



**INSTITUTE OF NATURAL  
RESOURCES NPC**

**ANNUAL REPORT 2022**



**TURNING SCIENCE INTO SOLUTIONS  
FOR PEOPLE AND THE ENVIRONMENT SINCE 1979**



# ABOUT THIS REPORT

The Institute of Natural Resources NPC (INR) works towards the wise use of natural resources in pursuit of sustainability, for the good of the environment and society. We do this through applied research integrating data techniques, tools, perspectives, concepts, and theories from multiple disciplines to develop practical solutions for real-world environmental problems.

We have done this for 43 years by partnering with government, civil society, the private sector, and other leading research organisations, making us a leading knowledge provider, strategic and operational supporter, capacity developer, and advocate for natural resource and environmental management in southern Africa.

We use funding from independent funders to build an equitable future in which both people and nature thrive. We work with our partners in the private, public and non-profit sectors to raise awareness of the socio-ecological challenges that the communities we work with face in terms of access to and management of natural resources.

This annual report covers the period 1 January 2022 to 31 December 2022. The Board approved this report on 12 October 2023.

## ACKNOWLEDGEMENTS

**INR editorial team:** Sershen Naidoo, Brigid Letty, Jon McCosh, Belinda Murray and Nisha Rabiduth

**Photography:** INR Staff

**Layout:** Tracy Freese (Purple Boa Creations)

**Auditors:** Moore Midlands

**Bankers:** Nedbank, Investec



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Plastic pollution monitoring



Wastewater treatment

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# INTRODUCTION

## LETTER FROM THE CHAIRMAN OF THE BOARD

The INR is a unique organisation rooted in scientific work translated into evidence-based tools, models, methodologies and practical outcomes in the interest of sustainable development, the environment and social justice. In summary, it brings applied scientists together to translate science into solutions for people and the environment. The INR has dedicated a significant amount of time to self-definition and strategy improvement. This brought clarity that has propelled the organisation to superb performance, commitment, unity of purpose, and building stronger and smarter after the pandemic and all its impacts.



Norman Dlamini

Every organisation that wants to stand out must carefully and honestly respond to certain crucial questions, such as Who are we, Why are we here, and How are we going to fulfil our mandate? Since the nature of our work requires that we be responsive to changes in the socio-ecological environments in which we work, we at the INR have questioned and still question such issues. Throughout this report, you will discover how and why the INR has distinguished itself as an organisation whose work does not only influence policy at the highest level but also impacts at the household and individual levels. You will discover how 'living' strategy and agile management have infused life into each of our workstreams.

I wish to express my gratitude to the board, management, and all staff members for their continued support and dedication to the INR. A special thank you also goes to the outgoing Chairperson of the Board, Dr Shamim Bodhanya, and former executive director, Dr Sershen Naidoo for laying a firm foundation on which we are now building.

All the accomplishments recorded in this report are largely attributable to the small team of highly motivated and skilled individuals that make up our organisation, as well as to the ongoing support from our partners and external stakeholders. Please read, interact with us, and give us feedback as we work to improve things together.

*Norman Dlamini*



## LETTER FROM THE EXECUTIVE DIRECTOR

While an annual report is supposed to be a reflection on the year gone by, 2022 marked our return to business as usual after the COVID-19 pandemic and consequently we could not help but be forward-thinking in this report. Therefore, the report showcases how we have used the year to turn both long-standing and recent challenges into opportunities, identifying potential obstacles and problems, analysing them, and determining how to utilise them to propel the company into the future – the financials, wide range of new projects and new partners/clients reflect this.



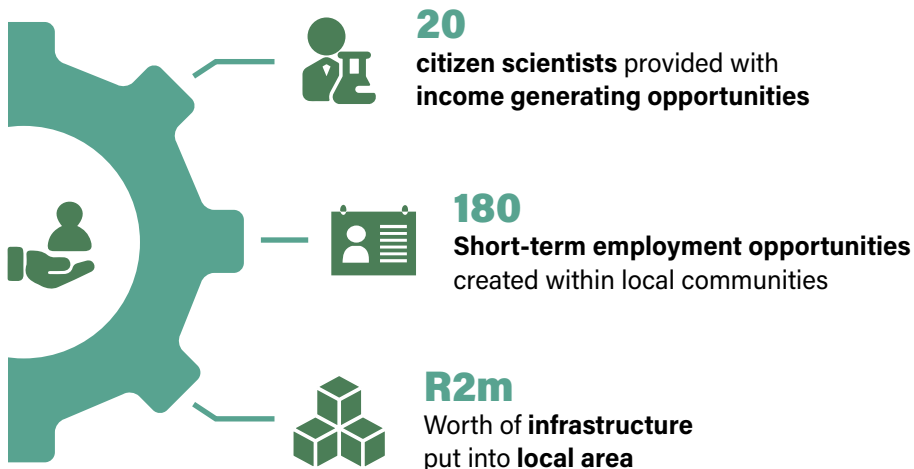
Dr Sershen Naidoo

We at the INR have for many years wrestled with who we are as an organisation and what our role is in the research landscape, and as Executive Director it was perhaps my greatest pleasure in 2022 to see staff, new and old, come to understand and embrace our identity and role as an organisation. In short, we are a public benefit organisation that builds resilience through our research which focuses on helping communities, organisations and the environment cope, adapt, and recover from adversity and shocks. Many of the projects showcased in this report illustrate how we have used our research in 2022 to identify factors that help people bounce back from and cope with future environmental shocks.

True to our mission, we have tried at every opportunity during this year to generate policy-relevant science, partnering with local and international environmental and development champions across the public and private sectors. Our commitment to capacity building has also seen us incorporate in-service learning and community engagement across many of our projects. In line with what building resilience encompasses, we have also shown our clients, partners and community beneficiaries that we have worked with during the year how we bring together applied scientists from multiple disciplines – ecology to economics – to investigate the interplay between biological, environmental, and social factors and develop approaches and interventions that enhance socio-ecological resilience. In some cases we have even

gone to the extent of influencing public policies aimed at promoting resilience and addressing issues such as social inequality, such as our work with the Presidential Climate Commission on flood risk mitigation – **this is the mark of a truly impactful organisation.**

In terms of how we have performed as a company, the numbers speak for themselves: a total of 86 projects undertaken over the course of 2022, 25 of which were initiated in 2022; new project income to the value of R13 595 436,36 (inclusive of subcontracts and disbursements) and services rendered to 37 clients. But while these figures may impress our followers, it is our contribution to local economic development in 2022 that makes us, as staff, proud.



These are the standards that we at the INR must and will hold ourselves to as we take the gains made and lessons learned in 2022, into the new year. Our place in the research landscape is clear and our role in building resilience locally has never been more relevant. For this, we are grateful to those that have come before us and hopeful for those that will follow... *Siyaphambili!*

*Dr Sershen Naidoo*

# HIGHLIGHTS

2022 was a year when we turned challenges into opportunities by leveraging our strengths and addressing our weaknesses. We did this by capacitating our staff, responding to the needs of the communities we service, partnering with environmental/developmental champions and making impact our priority through resilience-building research and implementation.

## 2022 THE YEAR IN NUMBERS



**100** farmers trained in and practising conservation agriculture.

**>100 km** of firebreaks burnt across Vulindlela and uMkhomazi through the uMngeni Resilience Project.



Food gardens established at **480** homesteads in collaboration with Mahlathini Development Foundation.



**1<sup>st</sup>** Integrated Waste Management Plan for KwaZulu-Natal being developed – commissioned by the KZN Department of Economic Development, Tourism and Environmental Affairs.

**35 000** hectares of rangeland under improved management through the INR and Meat Naturally Partnership in the upper uMkhomazi Catchment.



**9** projects focused on mitigating the impacts of environmental pollution launched in collaboration with the Joint Nature Conservation Committee and the United Kingdom Department of Environment, Food and Rural Affairs.



**12** citizen scientists trained in using a macroplastic monitoring protocol for rivers.



**3** Rivers, viz. uMngeni, uMsunduzi, and the Mthinzima, assessed for water quality using a novel unmanned aerial vehicle-based approach.

# ABOUT THE INR

## WHO ARE WE?

An **applied research organisation** that integrates data, techniques, tools, perspectives, concepts, and theories from multiple disciplines to develop practical solutions for real-world environmental problems.

## WHAT IS OUR MISSION?

The INR works towards the **wise use of natural resources** in pursuit of sustainability for the **good of the environment and society** through **multidisciplinary research and the application of knowledge**.

## WHERE DO WE SIT IN THE RESEARCH LANDSCAPE?

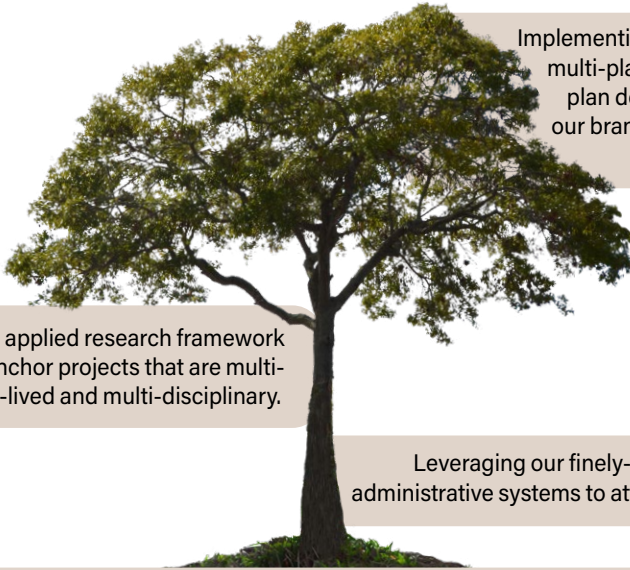
The INR engages in **applied research aimed at building human and environmental resilience**.





## OUR 'LIVING' STRATEGY

Our mission and the nature of our work demands that we are responsive to the changes in the socio-ecological environments within which we work. This demands agile management and a 'living' strategy that encompasses:



Implementing an aggressive, multi-platform marketing plan designed around our brand of high-impact action research.

Adopting an applied research framework built upon anchor projects that are multi-funder, long-lived and multi-disciplinary.

Leveraging our finely-tuned administrative systems to attract clients.

Establishing strategic partnerships for the purpose of tapping into funding sources that are inaccessible to the INR or accessible only through collaboration.

## MONITORING AND EVALUATION

We have invested significant time and effort in monitoring and evaluation (M&E) of our impact, and our financial and staff performance. The bespoke M&E system developed in 2021 was further elaborated in 2022 to ensure that our activities align with our mission and goals, and ensure the achievement of targets. The outputs of the M&E have fed into quarterly Management reports and this Annual Report, promoting transparency and accountability. All staff, irrespective of their role in the company, contribute to the M&E processes for the purpose of ensuring that staff are aware of our successes, challenges and opportunities, and their contribution to our performance as a company.

# 2022 PERFORMANCE REVIEW

## BUSINESS DEVELOPMENT

Leveraging our team's collective experience and multiple partnerships we were more targeted in our approach to business development in 2022. While fewer proposals were submitted relative to 2021, our success rate was much higher than in previous years (2020/2021). A total of 77 project proposals were submitted in 2022 with a contract value of R93,133,188; 29 projects were successful, amounting to a contract value of R23,935,060. More importantly, 11 proposals are still pending, amounting to R12,006,976 which we are hoping will have positive outcomes.

An analysis of our client base indicates that we are attracting an increasing number of high-value projects (with a value of more than R2 million), which include local and international funders. Furthermore, the projects awarded by clients such as Umgeni Water, Meat Naturally (Pty) Ltd and the United Kingdom's Department for Environment and Rural Affairs (DEFRA) in association with the Joint Nature Conservation Committee (JNCC) are multi-year projects. In addition to the clients listed below, a further 19 clients were recorded on the INR books with contracts of less than R500K during 2022.

## 2022 CLIENTS

- > 500k**
  - Cranfield University
  - Duzi-Umgeni Conservation Trust
  - JNCC
  - KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs
  - Milk South Africa
  - WWF South Africa – Sappi Partnership
- > 1 mil**
  - Association of Church-based Development NGOs
  - WWF South Africa
- > 2 mil**
  - Mahlathini Development Foundation (Humanitarian Crisis Relief Fund)
  - DEFRA in association with the JNCC
  - Meat Naturally (Pty) Ltd
  - Pegasys Limited / Green Climate Fund – SANBI
  - Umgeni - uThukela Water

## **NEW CLIENTS**

- Food and Agriculture Organization of the United Nations
- Green Climate Fund (GCF) through Pegasys International / SANBI
- Human Sciences Research Council
- Humanitarian Crisis Relief Fund through Mahlathini Development Foundation
- Impendle Local Municipality
- KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs
- National Department of Tourism (NDT) through the University of KwaZulu-Natal
- Pegasys Limited
- Presidential Climate Commission
- DEFRA in association with the JNCC
- University of Bristol (via Rhodes University)
- Wellcome Trust
- WWF-Sappi Partnership

## **NEW PARTNERS/COLLABORATORS**

- Durban University of Technology's Institute for Water and Wastewater Technology
- Marondera University of Agricultural Sciences and Technology
- Msinsi Holdings
- Nzwakhele Environmental Services (Pty) Ltd
- University of Manchester
- University of the Free State
- University of the Western Cape
- University of Washington
- University of Zimbabwe
- Upland Rivers
- Zutari Engineers

## RESEARCH WITH IMPACT

It has always been our mission to carry out research that is impactful and to generate research outputs that drive the environmental protection and development agendas. This is evidenced by the infographic below which shows the number of projects, conducted in 2022, that addressed specific Sustainable Development Goals.



*The SDGs targeted by our projects: number of projects per goal, with some projects addressing multiple goals*

# PROJECT HIGHLIGHTS

## SNAPSHOTS OF SOME OF OUR APPLIED RESEARCH:



Developed the State of the Expanded Public Works Programme in the South African Cities Annual Report

A feasibility analysis of cost-effective biological wastewater treatment options for the dairy sector in South Africa



Community-led solid waste pollution mitigation at the catchment scale - the uMkhomazi and uMngeni Catchments in KwaZulu-Natal, South Africa

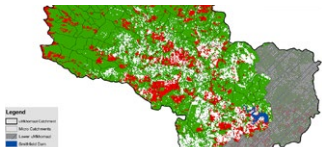


Towards developing a rapid, citizen science-based macroplastic monitoring protocol for rivers and wetlands

Nzinga and Qutshini Water Stewardship Project Support



Climate adaptation and sustainable rural health outcomes in Southern Africa



Developing and integrating the upper uMkhomazi Catchment and ecological infrastructure management plan with Smithfield dam design using NatSilt dam operations mode

Integrating knowledge systems in flood-risk modelling for sustainable solid waste management and flood resilience in urban informal settlements



Waste not, want not: Investigating the use of disposable nappies and black wattle biochar for land rehabilitation



Household food security projects

Support to Umgeni Resilience Project (URP) with the burning of fire breaks



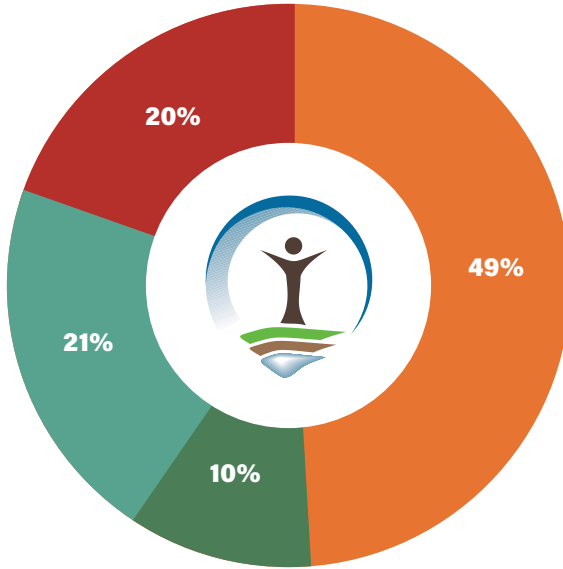
A community-led approach to protecting springs against pollution and ensuring sustainable self-supply through nature-based solutions

**THIS IS HOW WE BUILD RESILIENCE**



## REVENUE

Total revenue for the year 2022 increased by 36% from 2021, driven by more implementation-based projects requiring higher expenditure on project disbursements, especially the costs associated with local job creation. Other income, which was made up predominantly of rental income and royalties decreased by 11%. Investment income increased from 2021 to 2022 due to higher interest rates. While our revenue is largely sourced from the South African Government and its related institutions we have secured work from the local private and non-profit sectors as well as foreign funders.

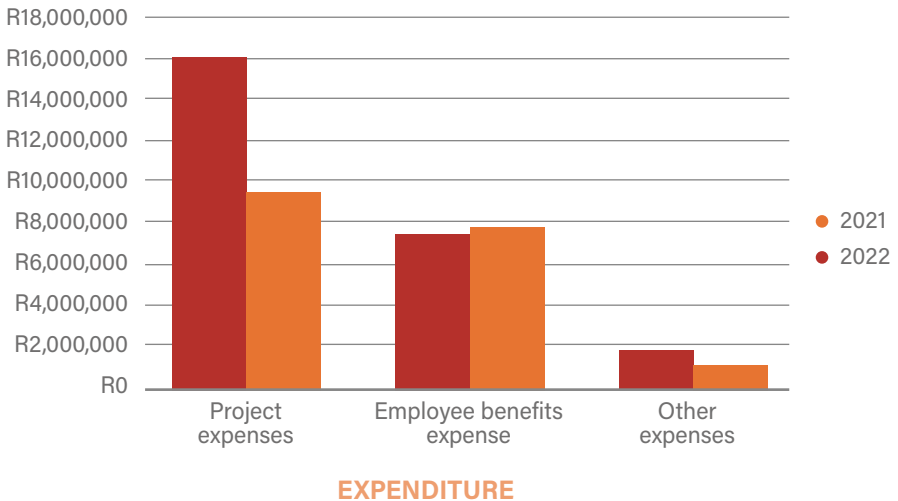


### REVENUE BY SOURCE

- SA Government and Related Institutions
- SA Private Contracts
- SA Non-profit Organisations
- Foreign Funding

## EXPENSES

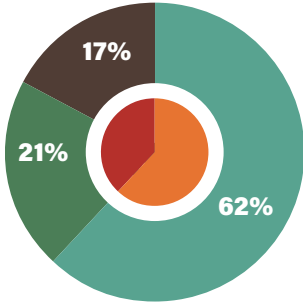
In 2022, direct expenditure on projects increased as a result of an increasing number of implementation-based projects being conducted – as alluded to earlier. These required higher expenditure on project disbursements, which in 2022 included more expenditure related to local job creation. Employee costs decreased in 2022 due to a smaller staff complement. Other overhead costs increased, mainly due to major repairs and maintenance being carried out on the buildings, totaling R559 824 for the year. Management continued to focus on keeping general costs as low as possible while still having adequate resources available for the efficient execution of projects.



## FINANCIAL POSITION

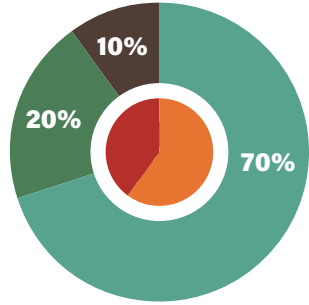
A modest surplus of R165 817 was recorded for the year which was positive considering the expenditure on building repairs and maintenance detailed above. The cash flow strengthened with a positive inflow of cash for the year of R1 442 294 improving working capital on the balance sheet. This was mainly due to the receipt of funds in advance from both local and foreign clients. We yet again received a clean audit and the detailed financials are provided in Appendix 1.

# HUMAN RESOURCES\*



## TOTAL STAFF COMPLEMENT

62% Female | 38% Male



## YOUNG SCIENTISTS

60% Female | 40% Male



## 8 INTERNS HOSTED

6 Black African females | 1 Black African male | 1 Indian/Asian female



\*See Appendix 2 for full list of staff and credentials

# DISSEMINATION AND VISIBILITY

## ACADEMIC CONTRIBUTIONS

- Hosted **1** panel discussion on Ecological Restoration in Practice at the Fountainhill Research Symposium.
- **2** of our junior team members presented their findings on Conservation Agriculture at the University of KwaZulu-Natal's annual Howard Davis Memorial Symposium.
- Contributed to **10** articles in peer-reviewed journals.

CLICK ON THE ARTICLES BELOW TO READ MORE ABOUT OUR RESEARCH

Original Research

### Linking Climate Change Adaptation Strategies and Nutrition Outcomes: A Conceptual Framework

Prosper Chopera, PhD<sup>1</sup>, Admire Nyanwanza, PhD<sup>2</sup>, and Peter Jacobs, PhD<sup>3</sup>

Food and Nutrition Bulletin 2022, Vol. 4(2) 201-212  
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DOI: 10.1177/175001752110281982  
[journals.sagepub.com/home/foa](http://journals.sagepub.com/home/foa)

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/36758992>

### A critical comparative review of evidence on alternative instruments for supporting research and innovation in agri-food systems in the Global South

Theelin Nardoo<sup>1</sup>, Sharad Raj<sup>2</sup>, Ejbart Triani<sup>3</sup>, Joshua Zukari<sup>4</sup>, Sershan<sup>5</sup> and Irene Anon-Franco<sup>6\*</sup>

\*Faculty of Human Resources, Food Processing, South Africa; <sup>1</sup>Human Sciences Research Council, Pretoria, South Africa; <sup>2</sup>International Institute for Water, Environment and Health, Johannesburg, South Africa; <sup>3</sup>International Development Partners, Johannesburg, South Africa; <sup>4</sup>South Africa; <sup>5</sup>International Development Partners, Johannesburg, South Africa; <sup>6</sup>South Africa

Water 5(4)(2): 205-207 (Jul 2022)  
Water (doi:10.1177/215067172110281982)

### Yeast supplementation alleviates the negative effects of greywater irrigation on lettuce and maize

Flora 2(1) (2022) 152-156

Contents lists available at [ScribdDirect](http://ScribdDirect)

### Foliar water uptake in eight mangrove species: Implications of morpho-anatomical traits

Janaina dos Santos Garcia<sup>1,2,3</sup>, Daniela Boaneres<sup>1</sup>, Marcel Giovanni Costa França<sup>1</sup>, Sershan<sup>1,4</sup>

Biological Conservation 274 (2022) 109756

Contents lists available at [ScienceDirect](http://ScienceDirect)

### Biological Conservation

Journal homepage: [www.elsevier.com/locate/bioco](http://www.elsevier.com/locate/bioco)

### Drowning in data, thirsty for information and starved for understanding: A biodiversity information hub for cooperative environmental monitoring in South Africa

Sandra MacPhylen<sup>1,2,3\*</sup>, Nicky Allsopp<sup>4</sup>, Ben Alvoys<sup>5</sup>, Sally Archibald<sup>6</sup>, Judith Botha<sup>7</sup>, Karen Bradshaw<sup>8</sup>, Jane Caruthers<sup>9</sup>, Helen De Klerk<sup>10</sup>, Ana de Vos<sup>11</sup>, Greg Duttler<sup>12</sup>, Stefan Food<sup>13</sup>, Stefanie Freitag-Ronaldson<sup>14</sup>, Richard Gibbs<sup>15</sup>, Michelle Harner<sup>16</sup>, Pietro Landi<sup>17</sup>, Duncan MacPhylen<sup>18</sup>, Jeffrey Mansel<sup>19</sup>, Guy Midgley<sup>20</sup>, Glenn Mozzeroff<sup>21</sup>, Zulu Munch<sup>22</sup>, Onesimo Mutanga<sup>23</sup>, Sershan<sup>24</sup>, Rendani Nengula<sup>25</sup>, Mashakazo Npovoya<sup>26</sup>, Daniel Parker<sup>27</sup>, Mike Peel<sup>28,29</sup>, John Power<sup>30</sup>, Joachim Pretorius<sup>31</sup>, Syd Rambhani<sup>32</sup>, Mark Robertson<sup>33</sup>, Ian Ruthwark<sup>34</sup>, Andrew Skomroni<sup>35</sup>, Jasper Slingsby<sup>36</sup>, Andrew Turner<sup>37</sup>, Vernon Visser<sup>38,39</sup>, Gerhard Van Wageningen<sup>40</sup>, Gang Hai<sup>41,42,43</sup>

Taylor, Francis Online

### Women informal food traders during COVID-19: A South African case study

Sikukuma Shiyoko<sup>1</sup>, Peter Jacobs<sup>2</sup>, Admire Nyanwanza<sup>3</sup> & Marume Mula<sup>4</sup>

Pages 63-76 | Published online 07. 07.2022

RESEARCH PAPER  
MAKING EARTHWATER RESEARCH

### Effects of the mangrove forest environment and tree species characteristics on fiddler crab communities

Wilmar Theron<sup>1,2</sup>, Sershan<sup>3,4</sup>, Nazreen Peer<sup>5</sup> and Anusha Rajkaran<sup>6</sup>

### Marine seismic surveys for hydrocarbon exploration: What's at stake?

South African Journal of Science

AUTHORS:  
Jerome A. Singh<sup>1,2</sup>,  
Alicia de Rooz<sup>3</sup>,  
Sershan Nardoo<sup>4</sup>

Agroforestry Syst  
<https://doi.org/10.1007/s10457-021-00705-y>

### Improved fodder production and nutritional yields from the inclusion of biannually cut pigeon pea hedgerows in *Megathyrus maximus* 'Gatton' pastures

B. A. Letty<sup>1</sup>, T. L. Makhubedu<sup>2</sup>, P. Mafongoya<sup>3</sup>, P. F. Scogings<sup>4</sup>

Agroforestry Syst  
<https://doi.org/10.1007/s10457-021-00773-4>

### Biomass and nutritional yields of maize-Sesbania sesban alley cropping, and non-structural carbohydrates in hedgerows

B. A. Letty<sup>1</sup>, Makhubedu<sup>2</sup>, P. Mafongoya<sup>3</sup>

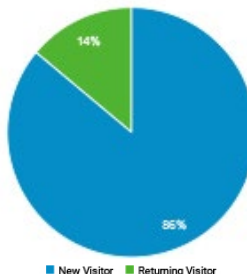
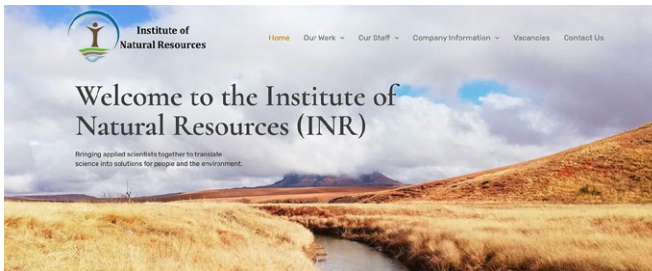
## STRATEGIC ADVISORIES

Contributed to **2** strategic advisories through our partnership with the Strategic Advisory Group on Emergencies (SAGE).



## WEBSITE

Since the revamp of our website in 2021, the site has seen a good amount of traffic, with project-related content receiving the most interest. Site visitors hail mainly from South Africa but web analytics reveal users in the United States of America, the United Kingdom, India and the Philippines. and other European countries



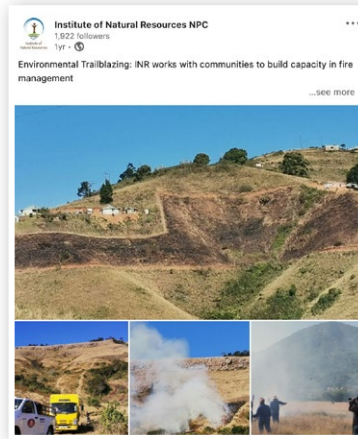
Language	Users	% Users
1. en-us	1,112	52.93%
2. en-gb	501	23.95%
3. en-za	383	18.23%
4. en-au	14	0.67%
5. c	10	0.48%
6. es-es	10	0.48%
7. fr-fr	9	0.43%
8. en	7	0.33%
9. de	4	0.19%
10. en-in	3	0.14%



## SOCIAL MEDIA

### LinkedIn

**50** posts  
**1478** post reactions  
**112** post comments  
**162** reposts  
**1 784** followers (748 new in the past year)  
**2 046** page views  
**644** unique visitors



#### Visitor demographics

Industry ▾

Environmental Services	265 (15%)
Higher Education	177 (9%)
Government Administration	72 (4%)
Farming	64 (3%)
Research	54 (3%)
Education Management	37 (2%)
Renewables & Environment	26 (1%)
Information Technology and Services	25 (1%)
Nonprofit Organisation Management	25 (1%)
Paper & Forest Products	24 (1%)

### FACEBOOK



**62** posts  
**81** post comments  
**828** post reactions  
**149** post shares  
**27 129** reach  
**3 205** followers  
**440** new followers  
**2 544** page views

## PRINT AND DIGITAL MEDIA

Featured in/contributed to **>15** articles in local and international news publications.

FOR SUBSCRIBERS 17 Dec 2022 Share

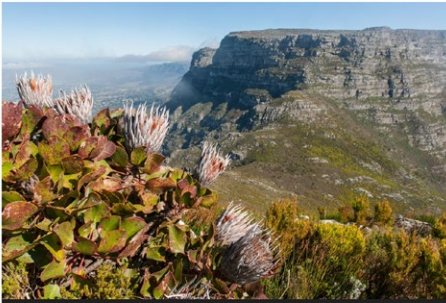
### Over a quarter of SA's ecosystems are threatened, here's why we need to protect them

Lameez Omarjee  
**news24**

Comments Gift article Bookmark

Listen to this article 0:00

SUBSCRIBERS CAN LISTEN TO THIS ARTICLE



Ecosystems such as those in the Fynbos area of the Western Cape are under threat.

**The Herald**

July 15, 2022

### Farmers adopt drought-tolerant crops



**The Sunday Mail**

LOCAL NEWS

### NEW: Mbire: A case study for climate change proofing


19 JUL 2022 - 10:07 COMMENTS IMAGES



**NEWSDAY** Forwards News for Kenyan People

### Poor climate adaptation creates mental health, nutrition challenges

Opinion & Analysis By The NewsDay | Apr. 29, 2022 | 2 Min read



The Admire Nyamwanza-led team of 10 researchers from Zimbabwe, South Africa, United Kingdom and the United States embarked on a study to evaluate the climate change adaptation strategies undertaken by rural communities of Zimbabwe in Mbire district, Mashonaland central province.

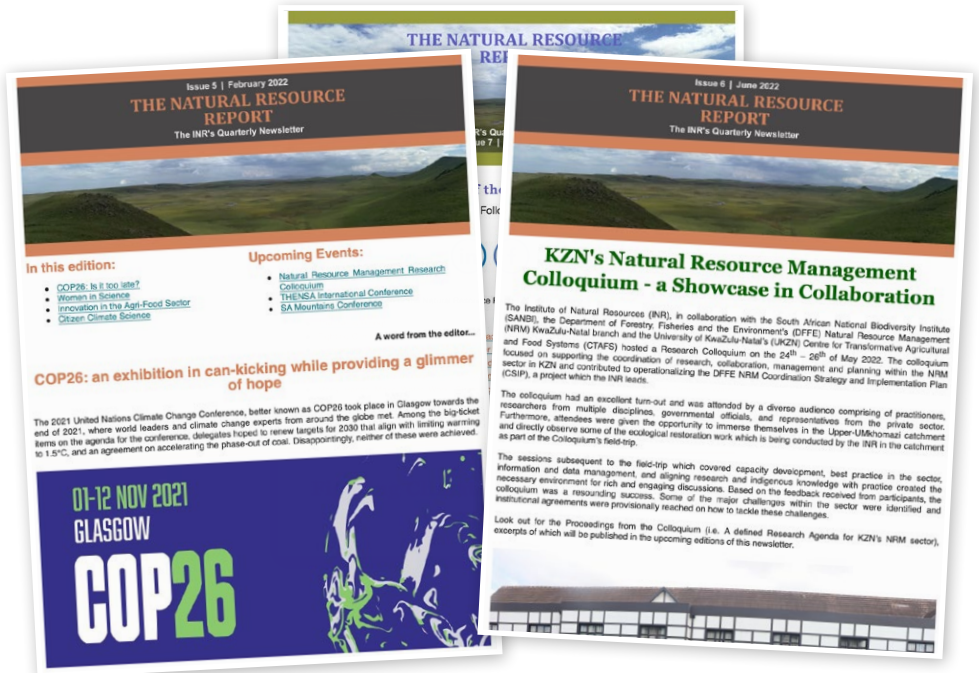
**HEALTHTIMES** Health News For A Healthier Nation

### Zim Smallholder Farmers Grow Small Grain Crops To Beat Climate Change

July 18, 2022 Patricia Mashiri



# INR NEWSLETTER



**3** issues published | average of **1 400** readers  
**13** different guest authors | **6** intern-written articles



# GOVERNANCE

## MANAGEMENT AND POLICIES

A consultative management style is achieved through multi-level staff input on policies and processes, and representation on governance structures. The design and implementation of policies is achieved via a tiered approach: Directors ► Executive Committee ► Management Committee ► Theme Leaders. In this regard, the company developed and implemented policies for Performance Management and Promotions in 2022.

Additionally, since our research and implementation activities revolve around actively engaging with the private sector, government and communities, we have been careful to ensure that we have their permission to contact them and exercise due care to protect the personal information entrusted to us via our Protection of Personal Information Act (POPIA) Compliance Policy.

## THE BOARD

The Board (see Appendix 2 for a full list of directors) provides strategic direction and oversight of the INR's executive and non-financial reporting. On a quarterly basis, the Board meets to discuss the financial performance of the company, matters related to business development, organisational development, human resources, statutory, policy, risk and compliance-related items and any other matters that Management needs the Board's input on. The Board is governed by a Memorandum of Incorporation. Directors are required to keep declarations of interest current. Non-executive board members are not reimbursed for their time. We give thanks to Dr Shamim Bodhanya, Dr Sershen Naidoo and Mrs Caryn Maitland who resigned from the Board during this period. The INR would especially like to express its gratitude to Dr Shamim Bodhanya for his years of service as Chairman. We welcome Dr Preeya Daya to the Board and congratulate Mr Norman Dlamini on his election as Chairman of the Board.

# OUR APPROACH TO RISK

Our risk assessment for the reporting period, January – December 2022, identified the key risks set out in the table opposite. Interventions were designed and implemented in consultation with staff.



RISK	INTERVENTION(S) IMPLEMENTED
Income not meeting demands	<ul style="list-style-type: none"> <li>• Maintain expenses at a minimum</li> <li>• Retain clients/funders by ensuring succession planning for key relationships</li> <li>• Reduce dependence on individual relations – diversify funder base</li> <li>• Diversify services and/or areas of work</li> <li>• Ensure that what is taken to market is robustly developed and that accurate business cases and costings are in place</li> <li>• Diversify income streams</li> <li>• Halt recruitment processes</li> </ul>
Inadequate skills and capacity	<ul style="list-style-type: none"> <li>• Characterise skills/capacity needs</li> <li>• Appoint change management agency to identify most feasible and effective route for meeting needs</li> <li>• Improve succession planning and create development opportunities not necessarily linked to promotion</li> <li>• Make appointment via INR recruitment process and/or identify subcontractor that could provide this skill/capacity</li> <li>• Implement communications to raise awareness about learning opportunities within INR for existing staff and interested individuals</li> </ul>
Work disruption due to loadshedding	<ul style="list-style-type: none"> <li>• Inform clients/funders of disruptions and make arrangements for adjustments to work plans</li> <li>• Shift to adjusted work format, making allowances for remote-working arrangements, where/when necessary</li> <li>• Investigate solutions for providing power independently</li> </ul>
Health and safety risks in the field	<ul style="list-style-type: none"> <li>• New drivers are asked to complete an advanced driving course</li> <li>• Staff members encouraged not to go into the field alone</li> </ul>
Deterioration in structural integrity of ageing buildings	<ul style="list-style-type: none"> <li>• Seek the advice of experts</li> <li>• Carry out restorative and repair work to buildings as recommended by experts</li> </ul>
Security risks on premises	<ul style="list-style-type: none"> <li>• Seek the advice of experts</li> <li>• Install extra security infrastructure where and when needed</li> <li>• Arrange additional patrols by security company</li> <li>• Encourage staff to be more vigilant</li> </ul>
Ineffective diversity transformation in the organisation	<ul style="list-style-type: none"> <li>• Consider transformation targets when making intern and staff appointments</li> </ul>
Lack of confidence in INR's capacity	<ul style="list-style-type: none"> <li>• Market the work of the INR effectively</li> </ul>

High Risk
  Moderate Risk
  Low Risk



# APPENDIX 1:

## SUMMARISED ANNUAL FINANCIAL STATEMENTS

Extract of the 2022 Audited Annual Financial Statements  
Institute of Natural Resources NPC

### Statement of Financial Position as at 31 December 2022

Figures in Rand	2022	2021
<b>Assets</b>		
<b>Non-Current Assets</b>		
Property, plant and equipment	2,480,381	2,396,503
	<b>2,480,381</b>	<b>2,396,503</b>
<b>Current Assets</b>		
Work in progress	4,077,887	711,817
Trade and other receivables	2,657,896	3,742,647
Cash and cash equivalents	7,622,710	6,180,416
	<b>14,358,493</b>	<b>10,634,880</b>
<b>Total Assets</b>	<b>16,838,874</b>	<b>13,031,383</b>
<b>Equity and Liabilities</b>		
<b>Equity</b>		
Reserves	1,200,000	1,200,000
Retained income	8,526,855	8,361,038
	<b>9,726,855</b>	<b>9,561,038</b>
<b>Liabilities</b>		
<b>Current Liabilities</b>		
Trade and other payables	1,326,712	1,485,297
Funds in advance	5,785,307	1,985,048
	<b>7,112,019</b>	<b>3,470,345</b>
<b>Total Equity and Liabilities</b>	<b>16,838,874</b>	<b>13,031,383</b>

Extract of the 2022 Audited Annual Financial Statements  
 Institute of Natural Resources NPC

**Statement of Comprehensive Income for the year ended 31 December 2022**

Figures in Rand	2022	2021
Revenue	25,161,893	18,438,902
Other operating income	332,926	372,488
Other operating expenses	(25,585,427)	(18,744,520)
<b>Operating (deficit) surplus</b>	<b>(90,608)</b>	<b>66,870</b>
Investment revenue	256,983	239,674
Finance costs	(558)	(468)
<b>Surplus for the year</b>	<b>165,817</b>	<b>306,076</b>
Other comprehensive income	-	-
<b>Total comprehensive income for the year</b>	<b>165,817</b>	<b>306,076</b>



Site visit to monitor spring health

# APPENDIX 2:

## STAFF AND DIRECTORS

SCIENTISTS			
NAME	POSITION	QUALIFICATIONS	
Dr Naidoo, Sershen	Executive Director	PhD, Plant Biology	Resigned 31/12/2022
Dr Letty, Brigid	Chief Scientist	PhD, Crop Science	
McCosh, Jon	Principal Scientist	M. Env. Dev.	
Bredin, Ian	Principal Scientist	MSc, Veterinary Sciences	Resigned 31/03/2022
Dr Nyamwanza, Admire	Principal Scientist	PhD, Development Policy and Management	Commenced 01/03/2022
Ntombela, Zinhle	Senior Scientist	MSc, Agriculture	
Murugan, Simone	Senior Scientist	MSc, Hydrology	
Evans, Wesley	Scientist	MSc, Enviro. Science	
Naidoo, Theolin	Scientist	MSc, Enviro. Science	
Dr Makhubedu, Thabo	Scientist	PhD, Crop Science	Commenced 01/09/2022
Shezi, Zanele	Senior Community Facilitator	Diploma, Agriculture	Resigned 31/05/2022
Gwala, Mthobisi	Field Officer	National Cert, Agriculture Production Management	
Myende, Mfundo	Field Officer	National Diploma in Agricultural Management	Commenced 01/05/2022

ADMINISTRATORS			
NAME	POSITION		
Murray, Belinda BCom (Hons), CA (SA)	Financial Director		
Rabiduth, Nisha	Project Management Officer		
Sukraj, Sunitha	Office Manager/Bookkeeper		
Ndaba, Mandisa	Administration Assistant		
Sikhakhane, Thembeke	Administration Intern	01/02/2022 - 31/07/2022	
Vilakazi, Mbali	Administration Support	Commenced 01/09/2022	
Mnikathi, Londiwe	Receptionist		
Hlatshwayo, Muzi	Gardener		
Sikhakhane, Delisile	Cleaner		

## INTERNS

NAME	QUALIFICATION	
Mahlaba, Simlindile	BSc (Hons), Environmental and Geog. Science	Resigned 28/02/2022
Ndimande, Nolwazi	BSc (Hons), Geography and Enviro. Management	Term Ended 28/02/2022
Maseko, Zwelakhe	MSc, Geography	Term Ended 31/05/2022
Phungula, Nosipho	MSc, Crop Science	Resigned 31/03/2022
Ndlovu, Snethemba	MSc, Environmental Sciences	Commenced 01/02/2022
Chetty, Samantha	MSc, Environmental Sciences	Commenced 01/08/2022
Badana, Ntanganedzeni	MSc, Integrated Water Resources Management	01/05/2022 – 30/11/2022

## DIRECTORS

NAME	POSITION	
Dlamini, Norman	Chairman, Non-executive Director	
Dr Bodhanya, Shamim	Non-executive Director	Resigned 15/11/2022
Prof Naidoo, Sershen	Executive / Acting Executive Director	Resigned 31/12/2022
Murray, Belinda	Financial Director	
James, Christopher	Non-executive Director	
Maitland, Caryn	Non-executive Director	Resigned 31/05/2022
Prof Modi, Albert	Non-executive Director	
Dr Daya, Preeya	Non-executive Director	Commenced 15/11/2022



The INR team of 2022



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"I have worked with the INR on a number of projects, all vastly different in nature. In all instances, I have been impressed by the INR's technical ability, their professionalism and their ability to deliver."

**Samir Randerer-Rees,  
WWF-SA**

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"It is my considered opinion that (the INR) is capable of delivering highly scientific work and simplify it for assimilation by different stakeholders including farmers, academics and policy makers."

**Dr Samkelisiwe Hlope-Ginindza,  
Water Research Commission**

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"The INR-led team fully delivered on the terms of reference and the product in the form of a project report has been considered by the Presidential Climate Commission as an important resource document for its policy recommendations."

**Dhesigen Naidoo,  
Presidential Climate Commission**



**DONATE**

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**WORK WITH US**



**CONTACT US**

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