

ANNUAL REPORT 2024

ABOUT THIS REPORT

This annual report covers who the Institute of Natural Resources NPC (INR) is and how we are structured and managed. The report highlights key outcomes and achievements and provides an overview of the work of the INR during 2024.

It summarises the financial performance and organisational sustainability of the INR and highlights activities and projects that reflect the nature of our organisation, in particular the suite of environmental pollution projects undertaken in collaboration with the Joint Nature Conservation Committee (JNCC) and the ongoing programme of work in the uMkhomazi Catchment, which has continued to grow.

The work with uMngeni-uThukela Water comprises important actions demonstrating our commitment to not only thinking about but also acting in support of improving the management of our natural resources, while supporting better livelihoods for all.

It also highlights the efforts made during 2024 to reflect on our strategy in terms of how the INR needs to respond and innovate in the face of emerging global challenges.

This annual report covers the period 1 January 2024 to 31 December 2024. The Board approved this report on 25 August 2025.

ACKNOWLEDGEMENTS

Editorial: Brigid Letty, Jon McCosh, Matthew Burnett, Helga Chauke, Belinda Murray, Nisha Rabiduth and Tafadzwa Mabhaudhi.

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FROM THE BOARD CHAIRPERSON

Dear valued stakeholders,

I am pleased to present the Institute of Natural Resources NPC's (INR) Annual Report for 2024. This report highlights our achievements, challenges, and progress towards our mission of promoting sustainable natural resource management.



Norman Dlamini

The INR team has worked tirelessly to deliver impactful projects, and I'm honoured to invite you to read the 2024

annual report. Our focus on environmental pollution, climate action, and sustainable agriculture has yielded notable results.

Some highlights from our 2024 report include key projects like the Environmental Pollution Programme, where our teams worked with the Joint Nature Conservation Committee (JNCC) to address environmental pollution challenges. In the uMkhomazi Catchment Programme, we made significant progress in conserving and restoring this vital catchment area. With the next phase now approved by uMngeni-uThukela Water, our contribution will be massive. Through the Sustainable Healthy Food Systems in Southern Africa (SHEFS-SA), we're contributing to food-related research that can be integrated into policy to make a meaningful impact on people's livelihoods.

We emphasise that our partnerships are vital, and we'll continue collaborating with old and new partners to find and promote local solutions to global concerns. During the period in review, we continued to collaborate with various organisations, including the University of KwaZulu-Natal, the South African National Biodiversity Institute, and the Lewis Foundation, to advance our mission.

Lastly, in 2024, the INR focused on Capacity Building. We've invested in developing the skills of our staff and interns, with a focus on building a diverse and dynamic team.

I'd like to thank our board, executive management, staff, partners, and stakeholders for their dedication and support. Together, we're making a difference in promoting sustainability and environmental stewardship.

Happy reading!

Sincerely,

Norman Dlamini

FROM THE EXECUTIVE DIRECTOR

Dear valued stakeholders.

In 2024, the world breached the 1.5 degrees Celsius warming threshold set by the Paris Agreement, making it the first year on record where the global average temperature surpassed that level above pre-industrial times, a significant milestone in climate change. This raises concerns about the potential for more frequent and intense extreme weather events. Already, we are experiencing, more and more, the realities



Tafadzwanashe Mabhaudhi

of a changing climate and its far-reaching impacts. We have emerged from one of the worst droughts to affect southern Africa, faced floods and wildfires that left a trail of death and destruction, impacting human and environmental health and wellbeing. The role of nature as a buffer has been undermined, with devastating impacts on people.

There is an urgent call to action to respond to the triple planetary crises with solutions that are science-led, robust and locally grounded, while responding to global challenges and putting people and planet at the centre of such action.

At the INR, we are responding to this call for action by continuing our leadership and focus on championing science-led solutions to the triple planetary crises. We do so by working with our partners, including the communities, to transform land, water, food, and environmental systems for people, nature, and society. As global leadership for responding to these crises shifts from the global North to the global South with a call for new and equitable partnerships that are led from the South, the INR is well-positioned to lead, partner and collaborate in this shift.

We are recommitting ourselves to driving science-led sustainable, equitable, inclusive and resilient natural resources management solutions that prioritise people, nature and society. We recommit to taking action to halt further greenhouse gas emissions and promote climate adaptation to protect the world's most vulnerable and the environment. In doing so, we are also broadening our outlook, focusing more on planetary health, recognising that human wellbeing and environmental wellbeing are intricately linked and cannot be achieved without the other. We have always championed solutions that reflect this ethos.

As we continue on this journey, I would like to thank our partners and the communities that we work with, who all continue to motivate, inspire and support us. While we work to respond to global challenges, we do so from a strongly locally grounded perspective, valuing and understanding the need for any solutions to be relevant to and informed by context.

I am excited to lead the INR on this journey as we seek to partner and respond to the global call to action, amplifying science-led solutions for people, nature and society from the South.

Sincerely,

Professor Tafadzwanashe Mabhaudhi



ABOUT THE INR

Who are we?

The INR is a non-profit company that was established as an associate institute of the, then, University of Natal. We became independent in 1996, and our work continues to be strongly aligned with our objective embodied in our Memorandum of Incorporation, namely:

The Institute of Natural Resources NPC 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.

We are a recognised public benefit organisation, and we use independent funding from diverse sources 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 faced by our community partners on the sustainable use and management of our shared natural resources.

The INR team carries out 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 44 years by partnering with government, civil society, the private sector and other leading research organisations. We are a leading knowledge provider, strategic and operational supporter, capacity developer, and advocate for natural resource and environmental management in southern Africa.

Governance

The INR is governed by a Board of Directors that comprises executive (Tafadzwa Mabhaudhi and Belinda Murray) and non-executive members (Norman Dlamini, Chris James, Preeya Daya and Cecile Proches). The Board is chaired by Norman Dlamini, the Director of Business Development at Forestry South Africa. The Board meets quarterly to reflect on the performance of the organisation and provide guidance to senior management.

Within the organisation, we have an Executive Committee (EXCO) that comprises the Executive Director (Tafadzwa Mabhaudhi), Financial Director (Belinda Murray), Projects Officer (Nisha Rabiduth), Chief Scientists (Jon McCosh and Brigid Letty) and staff representative (Zinhle Ntombela). EXCO is responsible for actioning the strategic direction of the INR as well as oversight of the financial performance, projects and programmes being implemented.

Structure of the organisation

The INR has technical staff that are organised across three themes (Ecosystems, Climate Action and Sustainability, and Agriculture and Rural Livelihoods). While housed within a particular theme, staff and interns work across multiple themes, reflecting our interdisciplinary approach. An efficient and professional administration team supports the technical staff.

INR's strategic response to emerging global challenges

To strengthen our position in the sector, we held a two-day workshop at Tala Valley Conference Centre in March 2024. This event brought together all INR staff as well as key external stakeholders with whom we work. This provided the opportunity for the INR to reflect on our outcomes and progressively refine our strategy to respond to global challenges at local and regional scales. Emerging from the process, the challenges were distilled and clustered into four interconnected categories:



Protect Ecological Infrastructure

Biodiversity and Land Restoration Climate Adaptation and Mitigation



Strengthen Circular Economies

Water Reuse and Efficiency Food System Circularity Waste Valorisation



Build Resilience and Adaptation

Urban Sustainability
Community
Empowerment
Inclusive
Development



Drive Science to Impact

Science-Policy-Practice Interface Applied, Collaborative Research

Evidence-informed Decision-making

ENABLING FACTORS

Talent Attraction and Retention | Cross-thematic Teams | Performance and Culture Shift

Key elements of the INR's strategic focus.

Biodiversity loss, environmental degradation, environmental pollution and climate change all impact ecological infrastructure, while also having impacts on other domains, such as food and nutrition security and climate resilience.

We need to co-develop solutions, including more sustainable land use practices, to reduce biodiversity loss and environmental degradation, to mitigate environmental pollution, and to either mitigate or adapt to climate change.

Water insecurity, as a result of increasing demands as well as climate change, calls for solutions that allow for more efficient use and re-use. Food and nutrition security could also be enhanced by a **circular economy** that recycles nutrients and reduces waste.

The INR will continue to collaborate with partners to build sustainable cities in the face of urbanisation and sustainable rural livelihoods to reduce poverty, unemployment, and inequality and achieve better governance and accountability. This will contribute to achieving the Sustainable Development Goals (SDGs). Developing the necessary capacity and capabilities of different stakeholders, including developing communities' agency and innovative capacity, is a key element of building climate resilience and adaptation capacity.

Partnerships at the science, practice, and police interface are necessary to ensure that knowledge generated through science has a real impact and that knowledge and local priorities inform science and policy.



Overview of the INR's strategic direction.

Through the strategic thinking process, we have realised that the first step is related to 'people and culture' and relies on building and retaining talent and recruiting new skills. This also calls for promoting multi-disciplinary teams that work across our themes to integrate research, implementation, outreach and knowledge dissemination across projects. We are also rethinking our performance management systems as well as our incentives and rewards systems to ensure that we can achieve this.

INR HIGHLIGHTS

During 2024, the INR team was engaged in a range of activities at local, regional and international scales, which allowed for the sharing and building of expertise and knowledge. A number of staff also invested in their career development, with the support of the INR.

Sharing skills and knowledge/enhancing transdisciplinary experiences

The INR team participated in an interesting range of global and regional conferences and workshops in 2024. Brigid Letty and Thabo Makhubedu attended the Prolinnova African Partners Workshop, which was held in conjunction with the International Farmer Innovation Fair and Conference (IFIF-C) in Nairobi in April 2024. Prolinnova is a global network that promotes participatory approaches for agricultural development, in particular, a recognition of the innovative capacity of farmers to address challenges that they face.

A number of INR staff (Jon McCosh and Thabo Makhubedu), together with a University of KwaZulu-Natal (UKZN) student (Ayanda Shandu) and two INR interns (Mzamo Mnikathi and Hlengiwe Zuma), attended the 34th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC), which was held in Seville, Spain, in May 2024. The participants were all part of a larger INR team that has been working on the Environmental Pollution Programme (EPP) that was funded by the United Kingdom's Department for Environmental Food and Rural Affairs (Defra) and implemented in collaboration with the Joint Nature Conservation Committee (JNCC). The meeting provided an opportunity for the team members to present their research outputs.

Besides the overseas conference, the JNCC project also brought INR project staff together for a UK / South Africa Knowledge Exchange Seminar, which was held in Durban from 6-8 March 2024. Members of the JNCC team were also hosted by INR in October 2024, which



Thabo Makhubedu with colleagues at the IFIF-C, Nairobi, April 2024. (Source: Janish Wettasinha) INR intern, Hlengiwe Zuma, attending the SETAC meeting in Seville, May 2025.

allowed for a team meeting to explore the golden thread tying together the different EPP projects, as well as allowing the team to undertake a field trip with the new ENVIROLAB, which was funded by Defra through the EPP.

Brigid shared Prolinnova experiences in Switzerland in September 2024, at the University of Basel, where she was invited to participate in the "Grassroots Innovations as Incubators for Sustainability Transitions" Conference.

Tafadzwa Mabhaudhi and Matthew Burnett have been contributing to the Sustainable Healthy Food Systems in Southern Africa (SHEFS-SA), which is investigating a wide range of issues across disciplines, considering the environment and food systems. This builds on the previous Sustainable and Healthy Food System (SHEFS) program at the University of KwaZulu-Natal, which has now expanded to include Malawi and Zimbabwe. The team has been travelling to these countries as part of the knowledge sharing process. Matthew was able to meet with collaborators in Malawi and visit different stakeholders in the fisheries sector.

Jon and Brigid attended the 4th Catchment-based Indaba on Ecological Infrastructure for Water Security, organised by South African National Biodiversity Institute (SANBI), that was held at Kleinmond in the Western Cape at the end of October 2024. This initiative also allowed the INR team to engage with other members of the Cross-Catchment Collective, which is an initiative funded by the Lewis Foundation aimed at supporting co-learning between seven catchment partnerships.

Focusing closer to home, the INR team organised and/or participated in a number of activities. In celebration of International Day for Biological Diversity, the INR and SANBI partnered with Matomela High School and the traditional healers for a hike up Impendle Mountain, led by locals from KwaKhetha in Impendle. The purpose of this day was to exchange knowledge on biodiversity conservation and promote community involvement in its protection. A BioBlitz was conducted using iNaturalist to identify local plant species, and their traditional uses





Celebrating biodiversity on iMpendle Mountain.

INR staff at Lotheni Nature Reserve, October 2024.

were explained by a local healer and discussed further by the participants. SANBI highlighted that the mountain's importance is multifold as it is also part of a strategic water source area. Despite the challenge of hiking up the mountain, most participants reached the top, marking a successful and educational day.

The Ecosystems Theme celebrated World Fish Migration Day by presenting the river connectivity work we do at the Palmiet River Conservancy. The day highlighted the plight of migratory fish around the globe, with freshwater eels being some of the local fish species negatively impacted by impaired migratory routes.

As mentioned earlier, the Tala Retreat that took place in March 2024 was an invaluable opportunity for all INR staff to get together to strategise about the future of the organisation. Another opportunity for sharing and learning between staff was through a field trip undertaken to Lotheni in October 2024 to see the range of rehabilitation and restoration activities being implemented in the upper uMkhomazi Catchment.

Pathways and progression

The INR is very proud of its internship programme. In partnership with government organisations that support internships, such as the Human Sciences Research Council (HSRC), through their DSI-HSRC Internship Programme, and the Groen Sebenza Internship Programme, we are able to provide young graduates with diverse work experiences across a range of projects. Interns are attached to staff members who provide guidance and mentorship, including regular reviews. The INR also offers placements for students requiring work-integrated learning (WIL) as part of their studies. During 2024, such an opportunity was provided to Nompilo Sishi, an agricultural diploma student from Mangosuthu University of Technology.

A number of INR projects have provided opportunities for the participation of postgraduate students. Ayanda Shandu, an MSc. Agriculture student from UKZN, contributed to the Defra/JNCC EPP project that explored the burying of used diapers (nappies) as a substrate for growing Napier grass, given the huge challenge experienced with the dumping of nappies. Ayanda has since graduated, but also had an opportunity to travel to Seville with the INR team for the SETAC meeting. Hlengiwe Zuma, who started as an intern at the INR before being invited to join the INR as a field officer in December 2024, has also been supported by Jon McCosh, as her mentor, towards completing her MTech at the Durban University of Technology. Admire Nyamwanza also supported a student through his EPP project, namely Zwivhuya Caroline Tshaivhundo, an MSc (Hydrology) student at UKZN.

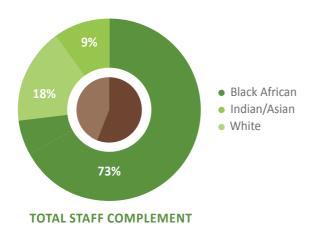
Career development for younger staff is seen as a key way of upskilling and retaining a dynamic team. The INR has provided some financial support and/or study leave to allow staff members, Mfundo Myende and Athabile Dlamini, to pursue further studies through UNISA.



HUMAN RESOURCES

For 2024, our staff complement comprised 24 full-time staff (technical and admin), and we hosted a total of seven interns (5 through HSRC and 2 through the Groen Sebenza internship programmes). See Appendix 2 for full staff details.

The INR's staff complement clearly reflects our intention to contribute to the transformation of the sector, as well as to recruit young scientists.



54% Female | **46%** Male



5 Black African females
2 Black African males



THEME ACTIVITIES AND OUTCOMES



Healthy ecosystems provide important ecosystem services and are the foundation of resilient socio-ecological systems. The Ecosystems Theme focuses on addressing global challenges of biodiversity loss, environmental degradation, and pollution. Theme members were involved in diverse projects in 2024 and saw the growth into new areas of work, such as river connectivity and fisheries.

A river connectivity workshop in collaboration with the World Fish Migration Foundation, which we held in Karridene, KwaZulu-Natal, South Coast, was a great success. It included a field trip to the Lower uMkhomazi Bulk Water Supply Scheme (LUBWSS), where a fishway and rock ramp are being constructed to facilitate the movement of fish. The workshop highlighted the need to maintain the ecosystem service rivers provide, that connected rivers are healthier rivers. In addition, the Theme has been working closely with the Environmental Fluid Mechanics Lab at UKZN on the construction of the Good Enough Weir to test the efficacy of the fishway at the LUBWSS.

Inland fisheries are an increasingly important sector in South Africa and across the region. They play an important role in generating income and enhancing food security. The Ecosystems Theme has been working with the Sustainable and Healthy Food Systems –

Southern Africa (SHEFS-SA) program to understand better the role of fish in the food system and the role of inland fisheries across the region. Importantly, the research undertaken by SHEFS-SA is helping us to understand how climate change is impacting fisheries and how policy can be used to create sustainable and healthy food systems. SHEFS-SA is working closely with the University of KwaZulu-Natal and other Universities in Zimbabwe, Malawi and the UK.

The Theme entered their final year with the projects funded by Defra implemented in collaboration with JNCC. The estuaries project completed the field sampling across the iMpenjati, uMdloti, and the uMlhanga estuaries. The project looked to compare biomonitoring techniques across several estuaries with varying levels of pollution, considering ecological status and characteristics. The iMpenjati proved to be in the best ecological condition, while the uMhlanga, following the agrochemical spill event, continued to show persistent degraded conditions, with ongoing pollution hampering recovery.

In October 2024, we took delivery of our new ENVIROLAB, a mobile water testing unit that was funded by Defra, through the JNCC's EPP. There has been interest not only within the INR but also from other stakeholders regarding the services that we can provide with this new resource.



The new ENVIROLAB is a mobile water testing unit funded by Defra.

The INR, in collaboration with the World Fish Migration Foundation, hosted a two-day workshop on integrating river connectivity restoration into river basin management strategies.



River connectivity
is important
because instream
barriers negatively
impact biodiversity,
sediment
and fisheries
management, which
indirectly impacts
people's livelihoods.

The INR has been exploring opportunities for cultivating indigenous trees on the Wild Coast with members of the Amadiba Community. This is through the Great Green Wall initiative, funded by the Global Environment Facility (GEF) and being implemented in partnership with Siyazisiza Trust and Sustaining the Wild Coast (SWC).



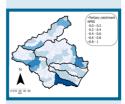
Besides the benefits that indigenous tree species can provide for livelihoods, such as food, fodder, and medicine, they have also provided a space for youth and elders to interact more closely to better understandto better understand and support indigenous knowledge systems.

The team is leading the fish and fisheries component of the Sustainable and Healthy Food Systems – Southern Africa (SHEFS-SA).



SHEFS-SA is a 5-year project that targets vulnerable people and focuses on food-related research that can be integrated into policy to make a meaningful impact on people's livelihoods.

The INR team has been developing a prioritisation tool and maps to identify important water-related ecological infrastructure in the uMngeni Catchment. This is done through the Ecological Infrastructure for Water Security Project (EI4WS), in collaboration with SANBI, UKZN, and catchment stakeholders.



Investment in critical catchments can unlock biodiversity benefits, highlighting the need for developing investment plans based on strong evidence.

Through the JNCC
Environmental Pollution
Programme, the INR, in
collaboration with the
Durban University of
Technology, conducted
field trials to investigate
the use of algae
(phycoremediation)
to mitigate pollution
associated with dairy
waste from farms and
processors.

Phyco-remediation has potential, but the wide daily and seasonal temperature fluctuations require further adaptation of the system.



Phyco-remediation is a climate-smart and green innovation that has great potential for reducing the impacts of pollution from agricultural waste on water resources.

The Ecosystems Theme has been sampling the uMhlanga, Mdloti and iMpenjati estuaries to understand how biological indices track pollution events.





The impaired estuary was closed to the public following the pollution spill. While there are still some contaminated areas, the system has shown recovery and has been reopened. However, the contamination is still a threat to the health of those depending on resources from this ecosystem.

The importance of healthy estuaries is demonstrated by the exciting find in iMpenjati Estuary, being three phases of freshwater eels, which are migrators that come all the way from the Mascarene Trench in the Indian Ocean, to live in our freshwaters.

Funded by Eskom to monitor the Ingula Power station, the Ecosystem Theme has been monitoring fish, diatoms, and macroinvertebrate diversity as indicators of water quality within an ecosystem because the communities respond to environmental changes and pollution.



Evaluating the conditions of the ecosystem linked to power generation is important for downstream users who rely on these ecosystems.



CLIMATE ACTION AND SUSTAINABILITY 😭



The Climate and Sustainability (CAS) Theme addresses climate change, environmental degradation and social inequality in South Africa's vulnerable communities. In 2024, the theme focused on building resilience to climate induced extreme events, improving waste management and sustainable development practices with support from Grand Challenges Canada (GCC), the UK Department for Environment Food and Rural Affair (Defra) – via the Joint Nature Conservation Committee (JNCC), the Government of Flanders, and South African National Biodiversity Institute (SANBI).

The CAS Theme has demonstrated the importance of community-based, participatory approaches in strengthening climate resilience and sustainability by centring local knowledge, building capacity in local communities and fostering partnerships. Key projects in 2024 included collaborations with eThekwini municipality, the Adaptation Network and the South African Depression and Anxiety Group to support community-driven adaptation.

The CAS Theme is committed to enhancing adaptation through participatory research and gender inclusion to address disproportionate impacts of climate change on vulnerable populations. It will continue to inform climate action and sustainability in partnership with the local government and communities.

Anele Mthembu, INR intern, participated in the Climate and Health Africa Conference in Harare, Zimbabwe in October 2024 and presented her poster titled "The floodswaste nexus and impacts on human health in South African urban informal settlements".



Participation in events such as the Climate and Health Africa Conference provides insights into how other countries are tackling climate change-related challenges.

Community members from the Jika
Joe informal settlement outside
Pietermaritzburg attended a Climate
and Disaster Risk Assessment workshop
at the INR. This was part of an initiative
coordinated by the Adaptation Network
and funded by the Government of Flanders
through SANBI.



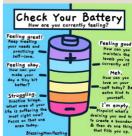
The participatory assessment approach empowered the community, allowing them to contribute local knowledge and to advocate for their needs for environmental resilience, especially related to waste management and sanitation.

Creating awareness about the impact of solid waste on flood risk enhances preparedness and community resilience. This was explored through a project funded by Defra and implemented in collaboration with JNCC at Jika Joe informal settlement.



Unmanaged solid waste increases flood risks in informal settlements, especially household waste dumped in riparian areas.

Members of the Quarry Road informal settlement were part of a programme funded through the Grand Challenges Canada Initiative. This led to the establishment of community recovery groups to address psychosocial health challenges associated with climate extremes.



Source: The South African Depression and Anxiety Group, 2025.

The project, which also drew on the expertise of the South African Depression and Anxiety Group, improved the understanding of both the INR research team and the community about the mental health challenges associated with disasters such as floods.



AGRICULTURE AND RURAL LIVELIHOODS



The work of the Agriculture and Rural Livelihoods (A&RL) Theme addresses a range of global challenges, including climate change, environmental degradation and food insecurity. Our work is focused geographically around three localities: the upper uMkhomazi Catchment. the central uMngeni, and the upper uThukela Catchment.

By focusing on specific localities, we are able to bring multiple sources of funding and complementary activities together. For example, in the uMkhomazi Catchment, the restoration project funded by uMngeni-uThukela Water serves as an anchor project, providing evidence of the benefits of restoration efforts to reduce erosion and siltation, while also providing direct livelihood benefits for the community teams as well as the Amanzi Champions. Amanzi Champions are young people involved in monitoring activities, supporting research and documenting project outputs. Complementary activities have included spring protection measures funded by the EU, solid waste and other pollutionrelated activities funded by Defra through JNCC, and enhanced grazing and livestock management through the Herding for Health programme, which is funded via Meat Naturally, along with support from WWF-SA, Sappi and SANBI. These grants have grown the work to meaningfully include participation by youth and traditional authorities in catchment actions.

Besides the work in KwaZulu-Natal, the A&RL team has been active in Limpopo Province, with funding from the UK Foreign, Commonwealth and Development Office (FCDO), investigating drought risk in the Groot Letaba Catchment, as well as outside of South Africa. This has included a range of activities associated with the global network Prolinnova, which 'promotes local innovation for agro-ecology and natural resource management'.

The INR, together with Mahlathini Development Foundation and UKZN, are conveners for the catchment partnership called the Northern Drakensberg Collaborative. PepsiCo funds this via WWF.



Multi-stakeholder partnerships bring together diverse stakeholders that can drive a common agenda towards securing water resources through improved catchment management while also ensuring that there are direct henefits for the people living in the catchment.

Phase 3 of the Conservation and Restoration of the Upper uMkhomazi Catchment Programme was approved by UUW, allowing this important catchment work to continue for another five years.



Landscape restoration and conservation agriculture have not only addressed degradation and climate change impacts but have also provided employment opportunities for community members and longer-term livelihood benefits.

The INR partnership with WWF and Sappi in the uMkhomazi also continues to grow and prosper through a second phase of funding focused on alien clearing, value addition of wattle biomass and supporting related income generation opportunities.



Local livelihoods have been directly enhanced through employment and small enterprise development. These can be seen as green jobs as they are closely linked to clearing invasive alien tree species that use excessive amounts of water and threaten biodiversity.

With funding from the Lewis Foundation, the INR is the host organisation for the Cross-catchment Collective, which is an initiative involving seven catchment partnerships that aim to share lessons and collaborate towards improved catchment management.



Catchment
management
is important
for addressing
environmental
degradation, securing
water resources
and enhancing
the livelihoods of
people living in the
catchment.

Given the number of catchment partnerships that exist, there is value in sharing institutional and technical lessons.

Pollution-related work conducted in collaboration with JNCC in the uMkhomazi Catchment has explored pollutants in spring water relied on by rural households; solid waste management; and alternative ways of disposing of used nappies, which are often dumped in streams and rivers.



Environmental pollution has a direct impact on natural environments as well as the health and well-being of people who rely on natural resources in the catchment. The team has been active in creating awareness about the potential risks associated with pollutants that communities may encounter.

In partnership with
Cranfield University and
with FCDO funding, the
INR has been working with
stakeholders in the Groot
Letaba to develop and
test a tool to make better
management decisions
based on long-term
drought risk



Climate change is leading to increased drought risks, which have the potential to negatively impact the commercial tropical fruit industry, resulting in job losses.

The INR sees value in participating in projects that lead to innovative tools that can sustain consistent production volumes and quality.

On behalf of the DFFE, the A&RL team had the opportunity to draw on existing agroforestry expertise to develop a guideline for agroforestry practitioners that was translated into local languages to make it more accessible to farmers.



Agroforestry, which can be defined as the intentional integration of woody species into crop and/or livestock systems, offers opportunities for increasing the resilience of agricultural systems.



FINANCIAL INFORMATION

The Institute of Natural Resources NPC (INR) has continued to demonstrate sound financial management for the year ending 31 December 2024, recording a modest surplus and maintaining a stable financial position. The financial statements have been independently audited, and a summary of the key figures is included in Appendix 1.

Revenue increased significantly compared to the previous year, driven by growth in project activity. This increase in income was accompanied by a proportional rise in project-related expenses, reflecting the implementation intensity of funded projects during the year. Despite the increased activity, the INR maintained tight cost control, ensuring operational sustainability.

Cash reserves decreased over the year due to the timing of project disbursements and the strategic investment in new assets. Notable purchases included the acquisition of two motor vehicles to support field-based project work and an upgrade in computer equipment to enhance operational efficiency. Nevertheless, the INR retains a healthy cash balance at year-end, with sufficient liquidity to meet its obligations.

Overall, costs were managed prudently, with general expenses remaining within budgeted expectations. Interest income grew during the year due to higher average cash balances earlier in the period and careful cash management.

APPENDIX 1:

INR ANNUAL FINANCIAL STATEMENTS FOR 2024

Extract of the 2024 Audited Annual Financial Statements
Institute of Natural Resources NPC
Statement of Comprehensive Income for the year ended 31 December 2024

Figures in Rand	2024	2023
Revenue	23,329,533	16,584,200
Other operating income	327,920	368,889
Other operating expenses	(23,907,123)	(17,291,723)
Operating (deficit) surplus	(249,670)	(338,634)
Investment revenue	812,893	721,633
Finance costs	(603)	(575)
(Deficit) surplus for the year	562,620	382,424
Other comprehensive income	-	-
Total comprehensive income for the year	562,620	382,424

Extract of the 2024 Audited Annual Financial Statements Institute of Natural Resources NPC Statement of Financial Position as at 31 December 2024

Figures in Rand	2024	2023
Assets		
Non-Current Assets		
Property, plant and equipment	3,943,969	2,871,955
	3,943,969	2,871,955
Current Assets		
Work in progress	1,451,685	797,413
Trade and other receivables	1,725,491	531,779
Cash and cash equivalents	10,389,607	13,416,363
	13,566,783	14,745,555
Total Assets	17,510,752	17,617,510
Equity and Liabilities		
Equity		
Reserves	1,200,000	1,200,000
Retained income	9,471,899	8,909,279
	10,671,899	10,109,279
Liabilities		
Current Liabilities		
Trade and other payables	1,223,240	901,628
Funds in advance	5,615,613	6,606,603
	6,838,853	7,508,231
Total Equity and Liabilities	17,510,752	17,617,510

APPENDIX 2:

STAFF AND DIRECTORS (31 DECEMBER 2024)

SCIENTISTS		
NAME	POSITION	QUALIFICATIONS
Prof Mabhaudhi, Tafadzwanashe	Executive Director	PhD, Crop Science
Dr Letty, Brigid	Chief Scientist	PhD, Crop Science
McCosh, Jon	Chief Scientist	MEnvDev
Dr Burnett, Matthew (Commenced 01/03/24)	Principal Scientist	PhD, Ecological Sciences
Dr Nyamwanza, Admire (Resigned 31/12/24)	Principal Scientist	PhD, Development Policy and Management
Dr Makhubedu, Thabo	Senior Scientist	PhD, Crop Science
Ntombela, Zinhle	Senior Scientist	MSc, Agriculture
Makhaya, Zanele	Scientist	MSc, Geography
Gwala, Mthobisi (Resigned 29/02/24)	Field Officer	NC, Agriculture Production Management
Myende, Mfundo	Field Officer	ND, Agricultural Management
Dlamini, Athabile	Field Officer	BSc, Hydrology and Water Management
Mtshali, Sizakele (Commenced 01/04/24)	Field Officer	MSc, Development Studies
Mncwabe, Sambulo	Field Assistant	Dip, Farming Management

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
Vilakazi, Mbali	Receptionist/Administration Support

ADMINISTRATORS	
NAME	POSITION
Majola, Gcinile (Commenced 15/04/25)	Administration Support
Mnikathi, Londiwe (Resigned 31/01/24)	Receptionist
Hlatshwayo, Muzi	Grounds Maintenance
Sikhakhane, Delisile	Office Cleaning

INTERNS	
NAME	QUALIFICATION
Zuma, Hlengiwe (Internship Completed 31/12/24)	BTech, Tourism Management; Dip, Ecotourism
Mnikathi, Mzamo (Internship Completed 31/12/24)	MSc, Ethnobotany
Mthembu, Anele	BSc Geography and Environmental Management; Dip, Food Security
Zuma, Cebisile (Commenced 01/08/24)	BSc Agriculture, Animal and Poultry Science
Magagula, Thokozani (Commenced 01/08/24)	BSc, Genetics and Zoology
Mahala, Lungelwa Pakama (Commenced 19/08/24)	Dip, Animal and Plant Production; BTech, Plant Production
Zondi, Sinethemba (Commenced 01/09/24)	BSc, Geography and Environmental Management

DIRECTORS	
NAME	POSITION
Dlamini, Norman	Chairman, Non-executive Director
Prof Mabhaudhi, Tafadzwanashe	Executive Director
Murray, Belinda	Financial Director
James, Christopher	Non-executive Director
Prof Modi, Albert (Resigned 04/09/24)	Non-executive Director
Dr Daya, Preeya	Non-executive Director
Dr Proches, Cecile	Non-executive Director

