determine the strengths, weaknesses and impact of the IKS Programme in terms of the aspects outlined below:

8.1.1. Performance of IKS Programme
- Assess the extent to which the objectives stated in item 6 of this document have been addressed;
- Assess the prioritised themes and their impact on the performance of the Programme;
- Assess Programme achievements against expectations and identify any gaps;
- Where possible, comment on the appropriateness of the performance indicators (output, outcome and impact) used by the IKS Programme; and
- Pay special attention to the participation, role and contribution of Indigenous Knowledge (IK) holders/practitioners and IK-based communities in the NRF managed IKS Programme.

8.1.2. Management of IKS Programme
Comment in relation to the DST and NRF:
- The appropriateness of the management strategies, policies and objectives;
- Whether the management structures and processes were well designed and appropriate to achieve the objectives of the IKS Programme;
- The performance of the respective role players [NIKSO, PMC, NRF Grant Management and Systems Administration Directorate and KFD] in the management of the IKS Programme; and
- Comment on the appropriateness and effectiveness of the grant-making processes, i.e., scorecard.

8.1.3. Capacity building
Comment on:
• The capacity development of appropriate human resources in relation to set targets (KFD and NIKSO);
• The impact of the IKS Programme on postgraduate student development; and
• The extent to which the IKS Programme contributes to transformation in terms of race and gender of students and those from marginalized communities.

8.2. **Recommendations**

Make recommendations (short, medium and long-term) based on the aspects mentioned above and also provide a strategic direction required to enhance the NRF managed IKS Programme.

9. **THE REVIEW PROCESS**

9.1. **The appointment of the reviewers, preparations and Programme**

• The RRG will select reviewers and, if applicable, a convenor;

• The review panel should comprise at least two persons with appropriate experience and skills to conduct the review. The resource documents listed in the Appendix will be available to the Panel four weeks before the commencement of the review;

• The RE Directorate will draw up a Programme for the review in consultation with the Assignment Principal and the management of the IKS Programme. The reviewers will have an opportunity to interrogate the proposed Programme, recommend amendments and additions, should the need arise;

• The reviewers will have an opportunity to interview members of the management of the IKS Programme (both NIKSO and NRF), grant-holders, students and other stakeholders; and

• The reviewers will decide on and pursue their own line of questioning (that is aligned with the purpose of the review) during interviews.

9.2. **Deliverables by**

9.2.1. The NRF-KFD
• A self-evaluation report compiled by NRF-KFD Programme should be submitted to RE five weeks prior to the commencement of the review. NRF-KFD is to supply a list of stakeholders arranged according to the various categories, e.g., Programme management and staff, IK holders/practitioners, grant-holders, student beneficiaries, etc. 
• List of current and former students indicating demographics and whereabouts;
• NRF-KFD to provide a report with details of IKS Programme highlights;
• Names, affiliations and contact details of possible reviewers for consideration;
• A written response to the draft review report pointing out factual inaccuracies to be submitted to RE Directorate a week after receipt of the draft review report; and
• A written NRF strategic management response to the final review report to be submitted to RE Directorate two weeks after receipt of the final report for onward transmission to the RRG.

9.2.2. The reviewers:
• Verbal feedback by the reviewers to the members of the Review Reference Group, NIKSO, the NRF Executive and other interested parties;
• A preliminary, draft report by the reviewers on the final day of the review Programme;
• A final report within two weeks of completion of the on-site review Programme. The report should include:
  - Executive summary;
  - Background to the review;
  - Evaluation questions that were addressed;
  - Key findings;
  - Recommendations; and
  - Appendices containing, e.g. terms of reference, persons interviewed, etc.

10. TIME FRAME
The date for the on-site review will be determined by the availability of suitable Review Reference Group members and reviewers.
11. **BUDGET**

The RE Directorate will submit a budget to the Directorate KFD of which will, upon the DST's approval, transfer funds to a dedicated cost centre for the purpose of running the review.

12. **ENQUIRIES**

Programme related:

Dr Kaluke Mawila

Programme Director

Knowledge Fields Development Directorate

National Research Foundation

Review process related:

Mr David Manamela

Programme Officer

Reviews and Evaluation Directorate

National Research Foundation
DOCUMENTS FOR THE REVIEW PANEL

Essential reading

- Brief Self-Evaluation Report
- Example of conditions of grant
- IKS Policy, 2004
- IKS Research Management Model
- IKS Knowledge Fields Development Framework Documents 2009-2012
- IKS Annual Reports (Progress report 2011/12 Knowledge Fields Development, 01 April 2011 – 31 March 2012)
- KFD Key Performance Indicators
- Strategic Plan of the National Research Foundation: NRF VISION 2015

Additional reading

- Department of Science and Technology Ministerial Review Committee on the Science, Technology and Innovation Landscape in South Africa, March 2012
- National Development Plan: Vision for 2013
- Mobilizing Knowledge for Integrated Ecosystem Assessments. Fabricius, C.; Scholes, R.; and Cundill, G.
- South Africa's National Research and Development Strategy, August 2002
APPENDIX TWO

THE DEPARTMENT OF SCIENCE AND TECHNOLOGY-NATIONAL RESEARCH FOUNDATION (DST-NRF) REVIEW OF THE NRF MANAGED INDIGENOUS KNOWLEDGE SYSTEMS (IKS) PROGRAMME

REVIEW PANEL MEMBERS:

- Prof Bagele Chilisa, Professor, University of Botswana, Botswana
- Prof Lebo Moletsane, Professor and JL Dube Chair in Rural Education, University of KwaZulu-Natal, South Africa
- Prof Marian Simms, Executive Director, Social, Behavioural and Economic Sciences, Australian Research Council, Australia (Convenor)

Sunday, 25 May 2014 (Pretoria)

Arrival in Pretoria

In-formal get together at 19h:00 with Prof Bagele Chilisa, Prof Lebo Moletsane, Prof Marian Simms, Mrs Joyce Olivier and Mr David Manamela

Accommodation: Cornerstone Guest Lodge, 25 Camellia Avenue, Lynnwood Ridge, Pretoria
Tel: +27 (0)12 361 8100, Cell: +27 (0)82 571 2110.

Monday, 26 May 2014

08:00 Reviewers to drive from accommodation to NRF

Venue: Nelson Mandela Boardroom, NRF, Meiring Naude Road, Pretoria

08:30 – 09:30 Welcome and briefing of reviewers by representative of the NRF Corporate Executive: Dr Roc y Skeef
also present:

- Mr Lebusa Monyooe, Acting Executive Director, Reviews and Evaluation
- Members of the Reviews and Evaluation (RE) Directorate, NRF

- Ms Joyce Olivier, Director: RE
- Ms Anke Rädel, Professional Officer: RE
- Mr David Manamela, Professional Officer: RE
- Ms Suzanne Tarver, Admin Assistant: RE

9:30 – 10:00 Discussion of review Programme with staff members of RE

10:00 – 11:30 Session for panel members to prepare their strategy and to allocated tasks among themselves (refreshments to be served at 10:00)

11:30 – 12:30 NRF Management of IKS Programme

Dr Andrew Kaniki, Executive Director: Knowledge Fields Development (KFD)

Dr Kaluke Mawila, Director: KFD

Ms Jane Mabena, Liaison Officer, Grants Management and Systems Administration (GMSA)

Mr Lebusa Monyooe, Director: GMSA

Ms Joyce Mokono, Professional Officer, RE

12:30 – 13:00 NRF IKS Programme Director

Dr Kaluke Mawila

13:00 – 14:00 Lunch (photo to be taken of Reviewers with NRF IKS Management)

14:00 – 16:15 Funders

14:00 – 14:45 Mr Hlupheka Chabalala, Director, National Indigenous Knowledge Systems Office (NIKSO), DST
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14:45 – 15:30 Prof Yonah Seleti, Chief Director, NIKSO, DST

15:30 – 16:15 Dr Thomas Auf der Heyde, Deputy Director-General: Human Capital and Knowledge Systems, DST

16:15 -16:45 Mrs Lactitia Tshitwamulomoni, National Dept. of Environmental Affairs

16:45 Wrap up of findings

Reviewers to drive from the NRF to accommodation

Tuesday, 27 May 2014

08:00 Reviewers to drive from accommodation to the NRF

Venue: Nelson Mandela Boardroom, NRF, Meiring Naude Road, Pretoria

08:30 – 10:00 Grant holders

- Prof Kobus Eloff, Professor (Programme Leader), Dept. of Paraclinical Sciences,
- University of Pretoria (UP)
- Prof Hassan Kaya, Director: DST-NRF IKS Centre, University of KwaZulu-Natal (UKZN)
- Prof Thenjiwe Meyiwa, Research Director: Dept. of Education and Skills Development, Human Sciences Research Council
- Dr Catherine Namono, Faculty member, Archaeology, University of Witwatersrand (WITS)
- Prof Abel Pienaar, Associate Professor: Teaching and Learning, School of Nursing Science, North-West University (NWU)
- Prof Hannes Rautenbach, Head: Dept. of Geography, Geoinformatics and Meteorology, UP
- Dr Mamello Sekhoacha, Senior Scientist: IKS, Medical Research Council (MRC)

10:00 – 10:15 Refreshments

10:15 – 11:45 Grant holders

- Prof Anthony Afolayan, Professor: Botany Dept. University of Fort Hare (UFH)
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- Dr Shadreck Chirikure, Senior Lecturer: Dept. of Archaeology, University of Cape Town (UCT)
- Prof Lesley Green, Associate Professor: Anthropology, School of African and Gender Studies, Anthropology and Linguistics, UCT
- Dr Nokwanda Makunga, Senior Lecturer: Dept. of Botany and Zoology, Stellenbosch University (SUN)
- Dr Nomfunda Mlisa, Director: Student Counseling Services, University of Fort Hare (UFH)
- Prof Indres Moodley, Director: Health Outcomes Research Unit, Dept. of Public Health Medicine, UKZN
- Prof Meshach Ogunniyi, School of Science and Mathematics Education, University of the Western Cape (UWC)
- Prof Myra Taylor, Research Manager: School of Nursing and Public Health, UKZN
- Prof Maryna Van de Venter, Associate Professor: Biochemistry, Nelson Mandela Metropolitan University (NMMU)

11:45 – 13:15 Current and former Programme Management Committee (PMC) members presenting academia

- Prof Neil Crouch, Deputy Director: Ethnobotany Unit, South African National Biodiversity Institute (SANBI), current member
- Prof Christo Fabricius, Professor and Campus Principal, (NMMU), current member (Tel Conference)
- Prof Nceba Gqaleni, Honorary Research Professor: Durban University of Technology (DUT), former member
- Prof Namrita Lall, Professor: Dept. of Botany, (UP), current member
- Dr Gilbert Matsabisa, Director: IKS (Health), Medical Research Council (MRC), current member
- Dr Nokulunga Mkabela, former member
- Prof Piti Eka Ntuli, Professor Extraordinaire, Tshwane University of Technology (TUT), former member
- Mr Martin Sebakwane, Northwest Province Farmers Association, current member

13:15 – 14:00 Lunch

14:00 – 15:00 Current and former PMC members representing Communities

- TrDr Thobeka Kente-Mekwa, current member
- Mr T Mabena, current member
- Ms Mavis Mathabatha, current member
- TrDr Nimrod Nhlapo, current member
- TrDr Shirley Thebe, former member

15:00 – 15:15 Refreshments

15:15 – 17:00 Stakeholders in the IKS Sector in South Africa
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- Mr Baba Buntu, Executive Director, Ebukhosini Solutions/ University of South Africa (UNISA)
- Ms Portia Matla, Director, Dept. of Arts and Culture
- Ms Phephsile Maseko, National Coordinator: Traditional Healers Organisation
- Dr T Mayeni, Director, National Dept of Health
- Prof Mathole Motshekga, Executive Director, Kara Heritage Institute
- Dr Muxe Nkondo retired Professor,
- Dr Otsile Ntsoane, Extraordinary Lecturer, UP

17:00 Wrap up of findings

Reviewers to drive from the NRF to accommodation

**Wednesday, 28 May 2014**

*08:00* Reviewers to drive from accommodation to the NRF

*Venue*: Nelson Mandela Boardroom, NRF, Meiring Naude Road, Pretoria

*08:30 – 10:00* **Deputy-Vice Chancellor and Senior Research Management in Science Councils**: Research/management of institution

- Prof Mohammed Jeenah, Executive Director: Research & Development, Agricultural Research Council (ARC)
- Prof Urmilla Bob: Research, UKZN
- Dr Patricia Smit, Head: Research Support, UP

*10:00 – 10:15* Refreshments

*10:15 – 11:00* **Community representatives**

- Mr L Matsobe, Mokgola Community

*11:00 – 12:00* **Postdoctoral fellows and their Supervisors in brackets**

Dr OI Amosun, UWC, (Prof M Ogunniyi)

*12:00 – 13:00* **Doctoral students**

- Mr VP Bagla, UP, (Prof J Eloff)
- Mr D Mphuti, NWU, (Prof A Pienaar)
- Mr K Langenhoven, (Prof M Ogunniyi)
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- Ms C Gly-Woo, SUN,(Dr N Makunga)

13:00 – 14:00 Lunch

14:00 – 15:00 Masters Students

- Mr Z Dudhia, ARC, (Prof E Joubert)
- Ms A Moffett, UCT, (Dr S Chirikure)
- Mr CA Louw, WITS, (Dr C Namono)
- Ms N Nare, NWU, (Prof A Pienaar)
- Mr M Ndomiso, MRC, (Dr M Matsabisa)

15:00 – 15:15 Refreshments

15:15 – 16:15 Fourth/honours students

- Mr S Molefe, UFH, (Dr L Mlisa)
- Ms NBR Radebe, WITS, (Dr C Namono)
- Mr F Jordaan, (Prof Pikirayi)
- Mr K Nkwintya, UFH, (Dr L Mlisa)

16:15 Wrap up of findings

Reviewers to drive from the NRF to accommodation

Thursday, 29 May 2014

08:30 Reviewers to drive from accommodation to the NRF

Venue: Room 114, NRF, Meiring Naude Road, Pretoria

09:00 Report-writing

13:00 – 14:00 Lunch
Review of the National Research Foundation managed Indigenous Knowledge Systems Programme

May-June 2014

14:00 – 16:00  Review report writing and presentation preparation

*Reviewers to drive from the NRF to accommodation*

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**Friday, 30 May 2014**

**08:30**  *Reviewers to drive from accommodation to NRF*

**Venue:**  *Room 114, NRF, Meiring Naude Road, Pretoria*

**09:00 – 10:00**  Finalising presentation

**10:00 – 10:30**  Refreshments

**10:30 – 11:30**  *Venue: Room 114, NRF, Meiring Naude Road, Pretoria*

**Verbal feedback by the reviewer to:**

- the Assignment Principal
- representatives of the NRF
- other interested parties

**11:30 – 12:00**  *Venue: Room 114, NRF, Meiring Naude Road, Pretoria*

**Debriefing session by panel members**

- Dr Albert van Jaarsveld, CEO: NRF
- Dr Daisy Selematsela, Executive Director, Knowledge Management
- Dr Rocky Skeef, NRF Corporate Executive

**12:00 – 13:00**  Lunch
## APPENDIX THREE: APPLICATIONS RECEIVED AND FUNDED BY FINANCIAL YEAR AND THEMES

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>Total Applications Received</th>
<th>Total Funded</th>
<th>IKS Themes</th>
<th>Money disbursed or to be disbursed</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009/10</td>
<td>59</td>
<td>4</td>
<td>Education</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Food &amp; Health</td>
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<td></td>
<td>Governance &amp; Leadership</td>
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<td></td>
<td>Beginning of the reconceptualised NRF managed IKS Programme</td>
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<td></td>
<td>Forty nine (49) applications failed to show active participation and equal ownership between academic scientists and IKS holders/practitioners/community members. Six (6) applicants were granted funding to establish crucial partnerships with IK communities/practitioners</td>
<td></td>
</tr>
<tr>
<td>2010/11</td>
<td>6</td>
<td>6</td>
<td>Epistemology Technology</td>
<td>Funded proposals on Epistemology</td>
<td></td>
</tr>
<tr>
<td>2011/12</td>
<td>69</td>
<td>7</td>
<td>Bio economy Energy Climate Change Practices of Khoi, Nama, Griqua and San</td>
<td>R6,162,762</td>
<td>Sixty (62) proposals did not meet the content and technical merit test as well as the rules of the</td>
</tr>
</tbody>
</table>
framework document of engaging IKS holders and practitioners in their projects.

<table>
<thead>
<tr>
<th>Year</th>
<th>Apps</th>
<th>Grants</th>
<th>Budget (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012/13</td>
<td>32</td>
<td>2</td>
<td>8,896,436</td>
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<tr>
<td>2013/14</td>
<td>36</td>
<td>16</td>
<td>6,062,131</td>
</tr>
</tbody>
</table>

Increase in number of funded applications due to introduction of seed funding (IKS development grant).