

# Sustainable Development for *The Africa we Want*

## 2021/2022 Annual Report



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# 1. Stellenbosch University Profile

## 1.1. A word from Prof Hester Klopper

### Sustainable Development Annual Report 2021/2022

## Foreword

SU has a vision to be the leading research-intensive university on the African continent, and to be globally recognised as excellent, inclusive, and innovative, and a place where we advance knowledge in service of society. We believe in living this vision daily through the work that we do in teaching and learning, research, and ensuring a societal impact. One of the aspirations for the realisation of our vision is to be a systemically sustainable institution.

Strategy drives our institution; we have set out six core strategic themes in our *Vision 2040* and *Strategic Framework 2019–2024*. Since our aim is to achieve **a thriving Stellenbosch University**, this is Theme 1. To do so, SU's stakeholders are crucial partners and, therefore, Theme 2 is a **transformative student experience** (students being our largest internal stakeholder group) and Theme 3 is **purposeful partnerships and inclusive networks**, which engages our external stakeholders. These are followed by SU's main drivers and core business, i.e. Theme 4, **networked and collaborative teaching and learning**, and Theme 5, **research for impact**. Theme 6, **employer of choice**, positions University staff as a critical enabler.

To make the University a thriving organisation (Theme 1), we envisage a vibrant, prosperous and systemically sustainable university. Systemic sustainability thus relates to the continuity of the economic, social, institutional and environmental aspects of human society, as well as the non-human environment. It affects every level of our organisation – from the University, to the local neighbourhood, to the entire planet.

Guided by our strategy, SU is committed to support both the United Nations' (UN) 2030 Agenda and its Sustainable Development Goals (SDGs), as well as the African Union's (AU) Agenda 2063 for a peaceful and prosperous Africa.

It is to this end that SU launched its **Sustainable Development Impact Hub in 2021**. Called the

**SDG/2063 Impact Hub**, it was established to measure the institution's contribution to, and advocate for, the uptake of both the UN 2030 Agenda and its SDGs, as well as the AU's Agenda 2063.

Because we are a university rooted in Africa, we serve both these agendas as both have sustainable development at their core. We are committed to ensuring a sustainable future for our continent by addressing the most important social, economic and environmental challenges Africa is facing. But these challenges also impact the world in which we live and, therefore, we expand our gaze beyond continental borders with the aim of making a global impact.

*In this report, we have highlighted the ways in which SU has contributed to ensuring a sustainable future for Africa and the world.*



**Prof. Hester C. Klopper**  
**Deputy Vice-Chancellor:**  
**Strategy, Global and Corporate Affairs**



# Our **Institution**

Over the past century, SU has grown into a quality South African higher education institution with the vision of being one of the continent's leading research-intensive universities, globally recognised as excellent, inclusive and innovative, and as a place where knowledge is advanced in service of society.

In line with its mission, SU attracts outstanding students, employs talented staff and provides a worldclass research, teaching and learning environment. It is an institution that prioritises staying connected to the world while enriching and transforming local communities. The University's values – excellence, compassion, equity, accountability and respect – are the beliefs and attitudes that guide the institution's behaviour. These values are equally important, interconnected and supported by SU's ethics code.

Upon its opening on 2 April 1918, SU had 4 faculties (Arts, Science, Education and

Agriculture), 503 students and 40 lecturing staff members. By 2022, SU has grown to 10 faculties, 5 campuses and a vibrant and cosmopolitan student community of 20 780 undergraduate and 10 577 postgraduate students, including over 2 900 international students from over 100 countries. In addition, we have roughly 4 540 full-time staff members and more than 350 postdoctoral fellows.

SU's Vision 2040, as well as its Strategic Framework 2019 – 2024, serves to cultivate a thriving university, provide a transformative student experience, foster purposeful partnerships and inclusive networks, promote networked and collaborative teaching and learning, encourage research for impact, and position SU as an employer of choice.

This vision and strategic framework articulate the envisaged positioning of SU as Africa's leading research-intensive university, with a global reach.



# About


## Stellenbosch University

SU has a renewed focus on its position as an internationally recognised academic institution, embedded in Africa.



### Our vision

SU will be Africa's leading research-intensive university by 2040, globally recognised as excellent, inclusive and innovative, and as a place where knowledge is advanced in service of society.

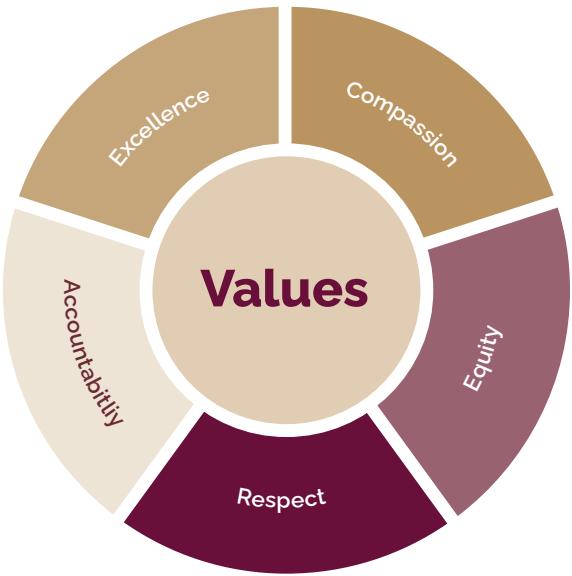


### Our mission

We are a research-intensive university that attracts outstanding students, employs talented staff, and provides a world-class environment; we prioritise staying connected to the world, while enriching and transforming local communities.

## Our values

Our values are the beliefs and attitudes that guide our behaviour (in essence, our 'action guides'). All of our values are equally important, interconnected and supported by SU's ethics code.





# Numbers

## 1.2. Stellenbosch in numbers for 2021



5

Campuses

- Stellenbosch
- Tygerberg
- Bellville Park
- Saldanha
- Worcester



10

Faculties



1

Business  
School



32 255  
students

of which

**10 557** are  
postgraduate



2

Schools

in Data Science and  
Computational Thinking  
and Climate Studies.



250

postdoctoral  
fellows



317

partners in

64

countries

# Our **strategic framework**

The University's Strategic Framework 2019–2024 articulates our vision, mission and strategic choices. It also accentuates the critical review of our approach to research, teaching and learning, social impact and our university-wide processes for attaining the goals articulated in the framework. Our **six core strategic themes** are discussed below.



## A THRIVING UNIVERSITY

To make SU a thriving institution, we are working towards a vibrant, prosperous and systemically sustainable university. We recognise the major challenges associated with developing into such a university, and are prepared to face them. We are committed to systemic sustainability, which includes people, place, economic prosperity and the environment, and compels responsible corporate governance. We invest in research excellence to help us achieve our vision of being the leading research-intensive university on the African continent, and amongst the best globally.



## A TRANSFORMATIVE STUDENT EXPERIENCE

At SU, we value our students and are committed to delivering a transformative student experience to each one of them. With this intention, we want to ensure that SU is accessible to qualifying students from all backgrounds, including students who face barriers to participation in university education. We regard our interaction with our students as a journey – from our first contact with prospective students until they graduate and embrace the role of alumni.



## PURPOSEFUL PARTNERSHIPS AND INCLUSIVE NETWORKS

As part of the University's mission, we have declared our desire to change the world around us through collaboration and to be responsive to and embrace change ourselves. Central to our mission is the notion that what happens in the world shapes our research, teaching and learning, as well as engagement – and that what happens at SU also matters to the world. As a university, we are committed to South Africa and Africa at large. The purposeful partnerships and inclusive networks that are forged take into account local, continental and global development frameworks.



## NETWORKED AND COLLABORATIVE TEACHING AND LEARNING

SU is promoting a journey of networked and collaborative teaching and learning through the creation of learning communities where students, staff and alumni can experience meaningful learning. The University promotes a learning-centred approach to teaching that focuses on learning as a partnership in which students are seen as co-creators of knowledge and learning environments. Within a learning-centred approach, teaching activities facilitate knowledge-building and actively engage students in their own learning.



## RESEARCH FOR IMPACT

This strategic theme implies optimising the scientific, economic, social, scholarly and cultural impact of our research. Our focus is on interdisciplinary research that benefits society on a national, continental and global scale. At the same time, we are committed to basic and disciplinary research excellence as it forms the basis for applied and translational research.



## EMPLOYER OF CHOICE

In support of the University's vision, mission, values and aspirations, it is imperative to promote the health and well-being of our staff. In our pursuit to be an employer of choice, we are creating an enabling environment that is built on the principles of co-creation and appropriate participation, and that embodies the characteristics of inclusive campus culture.



# 2. The Sustainable Development Agendas

SU's Strategic Vision 2040 is informed by both the United Nations' 2030 Agenda and its 17 SDGs (Sustainable Development Goals), as well as the African Union's (AU) Agenda 2063 with its 20 Goals and Aspirations for *The Africa we Want*. Both Agendas place People, the Planet, Peace, Partnership and Prosperity at their core, to address the most important social, economic, and environmental challenges currently facing the world.

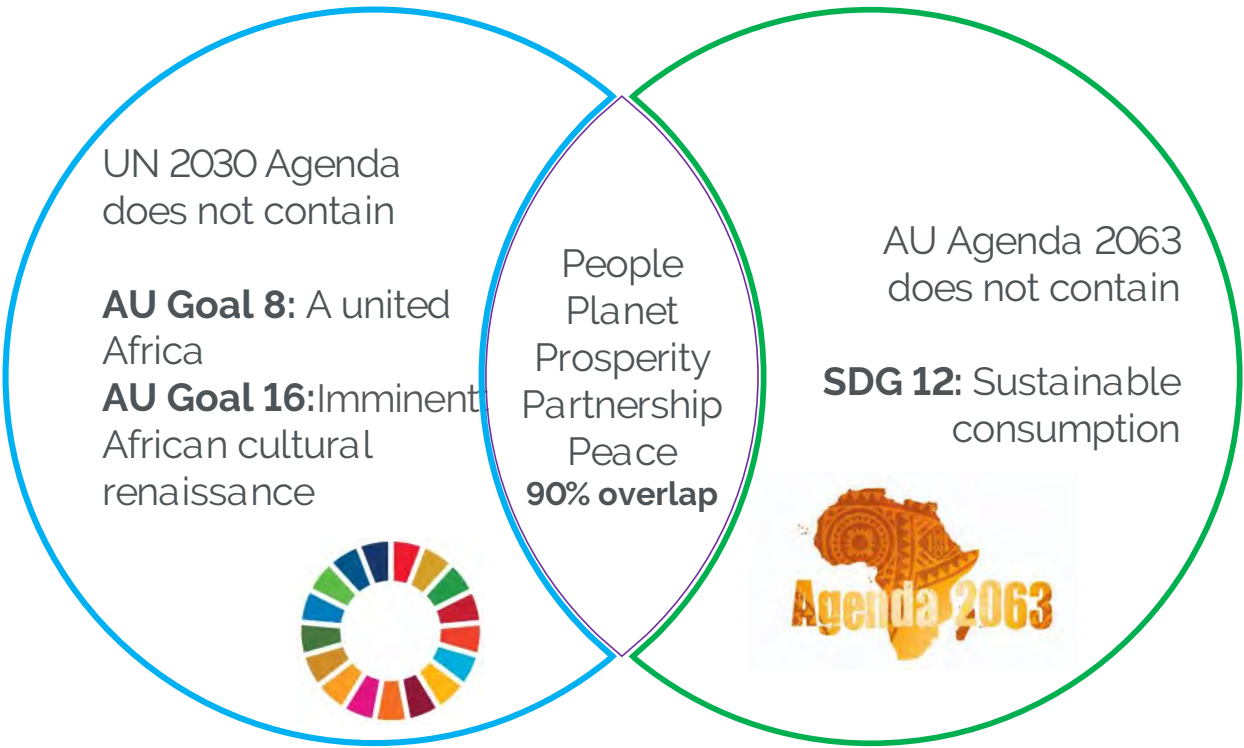
## 2.1 Embracing the global sustainability agenda

Universities are uniquely positioned to contribute to the Sustainable Development Agendas through research, teaching, and innovation. Years of good progress have been undone due to the worldwide Covid-19 health crisis; it was increasingly evident that the world-wide aim of attaining the combined Sustainable Development Goals set by the UN And AU would not be attained.

The opportunity now arises for nations and institutions to re-evaluate their SDG progress and implement policies to accelerate their National Development Plans, within their own contexts and priorities.

Furthering our commitment to Sustainable Development Research and contribution to Climate Action (SDG 13), SU joined 15 universities on 6 continents in 2019 when it became a member of GAUC, the Global Alliance of Universities on Climate. SU is the only African partner, joining the Australian

National University, UC, Berkeley, Cambridge, Imperial College London, London School of Economics and Political Science, Massachusetts Institute of Technology, Tokyo, the Federal University of Rio de Janeiro, Indian Institute of Science, and Sciences Po. Columbia, Oxford and Yale.



## 2.2 Sustainability Education

In 2021, SU launched a 3-year Advanced Diploma in Sustainable Development to produce graduates that can help South Africa and Africa grow in sustainable ways. Other postgraduate programmes in the sustainable development sphere include:

- A new Advanced Diploma in Sustainable Development was approved by the national authorities in 2021.
- SU also offers three short courses under the topic of Renewable and Sustainable Development.





**Table: Alignment of the UN's SDGs and the AU Agenda**

SDG 1: No Poverty	Goal 1: A high standard of living, quality of life and well-being for all
SDG 2: Zero Hunger	Goal 5: Modern agriculture for increased productivity and production
SDG 3: Good Health and Well-being	Goal 3: Healthy and well-nourished citizens
SDG 4: Quality Education	Goal 18: Engaged and empowered youth and children Goal 2: Well-educated citizens and skills revolution underpinned by science, technology and innovation
SDG 5: Gender Equality	Goal 17: Full gender equality in all spheres of life
SDG 6: Clean Water and Sanitation	Goal 7: Environmentally sustainable climate resilient economies and communities
SDG 7: Affordable and Clean Energy	Goal 7: Environmentally sustainable climate resilient economies and communities
SDG 8: Decent Work and Economic Growth	Goal 4: Transformed economies and job creation
SDG 9: Industry, Innovation and Infrastructure	Goal 10: World-class infrastructure that crisscrosses Africa
SDG 10: Reduced Inequality	Goal 1: A high standard of living, quality of life and well-being for all
SDG 11: Sustainable Cities and Communities	Goal 10: World-class infrastructure that crisscrosses Africa
SDG 12: Responsible Consumption and Production	No corresponding AU Goal
SDG 13: Climate Action	Goal 5: Environmentally sustainable climate resilient economies and communities Goal 6: Blue/ocean economy for accelerated economic growth
SDG 14: Life Below Water	Goal 5: Environmentally sustainable climate resilient economies and communities Goal 6: Blue/ocean economy for accelerated economic growth
SDG 15: Life on Land	Goal 5: Environmentally sustainable climate resilient economies and communities Goal 6: Blue/ocean economy for accelerated economic growth
SDG 16: Peace, Justice and Strong Institutions	Goal 11: Democratic values, practices, universal principles of human rights, justice and the rule of law entrenched Goal 12: Capable institutions and transformed leadership in place at all levels, cross-cutting with Governance Goal 13: Peace, security, and stability are preserved Goal 14: A stable and peaceful Africa Goal 15: A fully functional and operational African peace and security architecture
SDG 17: Partnerships to achieve the Goal	Goal 9: Key continental financial and monetary institutions established and functional Goal 19: Africa as a major partner in global affairs and peaceful co- existence Goal 20: Africa takes full responsibility for financing her development
There are no corresponding SDGs for Goals 8 and 16	Goal 8: United Africa (federal or confederate) Goal 16: African Cultural Renaissance is pre-eminent

## 2.3 Research for Impact

SU has five key Strategic Research Areas that help to define their contribution to Research for Impact:

- The natural environment
- Health and human security
- Social justice and development
- Human creativity and social innovation
- Systems and technologies for the future

The Division of Research Development publishes a Research for Impact report annually, highlighting the work of the Researchers, Centres of Excellence and Research Chairs at SU.

## 2.4 Research Expenditure

One of Stellenbosch University's core aims as part of Vision 2040 is to become Africa's leading research-intensive university, with a global reach, and focusing on research for impact. SU aims to contribute to the progress of the SDGs by conducting research that is of a high standard and is applicable to the struggles facing humanity today and in the future.

A total of 1 446 research contracts were processed in 2021, compared with 956 in 2018. This represents an increase of 66% in 4 years.

## 2.5 Teaching

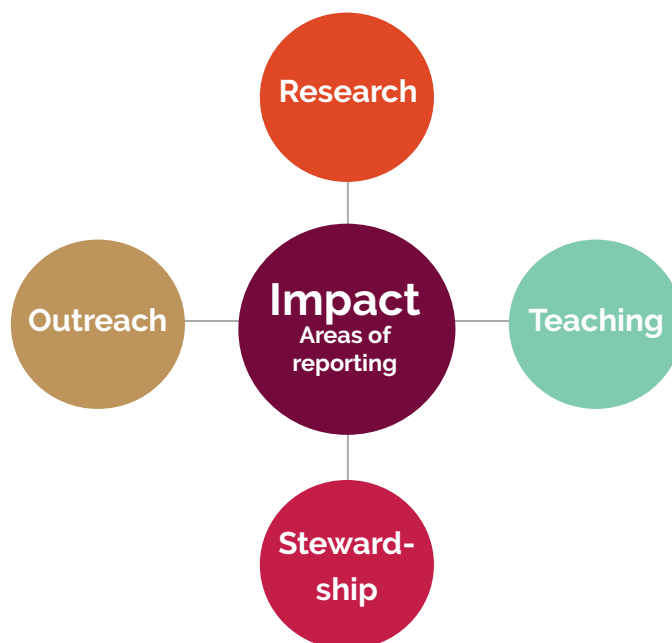
Higher Education Institutions within Africa can play a significant role in fulfilling the sustainable development agenda, as they are not only training the leaders and policy makers of the future, but also offer cross-sectoral expertise, research, and educational resources.

## 2.6 Stewardship

SU is committed to being a responsible steward of the environment and has set specific environmental goals as part of its ecological sustainability strategy. These goals can be found in the University's Environmental Sustainability Plan. The usage of water and energy, rate of waste recycling, and management of biodiversity is measured against this plan on an ongoing basis.







## 2.7. Outreach

As a Higher Education Institution, SU wants to positively impact the lives of South Africans. Staff and students at the University are involved in many outreach programmes, with themes ranging from health to education to conservation, and many more. These initiatives are collected by our Division for Social Impact and projects are classified per SDG.

### Change in motion

Significant advancements were made in 2021 towards achieving SU's sustainability goals: the establishment of the School for Climate Change and the development of its first Environmental Sustainability Plan.

Leading the field in the move towards a carbon-neutral university, Stellenbosch University launched the School for Climate Studies, the first of its kind in South Africa. The School has faculty status and collaborates with all SU faculties, cutting across environments to ensure a focus on multi-disciplinary research and collaborations.

The School has a holistic approach to climate challenges. It fosters transdisciplinary capacity to combine the climate-related knowledge systems of Stellenbosch University's faculties, the public sector's climate policies and initiatives, the private sector's climate redress and innovation capacities and the social impact mission of Stellenbosch University in both academic and applied ways – all in support of

the transition to a climate-resilient society and a sustainable, low-carbon economy.

## 2.8. Environmental Sustainability Plan and Net Zero by 2050

Since the inception of the HOPE Project in 2010 by former Vice-Chancellor, Prof Russell Botman, SU has been committed to promoting sustainability at the core of its operations. Our current Vice-Chancellor, Prof Wim de Villiers, notes that this commitment can today be seen in how the University's Vision 2040 and Strategic Framework 2019 – 2024 was informed by South Africa's National Development Plan, the African Union's Agenda 2063 and the United Nations' Sustainable Development Goals." It bears testimony to SU's commitment to being a university that is relevant to its context and is of service to our country and continent – an inclusive, world-class university in and for Africa."

The University's Environmental Sustainability Plan offers a roadmap to develop Stellenbosch responsibly, while respecting ecological thresholds and enhancing society. The plan aims to meet the following milestones:

- Carbon Neutrality by 2030
- Carbon Net Zero by 2045
- Net Zero by 2050 (As per the UN's target)

The Environmental Sustainability Plan (2020 – 2025) compiled by SU Facilities Management highlights eight themes, each with specified, measurable goals.

<div>Energy and emissions</div> <div>  </div>	<div>Overarching aim: To reduce Scope-1 and Scope-2 emissions and dependence on fossil-fuelled energy through dynamic and continuous energy management programmes.</div> <div>Targets</div> <ul style="list-style-type: none"> <li>• 10% reduction in municipal electricity consumption by 2024 compared to 2016 excluding self-generation</li> <li>• Reduce Scope-1 vehicle emissions by 30% compared to 2019 values by 2026</li> <li>• Reduce Scope-2 electricity consumption emissions by 20% compared to 2019 including self- generation by 2029</li> </ul>
<div>Water</div> <div>  </div>	<div>Overarching aim: To conserve potable and irrigation water by reducing, reusing, and exploring alternative sources.</div> <div>Targets</div> <ul style="list-style-type: none"> <li>• 40% reduction in potable water use (kl) compared to 2015 baseline</li> <li>• 50% reduction in per-capita potable water use (kl) (<i>staff and students</i>) compared to 2015 baseline</li> <li>• 30% reduction in irrigation water consumption when using primary freshwater resources</li> <li>• 10% reduction in the concentration of COD in water effluent from specified facilities compared to 2019 baseline</li> </ul>
<div>Waste</div> <div>  </div>	<div>Overarching aim: To actively manage and reduce waste generated on campus and divert it away from landfill through prevention, reduction, reuse, recycling, beneficiation, and responsible disposal.</div> <div>Targets</div> <ul style="list-style-type: none"> <li>• 80% general waste diverted from landfill</li> <li>• 100% sorting of all general waste</li> <li>• 95% food and other organic waste diversion from landfill</li> <li>• 20% reduction in general waste generated compared to 2018 baseline</li> </ul>
<div>Biodiversity and land use</div> <div>  </div>	<div>Overarching aim: To maintain and design all landscapes to be resilient to environmental change and to improve biodiversity and the sustainability of open spaces.</div> <div>Targets</div> <ul style="list-style-type: none"> <li>• Convert 90% (m2) of new landscaping to vegetation that is resilient to environmental change and that improves biodiversity</li> <li>• Designate 5% (m2) of total landscapes as green areas and greenbelts</li> <li>• Designate all new and upgraded landscapes in accordance with SUDs principles</li> <li>• Implement a management system to preserve the value and integrity of natural system</li> <li>• Remove 100% of Category-1 invasive species</li> <li>• Increase carbon sequestration through tree management and planting programme with 2019 as the baseline</li> </ul>



<div>Goods and services</div> <div></div>	<p>Overarching aim: To purchase goods and services from companies and organisations where Chain-of-Custody (COC) credentials are available and evaluated.</p> <p>Targets</p> <ul style="list-style-type: none"><li>• Develop sustainable procurement criteria and include these in procurement policy by 2024</li><li>• Commit to a monitoring system to measure progress and impact of procurement processes on society and the environment</li><li>• Procure 70% in quantity of all goods and services from local suppliers that meet the sustainable procurement guidelines by 2024</li></ul>
<div>Sustainable buildings</div> <div></div>	<p>Overarching aim: To include sustainable design principles aimed at reducing the environmental impact of SU construction, refurbishment, and operations.</p> <p>Targets</p> <ul style="list-style-type: none"><li>• Implement a standard based on GBCSA principles for sustainable construction and refurbishment</li><li>• Obtain minimum of GBCSA four-star rating for certain new development</li><li>• Create green star-rated portfolio certification of selected precincts</li><li>• Performance-rate buildings based on top 50 consumers in energy</li></ul>
<div>Travel and mobility</div> <div></div>	<p>Overarching aim: To minimize the environmental impact of travel and encourage the use of efficient modes of transport that will contribute to the reduction of emissions.</p> <p>Targets</p> <ul style="list-style-type: none"><li>• Develop transport strategy for all campuses by 2024 to reduce emissions</li><li>• Measure transport emissions from student and staff commuting, air travel and vehicle fleet, with targets to reduce GHG emissions</li><li>• Develop and incorporate NMT and end-of- route facilities into urban plan to optimize sustainable transport</li></ul>
<div>Engagement</div> <div></div>	<p>Overarching aim: To engage the campus community to accept responsibility for the environment.</p> <p>Targets</p> <ul style="list-style-type: none"><li>• Engage all students and staff to participate in environmental sustainability on all campuses</li><li>• Report on all sustainability goals by 2024</li><li>• Empower students, staff, and faculty to be agents of change who collaborate and share knowledge in concrete ways</li></ul>

### 3. SU's contribution to the goals

The 17 SDGs and 20 Goals can be categorised into the 5Ps (People, Planet, Prosperity, Peace and Partnership) that stand at the centre of both the SDGs and Agenda 2063's Goals. The remainder of this report will showcase some of the activities undertaken by SU in 2021 that have contributed to the attainment of the Sustainable Development Agendas of both the AU on a continental level, and the UN on a global level.

#### 3.1. People

Leave nobody behind: No human beings experience poverty or hunger, and all have dignity, equality, and a healthy environment.

**SDG 1: No Poverty: End poverty in all its forms everywhere**

**AU Goal 1: A high standard of living, quality of life and well-being for all**

The importance of education as a tool for upliftment and for the eradication of multi-generational poverty, cannot be overemphasized. Besides financial support for enrolled students, SU supports a number of initiatives aimed at stimulating the local economy and alleviating poverty in the area.

##### Small business and start-up support

The CoCreate Hub was launched in 2021, a first of its kind in Stellenbosch. The Hub helps small businesses by providing an affordable work space for their entrepreneurial initiatives. SU funded the refurbishment of the space from a disused former clinic to a multi-purpose business premise, which affords locals and tourists alike the opportunity to interact with local entrepreneurs. Through its support of the Hub, SU hopes to stimulate

local business, which will in turn better the lives of those involved.

The University also offers a Small Business Academy programme through its Stellenbosch Business School, aimed at improving the efficacy of small businesses in low-income communities over a nine-month period. Graduates from the Small Business Academy qualify to participate in the Growth Initiative, which aims to stimulate continued business growth through mentorship and business plan support.

The SU LaunchLab provides start-ups with access to expert advice and assistance based on research or entrepreneurial ideas from SU students. It offers three different Business Building routes depending on the needs of the business. Start-ups can also access funding through the LaunchLab.

##### SDG 2: Zero Hunger

**AU Goal 5: Modern agriculture for increased productivity and production**

Universities can improve the nutrition of local communities through interventions and education about SDG 2 (Zero Hunger), and by improving food production. The promotion of sustainable agriculture will secure food supplies for future generations, to reduce and eventually eradicate hunger and multi-generational poverty.





SU has a Food Security Initiative in place to ensure no student is burdened by food shortages. In addition, the student-led #Move4Food campaign provides an emergency fund for the immediate relief of student hunger on our campuses. Through the Pantry Project, students donate non-perishable food items and toiletries to communal pantries, giving students in need access to basic necessities.

Yearly, SU graduates more than 1500 Agri-Sciences students, including those studying towards Aquaculture and Sustainable Agriculture degrees.

While Aquaculture is still in its infancy in South Africa, it offers a viable solution to intensive food production and has the potential to produce fish and crustaceans, thereby relieving the pressure on oceanic wild stocks. In water poor areas, Aquaponics (a system that incorporates aquaculture and hydroponics) can produce both fish and plant material in a closed loop system. Fish are fed an artificial feed and the fish excrement is converted into nutrients for the plants, thereby minimising space and labour and reducing overall water usage. Says Henk Stander, of the SU Aquaculture Unit and Water Institute at SU: "Aquaculture can make a difference and contribute to food security in South Africa, putting food on the table of South Africans."

In 2021, the Southern Africa Food Lab, funded by SU and housed under the umbrella of the Food Security Initiative, presented three public lectures on the theme of "African Food Systems," aimed at spreading knowledge on factors affecting farming and food production in Southern Africa.

### SDG3: Good Health and Well-being

#### AU Goal 3: Healthy and well-nourished citizens

The covid-19 pandemic highlighted the importance of access to good nutrition and quality healthcare for all. SU's annual Bridge the Gap fund aims to close the gap between talent and financial need. Bridge the Gap fuels student wellness resources and outreach programs for student success.

The #Move4Food drive has raised more than R1.4 million since 2018, while the Giving Day programme collects food for student pantries in an inter-faculty challenge. The Tygerberg Student Council led the Snack Pack Project in 2021. SU has implemented a Students Mental Health Plan to safeguard the mental health of Stellenbosch University students.

Additionally, Stellenbosch offers world-class sporting facilities and gyms that are open to students, staff, and members of the public at a fee.





### Cough Audio Triage (CAGE-TB)

In 2021, Prof. Grant Theron, who heads up the Mycobacteriology and Epidemiology research group in SU's Division of Molecular Biology and Human Genetics, was awarded a large grant by the The European and Developing Countries Clinical Trials. The research group is a partnership between SU's FHMS, Engineering, the University of Makerere in Uganda, the University of Gottingen in Germany, and the Amsterdam Institute for Global Health and Development in the Netherlands. The research aims to develop an app for smart phones that will use audio classification for rapid Tuberculosis (TB) triage testing. Preliminary tests have indicated that TB coughs have a particular audio signature that can be identified, allowing for a screening procedure that determines if a patient requires further laboratory testing.

### The Centre for Epidemic Response and Innovation (CERI)

CERI is a newly established Centre at SU aimed at advancing our understanding of epidemics and pandemics in Africa and the Global South. It is headed up by Prof. Tulio de Oliveira of the School for Data Science and Computational thinking, and works in conjunction with the Faculties of Health and Medical Sciences (FHMS) and Science.

Throughout the COVID-19 pandemic, De Oliveira made headlines worldwide by identifying a new variant of SARS-CoV-2 in South Africa – 501Y.V2, known as the 'Beta variant'. Shortly after moving to SU, he also discovered the Omicron variant in South Africa and, more recently, two other subvariants.







## SDG 4: Quality Education

**AU Goal 2: Well-educated citizens and skills revolution underpinned by science, technology and innovation**

**AU Goal 18: Engaged and empowered youth and children**

Quality education is an established gateway out of poverty, especially multi-generational poverty. Universities have the opportunity to create big change in this metric, by making education more accessible to a wider range of people and by ensuring the excellence of their educational offering.

SU makes a substantial contribution to bursaries from its annual budget. In 2021, this amounted to R103 million, with the university acting as the principal for the spending of these funds. The year also saw a substantial increase in bursaries for which SU served as the managing agent, predominantly from NSFAS (2021: R861 million), bringing the total value of SU managed bursaries to R1 347 million.

In 2021, 275 Primary School educators graduated from SU with foundation or intermediate undergraduate degrees. For High School educators, a Postgraduate Certificate in Education (PGCE) can be undertaken after an undergraduate degree in their chosen field.

## Education Outreach programmes at SU

In 2021, The Division for Social Impact and MGD (Matie *Gemeenskapsdiens*/Maties Community Service) ran a number of outreach and education programmes within communities in and around Stellenbosch as part of their Engaged Citizenship programmes. One such programme, Advanced Engaged Citizenship (AEC), provided students with the opportunity to volunteer at a number of institutions in South Africa. The course consists of the following modules: Accessing and Analysing Information, Curiosity and Imagination, Agility and Adaptability, Collaboration Across Networks and Leading by Influence, Effective Oral and Written Communication, Initiative and Entrepreneurship, and Critical Thinking and Problem Solving. The programme prepares students for the workplace by empowering them to become engaged citizens while still studying.



## SDG 5: Gender Equality

### AU Goal 17: Full gender equality in all spheres of life

"Investing in girls and women is smart. It is known that when 10% or more girls go to school, a country's GDP increases on average by 3%." – Professor Agnes Binagwaho, Vice Chancellor and cofounder of the University of Global Health Equity (UGHE) in Rwanda, and keynote speaker at SU's Women's Day 2021 webinar.

SU acknowledges the link between gender diversity and good business performance, and that the promotion of more women into leadership positions boosts the economies of countries.

### Discrimination and Equality Policies

SU promotes equality and fairness.

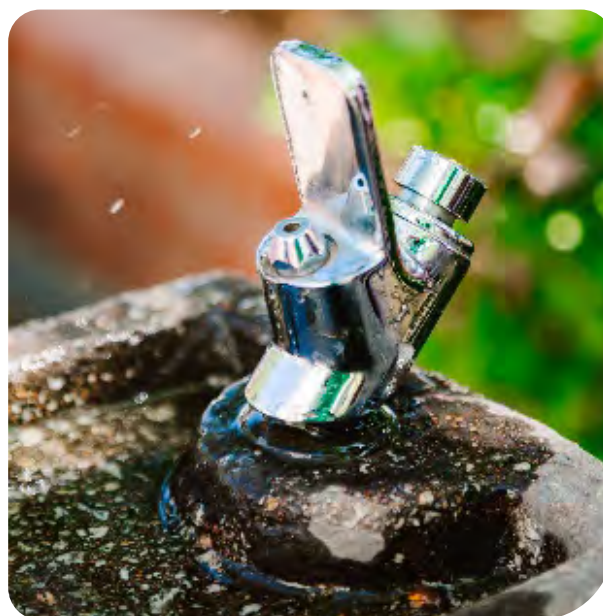
- The Equality Unit implements SU's policies on unfair discrimination and harassment and on HIV/Aids, and is committed to dealing with social injustice. Students and staff can report all forms of unfair discrimination, sexual harassment, gender-based violence, victimisation and abuse to the Unit. The Unit also provides staff and students with services, training and interventions to combat gender violence and HIV/Aids (prevention, testing and counselling), and gives support with issues related to the lesbian, gay, bisexual, transgender, queer, intersex and allies (LGBTQIA+) community.
- The Unit hosted webinars on rethinking gender during Women's Month (August 2021) and ran a cyberbullying campaign focusing on harassment and queerphobia. It also developed an online tool to make it easier for staff and students to report incidents and track harassment.
- SU's podcast, Talks at Stellenbosch University, ran a woman-centric line-up during Women's Month, which included a talk about women in science and how to encourage more women's participation in the STEM fields.

## 3.2 .Planet

### SDG 6: Clean Water and Sanitation

### AU Goal 7: Environmentally sustainable climate resilient economies and communities

In the last 100 years, global water use has increased much faster than population growth. Water systems around the world are facing pollution and degradation. Clean water and sanitation are vitally important in South Africa, as the country regularly experiences droughts. Many of our rural communities do not have access to safely managed drinking water and not all wastewater is properly treated before disposal.



SU ensures that all students have access to safe drinking water. Tap water is safe to drink in Stellenbosch and the University encourages students to make use of reusable water bottles. SU Facilities Management is involved in establishing special water stations across campuses to provide safe drinking water to staff, students, and visitors.

SU ensures that new buildings are constructed in a way that minimises water use, like the Jan Mouton Learning Centre, which opened in 2021. It was constructed according to GreenStar building practices, with a greywater system serving the ablutions to decrease long term water use.



*This state-of-the-art grey water system collects shower water, treats it and reintroduces it as flushable water in residence lavatories on the main SU campus.*



## The AUDA-NEPAD SANWATCHE – an African Network for water research and capacity development

SU hosts two Centres of Excellence (CoE) of the African Union Development Agency's (AUDA) New Partnership for Africa's Development (NEPAD). The AUDA-NEPAD Southern African Network of Water Centres of Excellence (SANWATCE) is a network of higher education and research institutions conducting research and sustainable capacity development and training activities in water and related sectors in the region. SU hosts the secretariat for the CoE and acts as a science node for South Africa in the network of 11 universities spread over eight SADC member states. The Southern Africa network is linked to nine other universities and research institutions in West- and East Africa.

The AUDA-NEPAD SANWATCE focus areas are:

- Research and development (including infrastructure) through innovation
- Human capacity development
- Research utilisation, impact and evaluation
- Outreach
- Strategic partnerships

### SDG 12 Responsible Consumption and Production

There is no equivalent AU Goal.

Irresponsible consumption and production are wasteful, lead to pollution, and have a detrimental impact on climate stability. Inefficient production and transportation can also lead to massive food wastage. With improved means of consumption and production, we can drive economic growth,

while avoiding environmental degradation and overuse of natural resources.

Universities can improve the situation by driving policy on responsible consumption, and by sharing research and knowledge with industries to facilitate sustainable means of production.

Stellenbosch University's Zero Waste Strategy (2020-2025) outlines the University's goals regarding waste reduction:

- 20% reduction of waste based on a 2018 baseline
- 80% diversion of general waste from landfill
- 95% diversion of food waste from landfill
- 100% sorting of general waste

SU is focused on handling waste judiciously and committed to greatly reducing the amount of food waste sent to landfills. A three-bin system on our campuses allows for the separation of waste that can be composted, recycled or sent to landfills. Where possible, waste is directed away from landfill; between January and August 2021, the average amount of waste sent to landfills from SU campuses was less than 13% of the total collected.

Food waste is collected from campus (including residence kitchens and cafeterias), composted and used in the University gardens or sent to a company that produces animal feeds. Up to 95% of food waste is diverted from landfills.

Recyclable waste is handled at the recycling facility on the Stellenbosch campus and sold to processing plants to be reused in manufacturing. The University's IT department collects e-waste and responsibly disposes of any waste that cannot be reused or repaired.







<b>SDG 13. Climate Action</b>
<b>AU Goal 5: Environmentally sustainable climate resilient economies and communities</b>
<b>AU Goal 6: Blue/ocean economy for accelerated economic growth</b>

Climate change disproportionately affects developing countries that do not have adequate resources to dedicate to mitigation and prevention. Universities can effect change through education about the dangers of climate change, and by funding and conducting research into mitigation strategies. Universities can lead the fight by changing their own practices and by shaping governmental policy regarding climate change.

SU's School for Climate Studies (launched in 2021) is an inter- and transdisciplinary entity at faculty level that conducts studies on climate and climate change, coordinates curriculum development, and coordinates postgraduate studies and training. It is set up to work across the different faculties at SU, the public and the private sectors in support of building a climate-resilient society.

The Centre for Renewable and Sustainable Energy Studies (CRSES) provides free resources to schoolteachers to teach students about renewable energy with the aim to raise awareness about climate change and strategies for prevention and mitigation.

The SU Environmental Sustainability Plan outlines the University's bold strategies to achieve systemic sustainability within SU, focusing on eight core themes featuring clear deliverables with a set timeline.

<b>SDG 14. Life Below Water</b>
<b>AU Goal 5: Environmentally sustainable climate resilient economies and communities</b>
<b>AU Goal 6: Blue/ocean economy for accelerated economic growth</b>

Water-based ecosystems are a critically important source of food and employment for many. Aquatic plants capture a large

amount of CO<sub>2</sub> annually and the health of these systems play an essential role in the prevention of climate change.

Universities drive impact through funding and research into protecting aquatic environments and raising awareness of the importance of these habitats. Universities can also help shape policy to protect aquatic environments.

### SU projects that contribute to Life below Water

In January 2021, SharkSafe Barrier Pty Ltd was recognised as a top ocean innovator. The SharkSafe Barrier is a spin-out creation from SU's Innovus that deals with technology transfer, entrepreneurial support, development and innovation. It is one of only a few eco-friendly methods of separating sharks and humans in the ocean.

The Kayamandi River Partnership is a joint project between the SU Water Institute (SUWI), the Plankenbrug business community, and local schools. Learners from five local schools were given water monitoring kits as part of a national effort to educate learners about the importance of river health in their immediate environment.

<b>SDG15. Life On Land</b>
<b>AU Goal 5: Environmentally sustainable climate resilient economies and communities</b>
<b>AU Goal 6: Blue/ocean economy for accelerated economic growth</b>

Healthy natural ecosystems combat climate change and prevent the extinction of species. Very few of South Africa's natural ecosystems are well protected. South Africa is home to an abundance of rare and endemic species that form part of the heritage of our country.

Universities can help by protecting natural areas on or close to campus and by educating people about the value of natural spaces. Universities can also fund and lead conservation research and help drive policy to ensure natural landscapes are protected.

**Biodiversity Management at Stellenbosch University**

SU has specific goals regarding biodiversity and has implemented several programmes, including eradicating invasive plant species on all campuses, planting indigenous plant species on campuses, and erecting owl and bat boxes on campus for their protection. The University acts in partnership with the Department of Forestry and Wood Science to conserve the mountainous region adjacent to Stellenbosch campus.

The limbovane Project has trained more than 13 000 learners in biodiversity since its inception. The project hosts camps and programmes where learners from local schools learn about biodiversity across habitats.

Stellenbosch University's Invasive and Alien Plant Species Management Plan outlines the University's strategy for the eradication of alien species on campus. The plan lists all alien species currently found on campus and the 2020-2025 plans for eradication.

**3.3. Prosperity**

Economic and other processes occur in harmony with the planet and nature so that all people may become prosperous.

**SDG 7: Affordable and Clean Energy**

**AU Goal 7: Environmentally sustainable climate resilient economies and communities**

Producing clean energy is an important step to preventing climate change and ensuring that energy and electricity is sustainable. Renewable energy demand and production is increasing in South Africa but has yet to become mainstream sources of power.

SU supports the expansion of renewable energy by funding and conducting research into new and improved technologies and by educating local, regional, and national communities on the importance of clean energy. SU is striving to transform its own energy use by transitioning to renewable energy sources.







*A 393 kW solar photovoltaic (PV) system on the roof of the Neelsie Student Centre. The power generated by the PV modules provides a third of the energy requirements of the student centre.*

### Projects at SU that contribute to affordable and clean energy

SU is committed to conserving energy where possible. The Facilities Management Division is implementing measures in existing buildings to increase energy efficiency. Energy-saving LED light bulbs and motion-sensor lights have been installed to reduce energy usage. In addition, a heating, ventilation and air conditioning precinct plant has been erected on Stellenbosch campus.

The SU Environmental Sustainability Plan (2020-2025) outlines the University's strategy to decrease energy use across the board. The Facilities Management Division is implementing energy-efficient measures to help reduce energy consumption. Smart meters have been installed in all buildings to monitor energy usage.

### SDG 8: Decent Work and Economic Growth

#### AU Goal 4: Transformed economies and job creation

The availability of decent work is essential to the upliftment of communities plagued by poverty and hunger. South Africa saw a sharp decline in GDP during 2020 due to the Covid-19 pandemic, with an upturn during 2021. SU is committed to the fair compensation of all employees, including employees contracted from outside the university. SU also provides training and career mentorships to improve the economic standing of its surrounding population.

SU supports the CoCreate Hub (SDG 1) and the Small Business Academy at our Stellenbosch Business School to help grow businesses that in turn stimulate job creation.



## SDG 9: Industry, Innovation, and Infrastructure

### AU Goal 10: World-class infrastructure that crisscrosses Africa

Infrastructure is essential for economic growth and for the transport of goods and people across the country. Innovation can drive sustainability and improve industrial processes. Investment in R&D has decreased in South Africa at the last measurement, which hinders innovation and industry growth.

SU contributes to this goal by fostering innovation within the university and the wider region and by funding start-ups. SU has partnered with Imperial Logistics to address problems related to climate change and healthcare in Africa. The aim of this collaboration is to ensure cross-industry related communication on these issues.

## SDG 10: Reduced Inequality

### AU Goal 1: A high standard of living, quality of life and well-being for all

Inequality is a global problem, but especially so in Africa, with South Africa having the highest Gini-coefficient in the world. Inequality restricts economic growth and access to decent employment, and it leads to increased poverty and hunger. Education is a powerful

leveller. SU's Admissions Policy guarantees that all admissions to study will be considered without any discrimination based on race, class, origin, gender, sexuality, or disability. The policy also addresses the University's positive discrimination practices.

SU projects like Caught in the Middle and #GradMe, respectively address the financial needs of students "caught in the middle" (who are not poor enough to qualify for state funding but who cannot afford to pay for their studies), and of students who cannot receive their degrees due to unpaid fees, thereby assisting them to enter the South African economy with confidence.

SU is committed to the success of its students, including students with disabilities. The Disability Access Policy outlines the University's commitment to providing these students with access to learning facilities and accommodation.

In 2021:

- Seven SU students and two coaches attended the Paralympic games in Tokyo.
- The Disability Unit presented the Lead with Disability programme, a course aimed at improving knowledge on accessible design and access.
- Students from SU took part in an international discussion about the role universities can have in social impact initiatives.





SDG 11: Sustainable Cities and Communities

AU Goal 10: World-class infrastructure that crisscrosses Africa

There has been a decrease in the number of people living in informal dwellings in South Africa, but many people still do not have access to sanitation and refuse removal. Cities and communities can help combat climate change by increasing renewable energy use and by adhering to beneficial environmental practices, like recycling.

SU hopes to lead the way by adopting sustainable practices on campus and by sharing knowledge and research about beneficial environmental practices.

In 2021, Cloetesville Primary School in Stellenbosch became the first school in South Africa to receive an electrical performance certificate (receiving an A-rating) thanks to energy-saving technology from GreenX Engineering, a SU spin-out company.

### 3.4. Peace

Societies are peaceful, just, and inclusive.

16. Peace, Justice, and Strong Institutions
AU Goal 11: Democratic values, practices, universal principles of human rights, justice and the rule of law entrenched
AU Goal 12: Capable institutions and transformed leadership in place at all levels, cross-cutting with Governance
AU Goal 13: Peace, security, and stability are preserved
AU Goal 14: A stable and peaceful Africa
AU Goal 15: A fully functional and operational African peace and security architecture

South Africa is seen as a dangerous place, with many believing that crime is increasing and that crimes frequently go unreported. Trust in institutions is key, if we want to create a peaceful and prosperous society.

Universities can lead by supporting institutions and leading research on law and the relationships between citizens and organisations. They can be transparent and promote educational freedom.



**Prof. Thuli Madonsela** holds the Law Trust Research Chair in Social Justice at Stellenbosch University. As part of their work, they created an accelerator programme, the Social Justice M-Plan. The programme aims to accelerate the end of poverty and to equalise opportunities by 2030 to support the National Development Plan, Agenda 2063 and the SDGs. Furthermore, it aims to foster social accountability and social cohesion, mobilise corporate and civil society resources to fund socio-economic inclusion, and foster civic responsibility.



**Prof. Pumla Gobodo-Madikizela** holds the South African National Research Chair in Violent Histories and Transgenerational Trauma. Her research explores how the dehumanising experiences of oppression and violence continue to play out in the generations born in the aftermath of historical trauma. She also works on the relationship between remorse and forgiveness and probes the role of empathy more deeply by engaging a perspective that makes transparent the interconnected relationship between empathy, Ubuntu and the embodied African phenomenon of inimba—an isiXhosa word that loosely translates to “umbilical cord”. The goal is to find a deeper, more complex understanding of empathy that takes into account an African knowledge archive.



# 3.5. Partnerships

The Goals can only be achieved through global partnerships and participation by countries globally, and specifically within Africa.

<b>SDG 17. Partnerships for the Goals</b>
<b>AU Goal 9: Key continental financial and monetary institutions established and functional</b>
<b>AU Goal 19: Africa as a major partner in global affairs and peaceful co-existence</b>
<b>AU Goal 20: Africa takes full responsibility for financing her development</b>

Sustainability is everyone's responsibility and cannot be achieved without collaboration between people, industries, and governments. The percentage of South Africans connected to the internet has been steadily rising, which increases our capacity to connect with each other and the rest of the world.

Universities build partnerships by connecting with other universities, as well as national and international industries, in order to meet the SDGs.

SDG 17 connects to all other SDGs as achieving the SDGs calls for a collaborative effort. As for Agenda 2063, it links to Goal 9: Key continental financial and monetary institutions established and functional; Goal 19: Africa as a major partner in global affairs and peaceful co-existence; and Goal 20: Africa takes full responsibility for financing her development.

In 2021, SU had 317 partners in 64 different countries and more than 2 900 international students, potentially increasing our connections even further. Fifty-four postgraduate students were enrolled in the joint degree offering, connecting these students to other exemplary universities worldwide. Connections to international partners increased in every region during 2021.

## The Goals for a United and flourishing Africa

<b>AU Goal 8: United Africa (federal or confederate)</b>
<b>AU Goal 16: African Cultural Renaissance is pre-eminent</b>

# 4. Final thoughts

Sustainable Development has for many years been integral to the long-term objectives of Stellenbosch University. With the establishment of the SDG/2063 Impact Hub in 2021, the University took a deliberate step to accelerate awareness and report on a wide range of activities as they relate to the 17 United Nations Sustainable Development Goals. As a leading University on the African Continent, we felt the need for a report that would articulate how our activities support the 20 African Union Development Goals which – though aligned with the UN SDGs – also provide goals specific to our unique context on the African continent.

As a Unit, an enormous amount of effort has gone into coordinating the collation of data to measure the impact of activities as they relate to the two Development Agendas, which has enabled us to better consolidate resources within the University. By further increasing our communication activities, we find that partners with mutual development interests engage in collaborations aligned with the Sustainable Goals, leading to increased quality and richness of teaching, learning and research.

We are proud of this first Sustainable Development Annual Report and I would like to commend all SU colleagues who contributed to it. Moving forward, it is my belief that institutions that are able to embrace tangible sustainable practices, will be around

for generations to come and along with like-minded partners, will be able to make a difference in the communities we serve.



**Dr Nico Elema** is the Director of the Centre for Collaboration in Africa at SU International



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## The SDG/2063 Impact Hub

In late 2021, SU established the first unit to exclusively focus on its Sustainable Development contributions to assist the University in its goal to become systemically sustainable. As an initial activity, the SDG/2063 Impact Hub was tasked to map and document the contributions that SU makes to SD on a regional (AU Agenda 2063) and global (UN 2030 Agenda) scale. This positions the Hub in a unique way and distinguishes it from other SD Hubs in Africa and internationally.

The key objectives of the Hub are to promote and advocate for the uptake of the two Agendas at SU, communicate our contributions to the goals and to introduce SD literacy, all while further leveraging our international partnerships for progress.

Please contact the SDG/2063 Impact Hub Programme Manager, Corina du Toit, with any queries or comments: [corina@sun.ac.za](mailto:corina@sun.ac.za)

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