

Future Africa — a reflection

The First Five Years: 2019-2024



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The First Five Years, 2019-2024

Heide Hackmann, Director of Future Africa

Over time, our narratives about science have reminded us that science knows no borders, is a universal language, and is intended for the public good. In recent years, the role of science in society has brought to the fore the need for the transformation of science and science systems in order to generate actionable knowledge for a global world in crisis.

Particularly in the realm of universities and knowledge institutions, the emphasis has been on 'doing science differently' in order to address what has been called 'sustainability challenges' that lie at the nexus of multiple issues and complex [realities](#) [1]. These complex realities are captured in the global sustainable development [goals](#) [2] that are regarded by some as an aspirational framework for generating actionable knowledge at the science-policy-practice interface.

There is broad consensus that working within disciplinary or policy boundaries is no longer sufficient, and that transdisciplinary approaches are needed - and collaboration across geopolitical divides - in tackling some of the urgent challenges of our times. It is in this context that Future Africa was conceptualised and is evolving to become a vibrant pan-African platform for research, collaboration, and engagement.

The purpose of this Director's Reflection is to present, in overview, Future Africa's achievements in its first five years, 2019 to 2024, and our plans for the future.

A BRIEF HISTORY

It is [ten years](#) since the idea of Future Africa was first mooted, in 2013, by the then Vice-Chancellor and Principal of the University of Pretoria (UP), Prof Cheryl de la Rey (2009-2018). Five years later, at her farewell on 30 November 2018 — fittingly held at Future Africa, as it was one of the projects that defined her tenure — [the buildings](#) [3] and [gardens](#) were almost complete. A few months later, the official launch on 29 March 2019 marked the beginning of a unique journey. It was also the beginning of a new leadership era at UP, with the appointment of Prof Tawana Kupe as Vice-Chancellor and Principal (2019-2023).

References

- [1] <https://council.science/publications/a-model-for-implementing-mission-science-for-sustainability>
- [2] <https://www.un.org/sustainabledevelopment/sustainable-development-goals/> [accessed 4 March 2024]
- [3] <https://www.ewarch.co.za/awards/>



In March 2022, the reins were handed over to me to lead the further development of Future Africa. The distinct focus of my tenure has been to ensure that Future Africa's plans and aspirations are given content, and that 'new ways of doing science' find expression in what we do, and in the partnerships and international collaboration pursued.

I pay tribute to UP's leadership, especially Future Africa's founding director, [Prof Bernard Slippers](#), [Prof Cheikh Mbow](#) who followed in his footsteps, and the many individuals and groups who have contributed to building the foundations of Future Africa to become what it is today.

THE CONTEXT AND FOCUS

There were predictable challenges, especially during the Covid-19 years that limited the very idea of Future Africa as a collaborative space. Following this difficult start, we needed to rapidly accelerate progress in order to build a pan-African research platform that is appropriately situated in a twenty-first century world, with all the complexities that this time-place contextuality entails. This has also been portrayed as '[the poly-crisis turn](#)'[4] in a contemporary world where multiple crises overlap, or as '[wicked problems](#)'. [5] Our place in Africa, and in the global South, further circumscribe the contextual realities that constrain our engagement in sustainability challenges.

In a relatively short span of time, we have initiated several high-profile initiatives and programmes, and extended our African and global reach and networks. We have also strengthened our capacity to organise and host national, regional and international events. Most notably perhaps, we have intensified our sphere of influence by connecting collaborators from within and beyond the worlds of science and science policy, industry, government, and civil society. And, by all accounts, we have been successful in our endeavours.

As expressed by one of our board members, [Prof Patrick Caron](#), in late 2023:

'Future Africa's trans-scale capacity to act by connecting processes at different levels — and to act upon networks at different levels and scales — is unique in the world and should be pushed forward.'[6]

In this brief reflection in the life of a young organisation, the intention is not to give detail. Instead, I would like to highlight some of the conceptual anchors and frames of reference, and the achievements of which we are particularly proud.

References

[4] <https://www.weforum.org/videos/experts-explain-adam-tooze-what-is-the-polycrisis/>

[5] <https://futureearth.org/2013/07/15/what-is-earth-system-governance/>

[6] Future Africa International Board meeting, 31 October 2023.

IN SUMMARY

Central to what we do is to focus on transformative research and engagement, as echoed in the four overarching strategic objectives:

- Leading transformative research in and for Africa
- Developing Africa's transformative research leadership capacities
- Building transformative global partnerships for African research
- Fostering a culture of dialogue and action for change in African research.

Tied to these objectives, our initiatives are grouped under five 'challenge domains':

- People, Health, Place (One Health)
- Sustainable Food Systems
- Global Equity in Africa
- Sustainability Transformations in Africa
- African Science and Technology Futures.

The research chairs of these domains are academics of high standing, and play a crucial role in advancing transformative research at the science-policy-practice interface.,

The chairs work at a pan-African level and collaborate with global partners to set African agendas, build African capacities, create African networks of expertise and influence, and co-design and deliver high-impact transformative research in and for Africa.

These domains are complimented by cross-cutting programmes and initiatives.

We have highly talented researchers and support staff linked to these domains:

Currently there are four research chairs.[7] A small complement of five permanent staff are funded by UP, the balance - currently about 50 - are externally funded positions and appointed on short-term contracts. This is in stark contrast to a total complement of five staff in 2019, one part-time faculty secondment and four contract positions.

International experts have contributed immensely to our work, and the impact and influence of what we do [8].

By December 2023, there were six visiting fellows; in the first quarter of 2024, the number grew to nine. The contribution of these world-class experts is in addition to the skill and expertise of the many collaborators who have participated in the research work and events hosted by Future Africa.

References

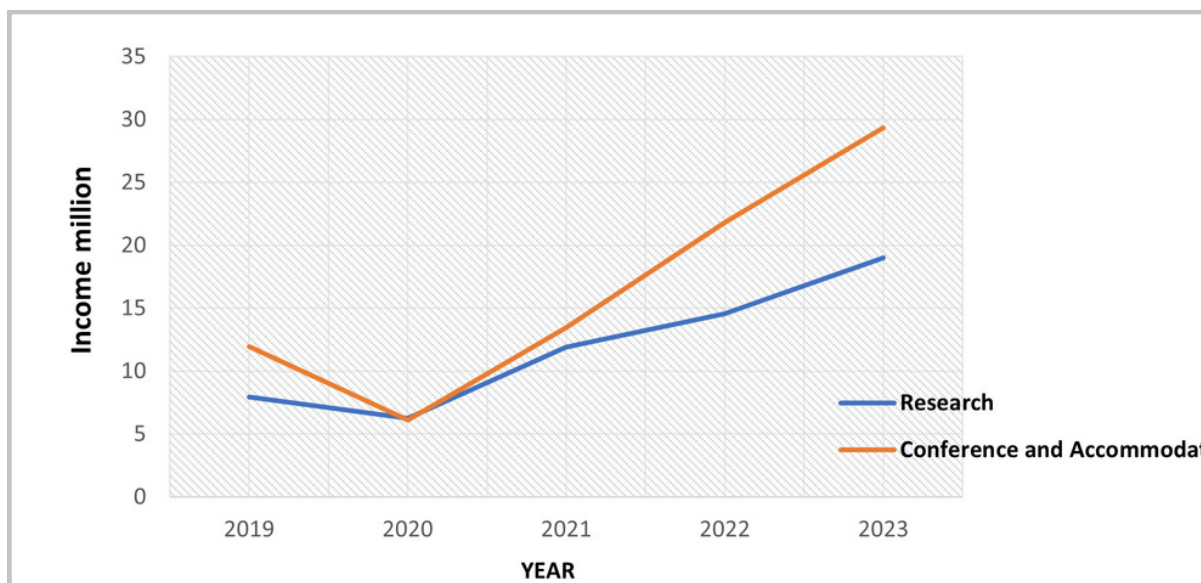
[7] The appointment of a new chair for Global Equity in Africa is in the process of being finalised.

[8] This excludes sources of funding received from donors where chairs hosted at Future Africa include a split component with other entities (e.g., SARChI or ARUA Centre of Excellence funding); subsidy received for research output which reverts to UP department and faculty structures, and where funding is allocated to the University for events co-hosted with Future Africa.

While it remains important to strengthen external funding for transformative research and engagement, there has been a steady upward trend in this period:

Funding increased by 30% from 2019 to 2023 - from R7,9m to a cumulative total of close on R60m - making up 42% of the overall income generated in this period.

Year	Research funding (million)	Conference and accommodation (million)
2019	7 937	11 960
2020	6 249	6 100
2021	11 906	13 410
2022	14 581	21 730
2023	18 991	29 130
Cumulative five-year total	R59 664	R82 330



Our engagement with a diversity of people and groups is to some extent reflected in the number of events hosted and visitors received.

In broad overview, the scope of activity increased from a total of 205 events in 2019, to 1 262 in 2023, and close on 3 000 in this period. With this, of course, there was an increase in the total number of participants from 10 000 in 2019 to a cumulative total of 66 000.

Year	Number of events	Number of people (est.)
2019	205	10 040
2023	1 262	29 407
Cumulative five-year total	2 899	66 069



References

[9] The figures reflect only the delegates who have made use of accommodation facilities and therefore are an underestimation of visitors and participants in events. With new software installed, it will be possible to track place and origin so that there is a system-level record (and not only per event).

CHALLENGE DOMAINS

It is in the nature of science and science systems that dialogue and action are needed in order for ideas to become embedded in practices, and for spheres of influence to be strengthened and extended. This is what has made the challenge domains at Future Africa so important, and their focus on transformative research for actionable knowledge.

'We have defined transformative research as 'research that is purposeful in addressing complex societal challenges and adopts an approach that is integrative (interdisciplinary), engaged (transdisciplinary), holistic (using systems thinking), digitally enabled and futures-oriented.' [10]

Each domain, in its own right, has achieved significant results in a relatively short span of time, and taken together, the strides have been enormous. The engine room continues to be engagement, collaboration and experimentation across disciplinary, institutional and geopolitical boundaries, and the cross-cutting weave that holds it all together, the drive to pursue actionable knowledge, with a focus on understanding transformations.

Below are brief descriptions of each domain, and highlights of some of the achievements.

PEOPLE, HEALTH AND PLACES (ONE HEALTH)

[Professor Wanda Markotter](#) is the research chair of *People, Health and Places (One Health)* challenge domain, the first to be established at Future Africa, in 2020. Her research spans inter- and transdisciplinary collaborative work and several One Health initiatives, from an institutional level at the University of Pretoria, to regional pan-African and international contexts.

To illustrate the extent of collaboration at one institution and in one project alone, and this at the start of the chair's research activities: seven UP faculties and centres, eight research clusters, and 100+ scientists were involved in the first United Nations Children's Fund (UNICEF) project that targeted youth during the Covid-19 years – the Youth Empowerments and Health (YEaH) programme. Phase II of this programme followed in April 2021, and focused on women scientists at historically disadvantaged institutions [11].

It would be interesting to trace the exponential increase in participation, impact and reach that this research chair has managed to consolidate in such a brief stretch of time. It was Prof Markotter's appointment in 2021 as co-chair of the [One Health High-Level Expert Panel \(OHHLEP\)](#) that brought about a significant shift in the global visibility of her work, and the potential for strengthened networks of influence and impact. The Expert Panel advises the World Health Organisation (WHO), the World Organisation for Animal Health (WOAH), the Food and Agricultural Organisation (FAO), and the UN Environmental Programme (UNEP), and includes 26 multidisciplinary international experts from 24 countries. A further major achievement, also in 2021, was her appointment to the *Lancet* - PPATS Commission for the prevention of viral spillover. Her research on bat populations in southern Africa has shown the presence of zoonotic viruses, and the potential spillover to humans and other animals [12].

References

[10] Future Africa Institutional Action Plan, September 2022-2023 (08/09/22).

[11] Future Africa, UNICEF and University of Pretoria (nd). Empowering youth for a sustainable, healthy future. A collaborative project.

[12] <https://doi.org/10.1371/journal.ppat.1011504>

In synergy with her work at Future Africa, Prof Markotter is also the Director of the [Viral Zoonoses Centre](#) at the University of Pretoria, and holds the DSI-NRF SARCHI Chair in Infectious Diseases of Animals (Zoonoses), a programme that has developed significant capacity through postgraduate and fellowship training. The combination of these three entities illustrates the advantage of a pan-African research platform such as Future Africa, and the asset that this 'neutral' structural position offers in bridging institutional, regional and geopolitical divides. In a highly cited paper published in PLoS Pathogens, a new One Health definition is described.[13]

Although a panel effort, Prof. Markotter as co-chair of the OHHLEP panel played a leading role in this output. The definition now forms the basis for global current and future One Health initiatives, and is referenced in several policy documents and discussions.

As she comments

'My role in OHHLEP and its quadripartite (WHO, WOA, FAO and UNEP) advisory role has meant that the research ideas afforded through this international exposure have become strongly embedded in my own research, and in following a One Health approach to prevent the zoonotic spillover.'

SUSTAINABLE FOOD SYSTEMS

The Sustainable Food Systems research chair, first held by Prof Lindiwe Sibanda,[14] was launched in January 2022. Prof Sibanda was succeeded by [Prof Frans Swanepoel](#) who served in an acting capacity until his appointment in November 2023. As with the other domains, the focus is on developing the transformative potential of African sciences. The strong features are not only the research undertaken, but also in the spheres of influence and networks established, and in the funding secured over a relatively short span of time — an estimated R60m since early 2019. Three examples are chosen to illustrate:

- The first **-Food Systems Research Network for Africa** (FSNet-Africa) - hosted at Future Africa, is a flagship project of the African Research Universities Alliance (ARUA) Centre of Excellence in Sustainable Food Systems (AURA-SFS). The project is funded by the Global Challenges Research Fund (GCRF) under the partnership between UK Research and Innovation (UKRI) and ARUA.

FSNet-Africa aims to strengthen researchers' capacities to conduct food systems research and translate evidence into implementable policy solutions and practical interventions in support of the global sustainable development targets.

References

[13] [Future Africa Institutional Action Plan, September 2022-2023 \(08/09/22\).](#)

[14] [Prof. Lindiwe Sibanda](#) is the System Board Chair of the Consultative Group on International Agricultural Research (CGIAR).

The three lead partners are the University of Pretoria, the University of Leeds (UK), and the Food, Agriculture, and Natural Resources Policy Analysis Network (FANRPAN). In the first phase (2020-2023), 19 of 20 postdoctoral researchers, selected from ten institutions across Africa, completed their multi-, inter-, or transdisciplinary research projects. In addition, a network of ten universities in Africa^[15] and six FANRPAN multi-sectoral in-country representatives, working in six countries in Africa, collaborated on this project.

Although this phase of the project has ended, funding has been made available by the University of Pretoria and the University of Leeds to support five fellows to continue their research work in a follow-on project called FSNet-Africa 1.5. This, in itself, is an indicator of achievement.

Several achievements can be listed. FSNet-Africa has been intentional about trying to understand how change happens in African food systems - and what the role of science is in the partnership with stakeholders to manifest this transformation. Through its detailed monitoring framework and 'theory of change', FSNet-Africa has been tracing and documenting its initial successes and will continue to monitor the ripple effects of this project, and its impact over the next five years. FSNet-Africa has trained 20 fellows and equipped them with a set of skills that can transform African food systems. We anticipate that these skills will trickle down to their students and work, and across the region as the footprint of FSNet-Africa begins to manifest in a critical mass of African food systems research leaders.

- The second example -***Climate, Land, Agriculture, and Biodiversity (CLAB)-Africa*** - also falls under the ARUA Centre of Excellence in Sustainable Food Systems (ARUA-SFS) umbrella, and is funded by the Bill and Melinda Gates Foundation.

This project provides a platform for Africa's science community to contribute to the developmental work of governments and institutions in the form of science-based, actionable recommendations. The work is grouped into four clusters: a) climate impact on food systems; b) land restoration and biodiversity; c) people-animal-ecosystems health; and d) land-water-energy resources use. A database of experts working within the CLAB-Africa thematic clusters is being developed, while capacity building has continued through engagement platforms linked to each thematic area.

For example: in 2022, four thematic webinars were convened, involving research institutions, partner organisations, the private sector, farming communities, and civil society. Also in 2022, regional workshops have ensured the inclusion of key stakeholders in dialogues, and importantly, that context-specific evidence and regional diversity are incorporated in policy documents. A key impact area has been the development of early-career researchers. The CLAB-Africa Summer School, held in October 2023, focused on the impact of climate change on food systems, and on land, water and energy resources use. It involved 36 early-career researchers and policymakers from eight countries in Africa.

References

^{15]} Kwame Nkrumah University of Science and Technology, University of Ghana, University of Nairobi, Malawi University of Science and Technology, Lilongwe University of Agriculture and Natural Resources, University of Pretoria, University of the Western Cape, University of Dar es Salaam, Sokoine University of Agriculture, and University of Zambia.

Two further achievements can be singled out here: mobilising regional and continent-wide structures in policy work, and ensuring the appointment of an internationally recognised scientist as co-principal investigator. Three regional structures have been involved,[16] and the partnership with FANRPAN has made possible a continent-wide reach. Prof Tafadzwa Mabhaudhi, London School of Hygiene and Tropical Medicine (UK) will join CLAB-Africa as co-principal investigator, from March 2024. His areas of specialisation include sustainable and resilient food systems, global environmental change, and the water-energy-food nexus, all of which are a perfect fit for the Future Africa research domain.

- The third example is the **Greenhouse Gas Measurement (GGM) project**, in partnership with the New Zealand Agricultural Greenhouse Gas Research Centre (NZAGRC). Funded by the New Zealand Ministry of Primary Industries through the Global Research Alliance on Agricultural Greenhouse Gases, the project aims to foster collaborative activities that would strengthen the connection between science and policy in the field of agricultural greenhouse gas (GHG) mitigation.

The project started in mid-2022, with the primary objective to assess agricultural GHG measurement research in southern Africa, and identify scientific capabilities and institutional capacity in advancing GHG research. In March 2023, the findings were presented at a consultative workshop that involved a diverse group of stakeholders to validate the findings and take the research forward. Participants included representatives from universities, research institutes, agribusiness, international organisations, provincial and local governments, and farmer organisations. In addition to identifying systemic challenges, the workshop highlighted the potential for transformative change through efforts from governments, funding agencies, research institutions, and other stakeholders.

As a result of the insights gained from the initial phase of the GGM project, Future Africa - supported by the Global Research Alliance on Agricultural Greenhouse Gases - has developed a regional programme called Qinisa (in isiZulu, 'to strengthen'). The programme is a multi-stakeholder initiative that aims to strengthen relationships amongst agricultural GHG-related research activities in southern Africa. A dedicated programme management unit will be established at Future Africa to support the project, which will run over five years (up to December 2028), with an estimated cost of 1 million USD. The programme is currently mobilising resources to support its implementation, and several agencies and stakeholders have been invited to partner with Future Africa.

About the Sustainable Food Systems domain, Prof Swanepoel comments as follows:

'A major strength of SFS is its focus on enhancing collaboration, facilitating information sharing, and fostering knowledge exchange. Future Africa provides a central platform for researchers and stakeholders that is welcomed by donor agencies who wish to work with a pan-African consortium of partners.'

References

[16] The three regional structures are the Centre for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA), the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), the Forum for Agriculture Research in Africa (FARA) for central and west Africa. Also significant is that the partnership with FANRPAN enabled CLAB-Africa researchers' engagement in side events at the African Ministerial Conference on Environment (AMCEN) and the UN Climate Change Conference COP27 and COP28.

GLOBAL EQUITY IN AFRICA

The first research chair was appointed in March 2023, with [Prof Dire Tladi](#) as the chair holder. Following his appointment to the [International Court of Justice](#) (ICJ) in November 2023 — a great achievement that has brought accolades for Future Africa, the University of Pretoria and UP Law, and South Africa - Prof Tladi resigned as chair of the Global Equity in Africa domain.

We are pleased to announce that Prof Tladi will deliver the inaugural Future Africa Global Lecture on 'The Transformation Imperative' in May 2025, during Africa Week.

Prof Tladi lists poverty, global ecological equity, and freedom from violence as priorities for Africa:

'The world we inhabit belongs to all of us, and through the activities of the chair, and the activities of Future Africa broadly speaking, we should strive to make sure that all are able to sustainably profit from it, free from poverty, hunger, and violence.'^[17]

In reflecting on his role in Future Africa, he cites as one of the main achievements the request for an advisory opinion,^[18] presented to the International Tribunal for the Law of the Sea in the Hague, on issues related to the adverse effects of climate change and the specific obligations of small island states.^[19]

The domain's current focus on human trafficking that envisages a global anti-human trafficking sensitisation campaign is continued by postdoctoral fellow, Dr [Irene Nyakagere Thomas](#), linked to the Faculty of Law at the University of Pretoria.

Discussions are being concluded on the appointment of a new research chair for Future Africa.

References

[17] Interview with Prof. Dire Tladi, 15 February 2024.

[18] On the proceedings as a whole, see: Request_for_Advisory_Opinion_COSIS_12.12.22.pdf (itlos.org)

[19] https://itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/verbatim_records_rev/ITLOS_PV23_C31_12_Rev.1_E.pdf, p.24

SUSTAINABILITY TRANSFORMATIONS

The fourth domain - *Sustainability Transformations* - and understanding the nature of transformations in African science and science systems, are central to the work of Future Africa. Until the recent appointment of [Prof Maano Ramutsindela](#) as research chair, with effect from 1 April 2024, this domain was my responsibility. The research leadership of Prof Ramutsindela will add considerable capacity to Future Africa and is a pioneering joint appointment between the UP and the University of Cape Town (UCT).

He will also serve as co-director of the ARUA-GUILD Cluster of Research Excellence on the Politics of Sustainability (see below), and hold the position of extraordinary professor in the UP Faculty of Natural and Agricultural Sciences.

in his words,

'I am truly humbled and honoured to be appointed as the UP-UCT Future Africa Research Chair in Sustainability Transformations and excited about the opportunity to harness the transformative potential of African sciences in addressing sustainability challenges and working collaboratively towards a sustainable future for Africa and a just society.' [20]

Six initiatives are grouped under this domain: the first, a well-establish research fellowship programme, followed by five new initiatives, all launched in 2023. In each case, strong progress has been made, partnerships are in place, and funding is secured. Each initiative is briefly described, again with specific reference to some of the major achievements.

1: The Future Africa Research Fellowship (FAR-LeaF)

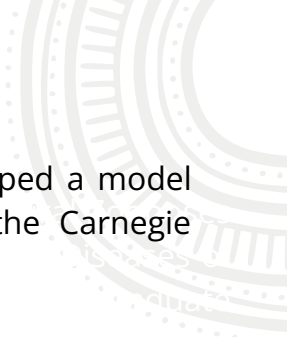
The FAR-LeaF programme, led by Prof Stephanie Burton as program director, recognises the value of creating a long-term network of future-focused African researchers, in synergy with Future Africa's emphasis on African science leadership.

The two-year research fellowship programme, running from March 2022 to August 2024, has focused on developing research and leadership skills at the nexus of health, well-being, and environmental risks in Africa. Sponsored by Carnegie Corporation of New York (CCNY), the programme includes 24 fellows, at 23 higher education institutions, and in 11 different countries across the African continent.

Each fellow has a supervisor in her/his home department or faculty, and a mentor at the University of Pretoria. They all have networks of collaborators in their regions and at their institutions. Many of them have, in these networks, government departments, community participants, and industry partners. Research outputs have included published or submitted research papers (30), conference proceedings and presentations (28), policy documents, and articles in public media (4), book chapters (2), patents (2), software models (5), and one new journal published.

References

[20] <https://www.futureafrica.science/news-events/all/news/item/appointment%20of%20professor%20maano%20ramutsindela%20as%20the%20up%20uct%20future%20Africa%20research%20chair%20in%20sustainability%20transformations>



As with the [Africa Science Leadership Programme](#) (ASLP), FAR-LeaF has developed a model that is keenly watched for scalability, and discussions are underway with the Carnegie Corporation of New York to continue funding this or a similar programme.

2: The ARUA-Guild Cluster of Excellence

The Africa-Europe Clusters of Research Excellence (CoRE) initiative emerged as a direct response to the AU-EU Innovation Agenda, emphasising the important role of research and education - particularly in the social sciences and humanities - in advancing the EU's Global Gateway strategy and the AU's Agenda 2063.

The project started in September 2023 and is a collaborative project, co-led by Future Africa and the University of Oslo (Norway), with several universities in Europe and Africa participating. In February 2024, Future Africa hosted the [inaugural in-person meeting](#) of CoRE on the '*Politics of Sustainable Development: Squaring the Circle of Science and Democracy*'.

The focus of the broader project is on '*The Politics of Sustainability*', challenges at the science-policy-practice interface - essentially linked to the global sustainability agenda - and obstacles at levels of implementation. Our particular interest is in the conceptual depth that can be generated in a project of this nature, and again, in understanding transformations in the African science system.

3: The Feed, Protect, Care Global Collaborative PhD Platform

This project is co-led by the University of Pretoria and Future Africa, and the University of Montpellier (France). Launched in May 2023 during Africa Week, the partnership involves (apart from UP and Montpellier) 16 universities from around the world, including four in Africa. The first cohort of 36 PhD students, selected in November 2023, attended a PhD convention in March 2024 which coincided with the '[The Montpellier Process: Pooling Collective Intelligence](#)' conference organised by the University of Montpellier and the Consortium of International Agricultural Research Centres (CGIAR).

The focus in the first three years of the programme, and with this first cohort, is on developing a new generation of sustainability scientists who are globally connected and work on sustainable food systems transformations. An additional benefit to students of the March 2024 event was that all the major science-policy structures were brought together with a focus on how they can collaborate around sustainable food systems transformation.

4: The Africa Hub of the International Transformative Innovation Policy Consortium

Also launched during Africa Week in 2023, the Africa Hub of the International Transformative Innovation Policy Consortium is led by [Dr Chux Daniels](#), a visiting fellow at Future Africa, and research fellow at the Science Policy Research Unit (SPRU), University of Sussex (UK). The project is funded by the International Transformative Innovation Policy Consortium (ITPC), and aims to constitute a network of innovation, technology and science in Africa, and to promote transformative initiatives for sustainable development.

5: Future Earth Africa Hub Leadership Centre

As with all initiatives, we are excited about the potential of this project. It is co-led by Future Africa, and Rhodes University, and funded by the South African National Research Foundation (NRF). [Future Earth](#) is a global sustainability science network that is hosted by the International Science Council (ISC), and co-sponsored by the United Nations Environment Programme (UNEP) and UNESCO. Globally there are already eight hubs - this would be the first in Africa. The work will entail a phased roll-out, first in setting up seven regional science clusters on the continent, followed by the establishment of sub-regional nodes.

We anticipate that this work could lead - in addition to a Future Earth Africa Hub - to the establishment of an Africa Sustainability Science Centre, supported by the International Science Council (ISC).

6: Policy framework for transformative synergistic action across Agenda 2030 and the Paris Agreement

This project builds on work undertaken by [an expert panel](#) appointed to consolidate evidence on synergies between climate action and sustainable development challenges. Co-convened by the UN Department of Economic and Social Affairs (UN DESA) and the UN Framework Convention on Climate Change (UNFCCC), findings were presented at the UN [Climate and SDG Conference](#) held in July 2023 (New York), followed by the [first edition](#) of the report in September 2023 [21] on the margins of the UN Sustainable Development Goals Summit and the Climate Ambition Summit convened by the UN Secretary-General in support of the Paris Agreement on Climate Change.

The evidence gathered will now be expanded with further data, deeper analyses, and the refinement of recommendations, in time for the major UN summits in 2024, in particular the [‘Summit of the Future’](#) planned for September 2024. Belinda Reyers from UP’s Faculty of Natural and Agricultural Sciences has worked closely with me on this UN task.

References

[21] United Nations. 2023. Synergy Solutions for a World in Crisis: Tackling Climate and SDG Action Together. Report on strengthening the evidence base (first edition).

AFRICAN SCIENCE AND TECHNOLOGY FUTURES

The fifth domain - *African Science and Technology Futures* - presents an important opportunity and challenge for Future Africa. The overall aim is to develop and enhance leadership for transformative African science systems, identifying and advocating for change where needed, and supporting existing and future leaders to amplify the visibility and voice of African science on a global stage. Again, there has been rapid development with highlights given of seven initiatives grouped under this domain.

1: The Africa Science Leadership Programme (ASLP)

When Future Africa was launched in 2019, the Africa Science Leadership Programme (ASLP) was its flagship programme, affiliated with the Global Young Academy, and linked to its sister programme, the Tuks Young Research Leader Programme (TYRLP) at the University of Pretoria. In 2023, nine cohorts had completed their training with Future Africa, and in total 205 ASLP mid-career researchers, from 28 countries in Africa. Now led by [Dr Connie Nshemereirwe](#) (Uganda) — who was one of the participants in the first cohort, in 2015 — the programme selects about 20 outstanding young scientists per year from all regions in Africa. The aim is to grow mid-career African academics in the areas of thought leadership, team management and research development to contribute to addressing the complex issues that face Africa and the world.

The model developed by the ASLP is widely recognised, including by the [Global Young Academy](#), and has been adapted and extended in multiple forms.

2: The International Science Council Regional Engagement Project

Led by [Dr Farai Kapfudzaruwa](#), this two-year project (2023-2024) is funded by the International Science Council (ISC). Future Africa and the ISC are leading a consultative process to determine what the African science system might need from an ISC presence in Africa. In the first year, much was accomplished, including the establishment of a steering committee, the finalisation of a stakeholder mapping exercise, and an [African science sector leadership](#) event with over 70 representatives of organisations in the African science system, held on 4 December 2023, on the margins of the Science Forum South Africa.

The Forum has positioned Future Africa as a strategic pan-African platform to convene leading science stakeholders on the continent and to provide a voice for African science in relation to agenda setting in the global arena. This second part of the ISC engagement project has led to the proposal to develop the African STI Leadership Forum - a platform to convene regularly and engage on priority issues related to STI on the continent. A final report will be presented to the ISC Governing Board and General Assembly in January 2025.

The most ambitious expectation is that this process will lead to the establishment of an African Science Leaders' Forum. The idea has been discussed with the Department of Science and Innovation (DSI) which is enthusiastic about supporting such an initiative.

3: Science, Technology and Innovation (STI) Coalition for Africa

Future Africa collaborates with the United Nations Department of Economic and Social Affairs (UN DESA) in providing technical support to the recently established STI Coalition for Africa. The initiative led by South Africa's Permanent Representative to the United Nations, together with her counterparts from Morocco, Ghana, and Cameroon. The aim to profile African STI priorities in the UN General Assembly. As part of this engagement, Future Africa is contributing to the UN policy guidelines to promote STI for the sustainable development goals. This partnership illustrates the role Future Africa is playing in shaping STI policy and capacity development to strengthen the STI system on the continent. Future Africa will co-host several events with UNDESA during the [UN Science, Technology and Innovation Forum](#) in May 2024, and convene in South Africa in late 2024.

At a national level, Future Africa is engaging with DSI and the Department of International Relations and Cooperation (DIRCO) to provide technical and science diplomacy support to position South Africa as a leading pan-African voice in promoting and developing African science.

4: Research Funding Flows in and for Africa

Funded by the International Development Research Centre (IDRC) (Canada), is the study on research funding flows in Africa, an aspect about which we know little, especially with respect to international donor funding. It was commissioned by the African Science Granting Councils' Initiative (SGCI), a network of 17 Science Councils in Africa. The study includes a consortium of participating entities, led by Stellenbosch University's [Centre for Research Evaluation in Science and Technology](#) (CREST). Future Africa's role, in particular, is to understand funding mechanisms for pan-African research collaboration. We have prepared an initial report on 'Pathways to supporting pan-African research collaboration' for the SGCI. We have, in addition, suggested an STI Indicator or Outlook Series as a potentially useful mechanism for disseminating information and creating opportunities for dialogue.

5: Transdisciplinarity for Transformation

Transdisciplinarity is a word often used with varying meanings and interpretations. Future Africa is part of a project at the University of Pretoria on advancing transdisciplinarity. Our focus is on two aspects: The first is to adapt training material and a curriculum toolkit, already developed by the International TD Collaboratory (funded by the US National Science Foundation), for use in the African context, and to make this available to our partners across the African continent. The second is to host an online series of critical dialogues, again in collaboration with the International TD Alliance and the ISC. The first in the [series of critical dialogues](#) is planned for mid-2024.

6: Global Science Systems Leadership Academy

We have been working on a concept note with Prof Bernard Slippers , founding director of Future Africa, on a global science systems leadership academy. While there are several programmes that focus on the development of individual scientists and researchers, a focus which remains highly relevant, there is a dearth in opportunities for the development of the next-generation leadership; individuals who are globally connected and understand the evolving science-technology-policy domain, and who have a grasp of how science systems play out and change at regional and global levels.

CROSS-CUTTING ACTIVITIES

In addition to the five research domains, Future Africa's cross-cutting activities further galvanise and define an Africa identity rooted in transformative research, understanding transformations, and dialogue. Although there are no hard boundaries between domains, programmes, and initiatives, two special features need emphasis:

Africa Week Science Leadership Summit

The University of Pretoria biennial science leadership event, held in May 2023 at Future Africa, was an exceptional event. In partnership with South Africa's Department of Science and Innovation (DSI) and the National Research Foundation (NRF), it involved the leadership of prominent African and global scientific networks and covered topical dialogues on the Africa Week theme, 'Open Africa, Open Science'. Central to the discussions were the importance of open science as a global public good and its relevance for the continent.

The event included strategic sub-events, and partnership meetings and workshops aimed at initiating new international programmes of transdisciplinary work. The inaugural Future Africa Global Lecture was presented by Prof Paul Tiyaambe Zeleza on '*Visions for the Future of Africa*'. [22]

Attended by 461 participants, 219 of whom attended in-person, the event was praised by faculties and departments within the University of Pretoria, and Future Africa's African and international partners. Also relevant in the assessment of impact was the request by the University of Leeds (UK) to replicate the model in their context, which is a clear indicator of success as well as pointing to the scalability of this project in different contexts.

Planning is already well underway for Africa Week 2025. As noted earlier, one of the highlights will be the Future Africa Global Lecture, to be delivered by International Judge Prof Dire Tladi.

References

[22] Prof Zeleza is Associate Provost and North Star Distinguished Professor at Case Western Reserve University, US.

Futures Literacy Incubator

The Futures Literacy Incubator was set up as an organic network of collaborators interested in how *'the future is used'* in academic and government spaces in South Africa. In May 2023, during Africa Week, the Incubator was officially launched. It continues to bring together a diverse range of academics and practitioners who engage in capacity development, and in research that advances the knowledge, theory and practice of anticipatory systems and processes. The work undertaken is informed by one of the leading global experts on futures literacy, [Prof Riel Miller](#), who is also a visiting fellow at Future Africa.[23]

While there is much work still to do, the Incubator has taken major strides in becoming a resource centre for Africa, providing training, tools, and expertise to design and run futures literacy initiatives across the continent.

CONCLUDING COMMENT

There is little doubt that there have been major milestones in the young history of Future Africa that have firmly established it as a pan-African platform. But five years is a short time in the history of any organisation.

We have moved fast - 'across levels and scales' - and it can be said that this in large part was possible because of the leadership and associated networks that we have brought into the organisation. This is at the nub of the impact and influence made possible, with Future Africa now increasingly recognised as a national and pan-African asset.

Yet, we are now at turning point where it is important to consolidate the gains made, and to prioritise strategies and initiatives that will anchor Future Africa into the future.

If there were to be a definitive statement about the direction of change that we need to pursue, it would be to understand transformations in science and the African science system, and the initiatives needed to affect this change.

References

[23] See Riel Miller (ed.), 2018. Transforming the Future. Anticipation in the 21st century. UNESCO.



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