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1918-2018



**Social Impact @  
Stellenbosch University  
2020**



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## *Message from the Deputy Vice- Chancellor: Social Impact, Transformation and Personnel*

In 2020 Stellenbosch University (SU), and many other institutions across the world, had to swiftly switch gears to continue with its learning and teaching, research and innovation, and social impact activities as the country went into lockdown due to the Covid-19 pandemic. The university set two core priorities for the year: to assist our staff and students to complete the academic year, and to ensure the comprehensive and systemic sustainability of our institution.

Sustainability at SU is centred around the wellbeing of our staff and students, the financial sustainability of the university, and the sustainability of our partners, especially our local partners in communities surrounding our various campuses in Stellenbosch, Bellville, Tygerberg, Saldanha and Worcester.

The values of the university – excellence, compassion, accountability, respect, and equity (ECARE) – became the foundation on which we built individual and joint actions and practices. We made a conscious decision that although these values are intertwined and interdependent, the value of compassion would enjoy priority during this pandemic. This is particularly important at a time when South Africans are experiencing a loss – whether it be of income and jobs, or the death of family members, friends, and colleagues.

Covid has amplified and multiplied existing societal concerns and challenges. The impact of poverty, unemployment, and inequality have been experienced more intensively. Corruption, crime, and violence, in particular gender-based violence, still plague South Africa, with many citizens still lacking access to health care, education, and housing to name a few.

While social impact often relies on physical interaction, we have seen an intensification in innovation in social impact even with social distancing. Staff at SU's campuses responded to the challenge by exploring and inventing new forms of engaged research, scholarship, learning and teaching, volunteerism, and cooperation. What we learn now will have a remaining impact on how we function in future.

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*We responded to immediate concerns by finding solutions to societal challenges caused by Covid-19.*

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Medical experts at SU collaborating with the University of Cape Town resorted to treating patients who were critically ill with the Covid-19 virus with high-flow nasal oxygen (HFNO) instead of immediately resorting to mechanical ventilation, which is more invasive and requires patients to be sedated. This decision to use a lesser known treatment made it possible for doctors from Tygerberg Hospital to avoid the “need for mechanical ventilation in half of all patients with severe disease”. The Faculty of Education stepped up to support Grade 11s and 12s with their academics during school closures while the Department of Food Science found a way to turn bread into hand sanitiser.

We have continued to explore and contribute to research on a post-Covid world, and the role of universities in such a world. Since the outbreak of the pandemic, Klaus Schwab of the World Economic Forum and Thierry Malleret, the founder of the Monthly Barometer, have published Covid-19: The Great Reset. In the book they argue for an economic, societal, geopolitical, environmental, technological, business, and individual reset. This reset entails, amongst others, that we work hard to bring out the best in each other and oppose and fight the worst in us. As universities, we need to continue engaging in these reflections from a theoretical point of view while searching for practical answers. It is, after all, a crucial dimension of the responsibility of universities to think with societal partners about societal concerns. And we do these theoretical reflections in the knowledge that there is nothing as impactful as good theories that partners develop together and that bring about tangible benefits to society.



## *Message from the Senior Director: Social Impact and Transformation*

2020 will indeed be remembered as the year of the global lockdown. All across the world we had to rethink our lives – from the way we worked, to the impact we had on each other as individuals, and in our case, the role of universities in a world negatively impacted by a pandemic. And this shift still plays out here and across the globe.

The crisis, brought about by the rapid spread of the coronavirus, forced the Stellenbosch University (SU) community to think differently about our role in our town and in the broader South Africa. In this regard, we made substantial adjustments – many of which literally happened overnight.

Firstly, we planned and executed what is now known as Emergency Remote Teaching, Learning and Assessment (ERTLA). This ERTLA method allowed staff and students to complete the 2020 academic year online, thus allowing our graduates to start a new phase of their lives and enter the workplace. As universities we understand that this is indeed one of the biggest ways that we can make an impact on society at large. And therefore, we are indeed overjoyed that we could complete the 2020 academic year.

Secondly, SU realised that it, like other universities across the globe, had to think differently about its role in society. We immediately joined hands with our civil society partners, our local municipalities as well as provincial and national government departments to support, enhance, and implement social impact to jointly address some of the immediate challenges brought about by the pandemic. And here I specifically think of food relief initiatives as well as initiatives that spearheaded the recovery of our local economy. In this regard I want to acknowledge the work of Stellenbosch Unite and the Support Stellenbosch campaign.

Further to this, the historical bilateral agreement that was signed between SU and the Western Cape Department of Health (DoH) during the pandemic is just one example of how SU continued to pursue engaged teaching and learning while maintaining social distancing. This agreement, eight years in the making, requires the DoH to “fulfill its statutory requirement to

train students in a clinical environment” and SU to train “skilled healthcare professionals and produce health research in order to deliver evidence-based care”.

Of note as well is the fact that students, technicians and academic staff from the Faculty of Engineering made various contributions to the country’s National Ventilator Project (NVP) by either printing 3D face shields, or “assisting with testing and manufacturing prototypes” for the NVP. We were also able to support Stellenbosch Municipality through our Campus Health Service (CHS) with telephone screening services and referrals to local hospitals for Covid-19 testing or advice on self-isolation.

It has been wonderful to see staff and students take hands internally – across departments and faculties – and externally with stakeholders and partners to enhance impact through our values as an engaged institution.

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*This crisis has affirmed that we are committed to ensuring that social impact is deeply embedded in our teaching and learning, and research.*

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This publication highlights some of those engagements and activities. You will note that some initiatives had to be adjusted substantially and that new initiatives that speak to the challenges of the time were implemented.

I would therefore like to thank colleagues from all SU faculties who adjusted their activities, expanded their work, found ways to maintain partnerships that had been impacted by the lockdowns, and who facilitated and implemented new avenues to continue with the embedded endeavour of social impact in 2020.

Although the pandemic is by no means a thing of the past, we have learned a number of valuable lessons that will also guide us in what will be a post-Covid era. These lessons will prove critical in ensuring we remain an engaged university that supports society at large through engaged teaching and learning, engaged research and by producing graduates that are engaged citizens.





## *Message from the Director: Social Impact*

commitment to “advance knowledge in service of society”, our Strategic Framework 2019-2024 and its values as it pertains to Social Impact. The two documents and methodology also underpin our interactions with our communities.

The Covid-19 pandemic left none of us unscathed and for some South Africans and global citizens the impact has been catastrophic, with many of us only able to watch helplessly.

The grief, fear, and lack of physical contact with family and friends affected the mental health and wellness of staff and students negatively and this also held true for the communities we serve. Within this context Stellenbosch University’s (SU) values of Compassion, Accountability and Respect became even more relevant within and outside of our institution. We stood firm in our pursuit of Excellence during this time and successfully hosted our annual SI Symposium 2020 with our students, staff, and the stakeholders/communities we serve. We are also constantly looking for new ways to live out the values of Equity through our responsiveness to matters of social justice and redress.

In South Africa, the temporary closure of universities and the move to online teaching and learning brought about by the lockdown, underscored the digital divide between disadvantaged and privileged students. The devastating impact was that some students were faced with the threat of not being able to finish the academic year successfully. At SU, management mitigated this negative effect by providing disadvantaged students that applied for the support, with laptops as well as data.

The national lockdown also negatively affected the ability of most of our social impact initiatives to continue because we could not physically interact with communities. It created an unprecedented disruption that negatively affected the university’s ability to provide various services to staff, students, and the communities the university serves. It exposed these inequalities on a larger scale and a great demand was placed on the university’s ability to find innovative ways to bridge this divide so that social impact initiatives could continue.

The continuation of seed funding support for social impact initiatives under lockdown was informed by the university’s Vision 2040, specifically the institution’s

At SU, we focus on embedded Social Impact through the pursuit of Engaged Research, and Engaged Teaching and Learning to strengthen the Scholarship of Engagement. Volunteerism, in the form of Engaged Citizenship, brings about partnerships that deepen the level of engagement with communities and thereby enhance the human skills of the students and staff involved.

One of the most significant ways in which we have embraced communities in bringing about social justice and redress through social impact, started in 2007 when the late Rector of SU, Prof Russell Botman, symbolically rededicated the Old Lückhoff School building in Banhoek Road to its original owners. Today, the old Lückhoff School houses the DSI offices as well as several NGOs that addresses a range of community needs.

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*We are now closer than ever to bring about authentic social change through social justice*

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This pandemic had shown us the need to start having new conversations with our external stakeholders to find innovative ways to continue with interventions and projects during and post-pandemic. The DSI will continue to participate in and contribute to local, national, and international conversations with other institutions and share best practices. In addition, events such as our annual symposium, will help us to further interrogate social impact at SU despite new challenges posed by the COVID-19 pandemic. Our Social Impact Strategic Plan (2017-2022), which is currently under review, will be key in helping us to improve our engagement.

Considering our social impact track record, lessons learnt, and commitment to redress, we are confident that we are now closer than ever to bring about authentic social change through social justice that will contribute to positive societal impact.



## *Learning to pivot in a changed world*

The word pivot, meaning to turn or twist, became one of the most used words during the Covid-19 pandemic. This is not surprising, considering that individuals, businesses, universities and governments had to evaluate and reshape or amend the manner in which it normally functioned. The Division for Social Impact (DSI) also found itself in a position where it had to respond to a new set of circumstances under lockdown while still continuing with its mandate of pursuing social justice through its social impact work. The pandemic has further exposed in South Africa the huge inequalities in our society and the need to urgently find innovative solutions to these inequalities.

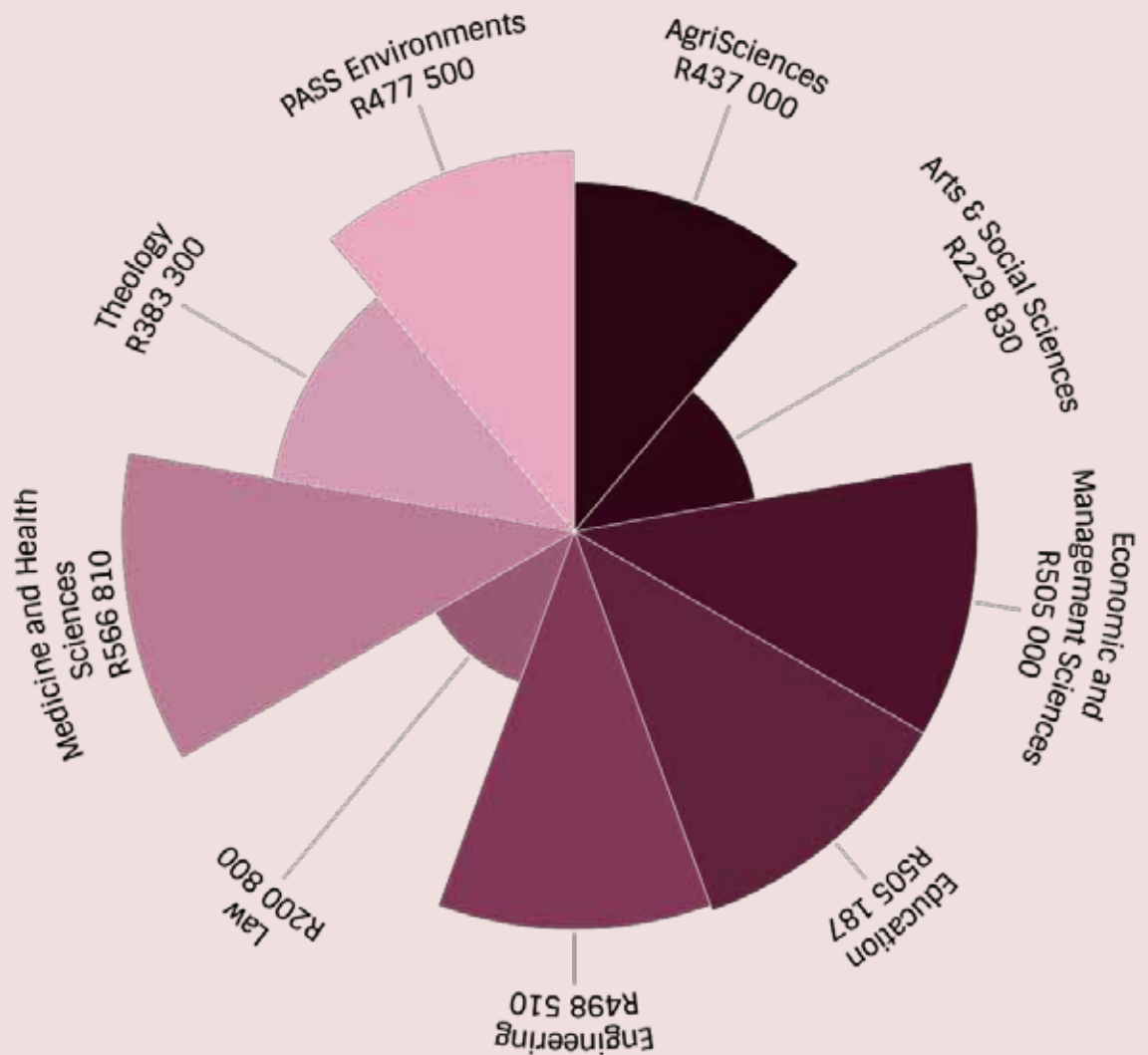
As the custodians of social impact at our institution, the DSI pursues social impact through engaged research, engaged teaching and learning, and engaged citizenship. We are responsible for advising, guiding and supporting staff and students at Stellenbosch University (SU) who manage or are involved in social impact initiatives in service of society. Additionally, we facilitate engagement between our researchers, staff and student volunteers, student interns, partners, and communities.

We also support SU in its mission to fulfil the university's Vision 2040 and its Strategic Framework 2019-2024 by focusing on three core strategic themes in particular. These themes are research for impact through engaged research; building purposeful partnerships and inclusive networks; and providing students with a transformative student experience. Within the current context of the global pandemic, engaging with communities to fully understand their challenges and focusing on research that solve those challenges is extremely important. Through the purposeful partnerships and inclusive networks, we have established with communities, NGOs, government departments, and businesses we are able to draw on the collective knowledge and expertise amongst stakeholders to find collaborative and innovative solutions to societal challenges, many of which have now become imperative. These partnerships and networks also provide us with opportunities to truly "embrace the communities we serve to bring about social, cultural, environmental and economic development and change". It also allows us to provide students with out-of-classroom experiences through volunteerism.

In September 2020, the DSI held its first online Social Impact Symposium, where we had meaningful discussions with staff and students on new challenges posed to social impact by the COVID-19 pandemic. The Symposium allowed us to reflect on how COVID-19 has affected social impact – locally and globally – and how it had and would continue to influence the university's ability to pursue social impact endeavours or continue with projects as it had before the pandemic. It was an opportunity to evaluate the effectiveness of our social impact



## Funds approved for 1st and 2nd round



methodologies and possible shortcomings in the support we offer to the communities and organisations we serve. This evaluation was important as it will impact significantly on how we do social impact going forward.

In 2020, Social Impact at SU invested a total of R 4 043 237 in social impact initiatives across all the university's 10 faculties, the PASS environment, the DSI, Maties Sport, and interfaculty collaborations.

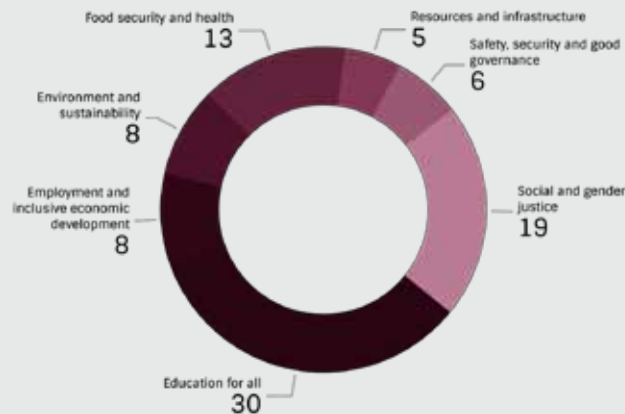
Our social impact initiatives are aligned to the international, national, and regional goals set out in the United Nation's

Sustainable Development Goals, the National Development Plan of South Africa, and the Western Cape's Provincial Strategic Goals and are divided into seven impact themes:

- Education for All
- Social and Gender justice
- Food security and health
- Environment and sustainability
- Employment and inclusive economic development
- Safety, security and good governance
- Resources and infrastructure

## Our contribution to SU's 7 themes

In 2020 Stellenbosch University's staff participated in 58 social impact initiatives and projects that fall within the university's 7 social impact themes. A total of 158 staff members spent 74 609 hours on these initiatives and projects.



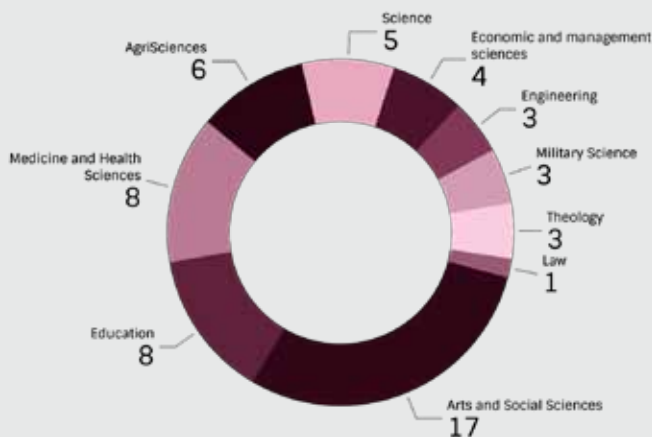
## Breaking down our social impact

During 2020, 90 social impact initiatives were registered and approved. These initiatives included curricular and co-curricular initiatives which involved only staff, or staff and students, or only students. Staff and students engaged in social impact initiatives with partners based predominantly in the broader Western Cape, but also in other provinces. Staff and students were also involved in four national and three international initiatives. Altogether 158 staff members and 1 472 students volunteered a total of 74 609 hours, working with 169 partners in the process.

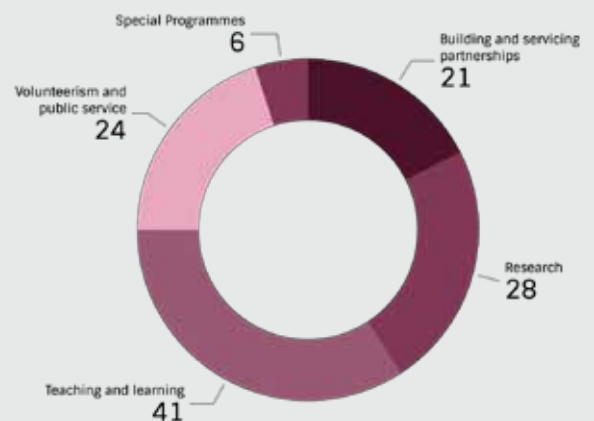
Below are graphical depictions of SU's social impact.

## Staff-coordinated social impact initiatives

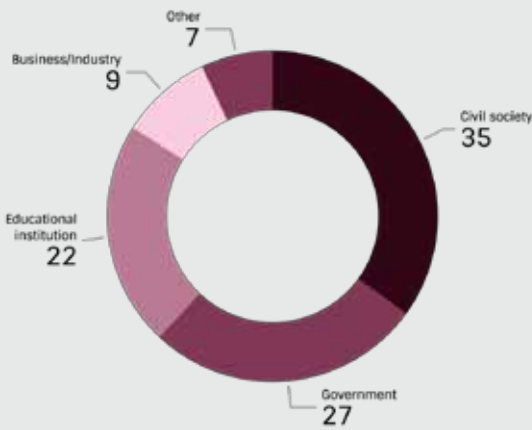
Initiatives by faculty



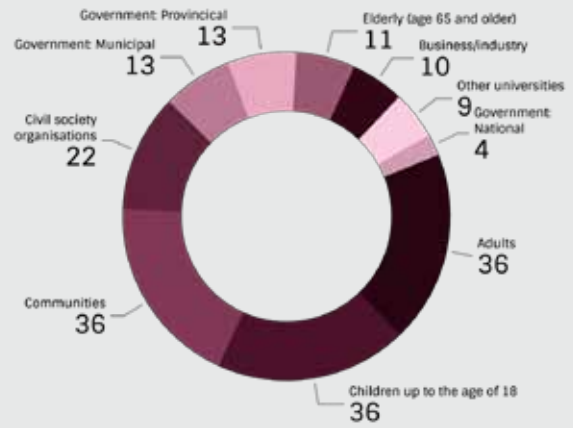
Initiatives by type



**Initiatives by partner category**



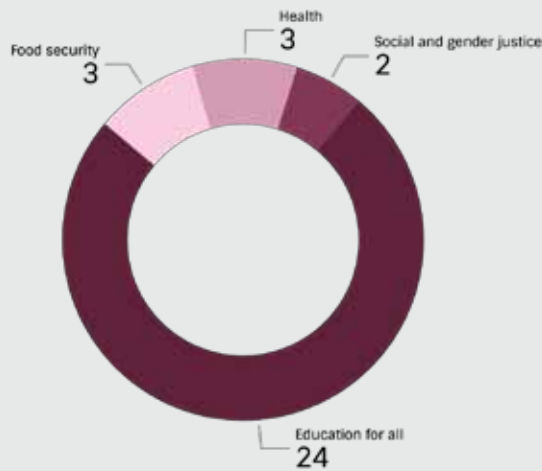
**Initiatives by target group**



*Student initiatives by theme*

Approximately 1 472 students participated in 32 student-coordinated projects and initiatives in 2020, volunteering 336 hours of their time and benefitting 2 450 individuals.

**Student coordinated volunteer social impact initiatives**





# *Matie Community Service and faculties enable student-driven social impact*

As we deal with the socio-economic fallout of the Covid-19 pandemic, one thing has become abundantly clear – now more than ever, Stellenbosch University (SU) needs to send engaged graduates into the world who are cutting-edge thinkers and can make a meaningful contribution to solving complex, real-life world challenges.

Some of the graduate attributes that SU aims to instil in its graduates are a passion for lifelong learning, critical and creative thinking, personal responsibility in the application of knowledge, the ability to collaborate with others in diverse environments, and being innovative while using sustainable and effective technology to solve problems. Our Vision 2040, to “become one of Africa’s leading research universities and to be globally recognised as an excellent, inclusive, and innovative institution where knowledge is advanced in service of society”, further demonstrates our commitment to equipping our students to make a contribution to society.

Matie Community Service (better known as MGD) is the vehicle through which SU realises all of the above through social impact. The non-profit organisation is housed within the Division for Social Impact at SU and its mandate is to support, enhance and enable volunteer opportunities for students.

This is important as students are confronted by increasingly complex issues such as food and energy security, global economic challenges, the rise of Artificial Intelligence (AI), the Fourth Industrial Revolution and now a global pandemic. This rapidly changing landscape requires universities to be more agile in responding to these challenges while preparing students to make a positive impact on society.

In 2020 MGD responded by launching a short course – the first of its kind – on Advancing Engaged Citizenship (AEC). The course aims to connect SU students to a variety of national volunteerism opportunities to acquire knowledge and skills to become engaged citizens while studying and upon entering the workplace. The four-month pilot AEC course commenced in 2020 with 32 Social Impact student leaders and 20 youth leaders from the Stellenbosch-based e’Bosch Heritage Project.

The course focuses on modules on *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*. It is presented

by the Training and Placement Centre within MGD. The centre enables students to gain civic engagement experience at a national level. The AEC course is recognised by SU’s Co-curricular Office and will form part of the academic transcript of student social impact leaders. Additionally, it ensures that MGD’s training remains relevant to critical issues and challenges facing South African communities and the world.

In 2020, the Covid-19 pandemic forced MGD to move away from face-to-face community interaction to mitigate risk of infection. In response to this, MGD launched a virtual volunteering course thanks to its partnership with ForGood – a national virtual volunteerism portal connecting individuals with causes and campaigns across South Africa. The volunteering course is aimed at second-year social work students to provide them with an online opportunity to obtain practice-based volunteering experience while also



applying their knowledge within diverse communities. Students will complete 30-50 hours of volunteering, whereafter they receive a certificate from SU in acknowledgement of the short-course they completed.

With initiatives like this, MGD is responding to real-life challenges and encouraging active citizenship through virtual volunteerism opportunities for our graduates that helps them gain experience within their fields while sharing cutting-edge academic knowledge with various national organisations.

For more information about the AEC course, visit <https://shortcourses.sun.ac.za/courses/c-5/2021-5557.html>.

*Changing the world one  
step at a time*



## *A second chance despite the impact of Covid*

SciMathUS, an acronym for the programme Science (and) Mathematics (at) Stellenbosch University, assists students to qualify for study at the university. It forms part of a variety of units within the Faculty of Education and specifically in the Stellenbosch University Centre for Pedagogy (SUNCEP).

Since its inception in 2001, a total of 1 697 students having successfully completed the programme with 85% enrolled at Stellenbosch University (SU). The programme has significantly added to the diversity profile of the university. Preference has traditionally been provided to students from educationally disadvantaged circumstances who were hindered by the education system and schools they attended, to demonstrate their academic potential to access higher education.

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*“SciMathUS is one of the best decisions I have ever made and the best university foundation that I needed.”*

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SciMathUS also known as the University Preparation Programme is offered to learners, who have passed Grade 12 with a minimum average of 60% but are not selected according to the selection criteria of the specific programme they wish to study. Through this programme students are provided an opportunity to improve their National Senior Certificate (NSC) results in specific subjects (Mathematics, Science and Accounting) to enable them to re-apply for university entry. The programme also provides complementary non examination modules, namely Computer Literacy and Academic Literacy to further enhance student’s transformation from schools’ methods of learning and introduces them to higher education methods of learning.

During the pandemic it was quickly discovered that many students did not have experience of remote learning and through the Computer Literacy module

was able to acquire digital skills that allowed them to be fully engaged. Through the Academic Literacy module, students were equipped with critical thinking, time management and research skills.

The pandemic’s effect on the South African economy significantly impacted on the number of bursaries and donations offered by organisations and companies. As a result, the affected funding support threatened academic endeavors but through perseverance and the return of students observing strict COVID-19 regulations and protocols, and the support of academics the SciMathUS programme continued.

Ms Nokwanda Siyengo, Component Head of SciMathUS, said that in 2020 the programme celebrated its 20th year in operation and has embarked on a campaign #Changinglives with the aim to create more opportunities for students to reach their full academic potential over the next 20 years.

Former SciMathUS student and BAcc degree graduate, Ms Ezile Mkhosi, shared: “SciMathUS is one of the best decisions I have ever made and the best university foundation that I needed.”





## *Education beyond classrooms: students lend a hand*

With the impact of the Covid-19 pandemic on society, students participating in the Beyond Education programme had to become critical thinkers and create a platform for education students to become more than teachers, but be agents of social change too. The programme is an initiative of the Education Student Committee's (ESC) social impact portfolio, which is headed up by Mr Marcel Adams, a second-year BEd Intermediate Phase student of the Faculty of Education.

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*“Our mental health has a great effect on the way we think, feel and react to situations.”*

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With schools remaining closed for the better part of 2020, education students could not gain necessary practical in-person teaching experience. This led the students to develop initiatives that harness their knowledge and provide access to educational materials that contribute to making a difference and impact in society. By being exposed to the needs of society, students were able to help communities develop their own agency by demonstrating how education can help them to unlock their ability to advocate for a just and equitable society.

During the lockdown, Adams said: “We realised that teachers couldn’t get through the first term’s curriculum with the lockdown regulations in place, so we decided to lend a hand.”

This led to the development of alternative resources to assist learners with their schooling obligations and especially provide support to those who had limited access to devices or e-learning. Electronic booklets for primary school learners from Grade R to 9 and a Grade 12 Matric Survival Kit were developed. The Survival Kit, contained study guidelines, motivational advice, and tips on how to look after your mental health.

“Our mental health has a great effect on the way we think, feel and react to situations. It also determines how we deal with stress, how we communicate with others and how we make decisions. So it is important that we take care of our mental health and always reach out for help if we are struggling,” said Dr Lynne Damons, a Lecturer in Educational Psychology.

With a specific focus on education and through the support of various stakeholders in civil society and businesses, the Beyond Education team was able to actively contribute to the realisation of developmental goals.

Adams said that they hoped to raise awareness and emphasise students’ role as future teachers and leaders through the initiative. The initiative relies on student support, businesses and civil society to continue making an impact. It also utilises the potential of social media and applications like WhatsApp to take education beyond the classroom, reaching communities far and wide.





## Grade 9 Career Guidance Booklet

Mixed methods of evaluation confirmed the resounding positive impact the booklet had made on learners' career preparedness. Qualitative feedback complemented the efficacy regarding assisting with learners' career planning and directionality, subject choice, and self-discovery. Learners expressed how the booklet "helped me consider the important aspects of my career", "helped me to choose my subjects", and "helped me find myself", and that "it was also fun to read through the booklet" and that "I know what I want to become in life".

Life Orientation teachers described the booklet as being "very comprehensive" and "learner-friendly", but strongly advocated for contact sessions with the learners to optimise the use of the booklet. Despite the many imponderables and unforeseeable circumstances brought on by the COVID-19 pandemic a unique opportunity exists says Naidoo "for us to get out of the box and think together".

The Career Guidance project is a community service-learning initiative developed to support Grade 9 learners from eight different schools with their subject choice and career planning. This a joint initiative headed by Prof Anthony Naidoo from the Psychology Department in the Faculty of Arts and Social Sciences and Dr Michelle Visser from the Industrial Psychology Department in the Faculty of Economic and Management Sciences.

In 2020, due to the Covid-19 pandemic, the project team and partners had to find a new way to continue and did so by converting the project from a contact-based workshop and assessment format to a context-appropriate, self-directed format for 1 684 learners. Stemming from the successes of the initiative in previous years, the team was eager to consolidate and to improve on lessons learned. The first project meeting took place in February and initial visits to the eight partner schools were completed during the first week of March. When the COVID-19 lockdown and social distancing measures were imposed, there was much uncertainty about the continuation of the project.

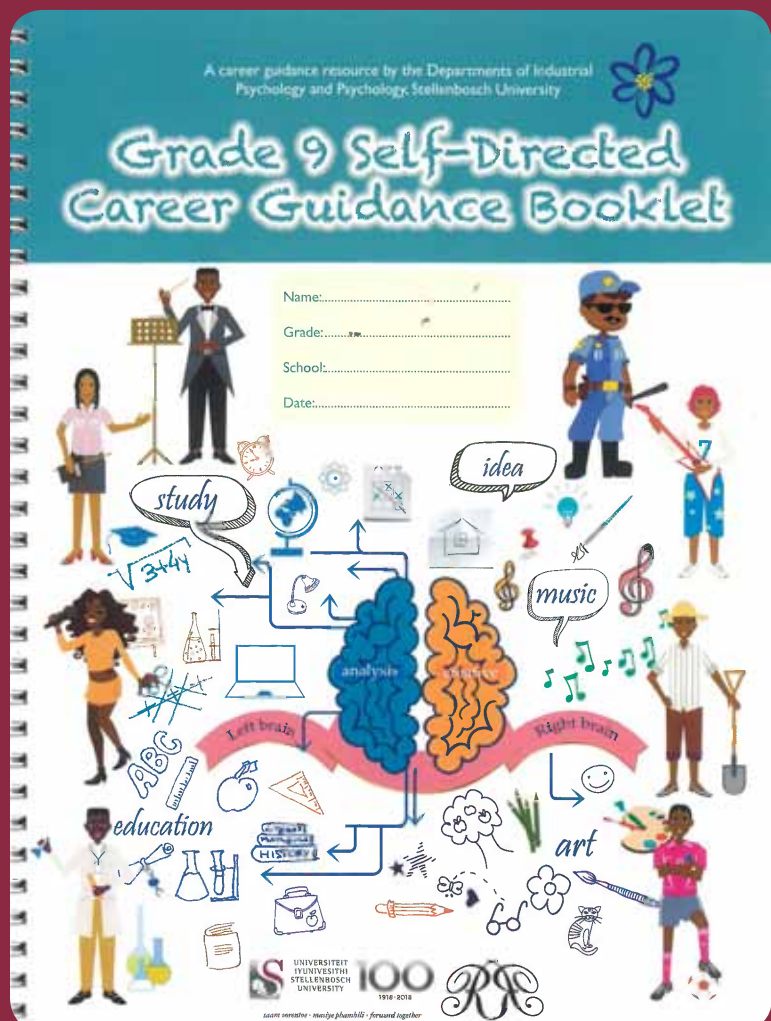
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*"I know what I want to become in life."*

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Under the emerging new circumstances, the team considered redesigning the content of the previous workshop manual to a new self-directed career guidance booklet supported by additional resources available on the initiative's website (<https://careerguidanceproject.co.za>).

The booklet was transformed into a dynamic, colourful and interactive format offered in both English and Afrikaans, which the Grade 9 learner could complete and peruse at their own pace. The booklet together with a snack pack were delivered to the different schools during the first week of October 2020. To inspire the learners to complete the booklet, an essay competition was launched.





## TRAC SA achieves success despite Covid-19 challenges

Despite the Covid-19 pandemic, TRAC South Africa – an education intervention programme situated in Stellenbosch University’s (SU) Faculty of Engineering – still assisted 5 565 Grade 11 and 12 learners from 85 high schools in the subject fields of Mathematics and Physical Science in 2020. They also fulfilled their mandate of assisting students with applications for tertiary studies and bursaries.

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*“We would like to see some of our learners in the future championing research and innovations to address pandemics such as COVID-19 and other challenges.”*

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A group of 107 TRAC (Technology Research Activity Centre) SA students registered at SU in 2020.

TRAC, which aims to eradicate poverty through quality education, has been operational in South African high schools since 1994.

It creates value through a three-pronged intervention strategy – academic intervention in the subject fields of Mathematics and Physical Science, assistance with applications to tertiary institutions, and facilitation of the application process for bursaries.

The importance of the programme was emphasised by Mrs Nelisa Hopa, principal of Bardale Secondary School in Blue Downs, who indicated that the school’s results in Physical Sciences increased dramatically after TRAC SA became involved.

“We would like to see some of our learners in the future championing research and innovations to address pandemics such as Covid-19 and other challenges, but these ideals can only be achieved through your continued support of our learners.”

According to Ms Debby Olivier, Director of TRAC SA, Covid-19 impacted them significantly – both operationally and financially.

“The extended school closure decreased the available time we had with the learners to prepare them for their final examinations and to complete at least three tertiary applications per student as per our mandate.”

Group work and peer-to-peer learning had to be terminated due to Covid-19 social distancing protocols and the cost of data made a move to online engagement near impossible.

“We had to change to a demonstration style teaching methodology and had to arrange many after-hours sessions with our learners to ensure that we could complete our tasks for the year,” explains Olivier.

TRAC SA is currently developing a new intervention model which will ensure improved academic results despite the lack of peer-to-peer group-work learning, as well as a financial model which will mitigate the risk of an economic downturn affecting the programme in the future.



# *Transformative values in schools influence communities*



The Beacon of Hope social impact initiative regards schools as the most important instrument of transformation in communities today.

Through value-driven workshops presented to teachers, school management teams, school governing bodies and learner leadership, the project focuses on strengthening human dignity, personal development and addressing aspects of social justice and gender equality.



The project, situated in the Faculty of Theology at Stellenbosch University (SU), originated when Mr Denver Robertson, Vice-Principal of Tuscany Glen High School in Eerste River, approached lecturers at SU to discuss challenges in education. It was launched at pilot schools in 2018, with Dr Jeanette De Klerk-Luttig from the Unit for Moral Leadership acting as facilitator of the workshops.

“Many schools encounter huge social challenges like poverty, gangsterism, substance abuse, lack of moral values and academic under-performance. The creation of environments that are conducive to growth and development relies on the ability to impact the educational pipeline throughout,” explain project leaders Dr Chris Jones from the Unit for Moral Leadership at SU, and Robertson.

“We also need to ensure that our schools are well managed and value-adding. This implies competent management teams and school

governing bodies, the existence of structured learner-driven leadership and governance structures, motivated and empowered educators, future-focused and relevant subject offerings, exposure to opportunities post-matric, the availability of career guidance, and the development of learners on a personal level.”

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*“Education can help to address the needs of our country by delivering young people that are willing and able to take on the challenges that face us as a nation.”*

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According to Mr Cedric Williams, Principal of Eersterivier Secondary School, one of the things that stood out during the workshop was the idea that strong values will create happier teachers and learners.

“A school is a place where learners and teachers need to be happy, and values contribute hugely to this state of mind.”

The project leaders had planned to extend the project to include the tutoring of Grades 11 and 12 learners at SU in 2020, but this was put on hold due to the Covid-19 pandemic.

“We hope that our intervention will have a positive impact on the broader society. Education can help to address the needs of our country by delivering young people that are willing and able to take on the challenges that face us as a nation,” says the project leaders.



## *Covid-19-related information made accessible to the hearing-impaired*

A social impact initiative in the Faculty of Arts and Social Sciences aims to make Covid-19-related information more accessible to a Deaf audience by creating information resources in South African Sign Language (SASL).

The project originated in the General Linguistics Department where the US Handlab, a curriculum material development unit funded by the Western Cape Education Department, is situated.

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*“Stellenbosch University has done excellent and vital work to ensure that we now have full access to accurate (Covid-19-related) information.”*

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Hearing-impaired sisters Ms Vanessa Reyneke and Ms Stephanie Lotz noticed that information about Covid-19 available on different platforms was mostly aimed at a hearing audience.

“Many Deaf people weren’t following the rules because they didn’t know what the rules were. We realised that we needed to make Covid-19-related information available in SASL so that Deaf people could understand the problem and know how to protect themselves,” explains Reyneke.

They received funding from Stellenbosch University’s (SU) Social Impact Strategic Fund and their first step was to approach members of

the Deaf community and find out what information needed to be made available in SASL. They focused on general information such as how to protect yourself, what happens when you test positive for Covid-19, and how and when to isolate amongst others. The sisters were assisted by sign language interpreters and Deaf presenters who understand the needs of the Deaf community well.

All resources are available free of charge from US Handlab’s Facebook group page, named Covid-19 in SASL, and a YouTube channel created for the purpose of sharing these videos.

The team was also requested by schools for the Deaf to develop child-friendly material about Covid-19. After addressing the most pressing needs for information on staying physically healthy, they would like to focus on information about Covid-19’s impact on mental health.

According to Reyneke, they hope that content producers and news outlets will start focusing on making material more accessible for the Deaf community by using subtitles or an interpreter, for example, thereby making it possible for Deaf people to remain informed and to keep themselves and those around them safe.

“With the videos being accessible in two dialects of SASL, Stellenbosch University has done excellent and vital work to ensure that we now have full access to accurate information without having to read it in another language or ask people to explain,” was members of the Deaf community’s feedback.



## *A haven for vulnerable children*

With the ever-increasing vulnerability of children and the effects of the Covid-19 pandemic, the need for a safe and loving homely environment is desperately needed. Heartlands Baby Sanctuary, situated in Somerset West in the Western Cape, is a registered Child and Youth Care Centre that provides temporary, residential care for orphaned, abandoned, abused, vulnerable and sick children from birth to six years of age for 25 children at any given time.

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*“The sanctuary provides care for the children in the community.”*

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The children of the sanctuary, often on the receiving end of the serious socio-economic challenges of communities, are admitted as a result of a court order which is valid for three months. Should the child need further care (health, psychosocial, and stimulation/ Early Childhood Development (ECD)) a further court order is issued. Where possible, reunification with their families remains top priority, otherwise foster care, an alternative facility or an adoption process is explored and considered.

The sanctuary provides shelter, healthy meals, clothing, hygiene, emotional and psychosocial care to vulnerable children. Children from these

backgrounds typically experience developmental delays and require special attention and care. To minimise developmental delays, a holistic ECD and stimulation programme has been introduced and forms one of three key pillars of service. The other pillars of service include the house care programme and psychosocial care.

To facilitate and enhance the process of rehabilitation and integration, parents can receive training in order to be better equipped in caring for their children when they are back at home or leave hospital. Ms Monica Buitendag, Chief Executive Officer, said that the sanctuary provides care for the children in the community and the involvement of the community is essential in ensuring the sustainability of the services offered.

Recently, the sanctuary was recognised by the International Prestige Awards (UK) as the best childcare service in South Africa. The aspirations of the sanctuary are to continue providing high-quality residential care and support to at-risk children and their families through a holistic, multidisciplinary team approach. Stellenbosch University, through Prof Gideon Wolfaardt from the Department of Microbiology in the Faculty of Science and in collaboration with the Faculty of AgriSciences, the Division of Aquaculture and the Department of Agronomy, has engaged with the sanctuary to support the provision of healthy food and develop sustainable solutions for the sanctuary.

## *Clinical learning continues with virtual home check-ups*

To ensure that Stellenbosch University (SU) students in the Faculty of Medicine and Health Sciences could continue their clinical learning activities in 2020, the Ukwanda Centre for Rural Health's Collaborative Care Project embarked on virtual home visits during the Covid-19 pandemic.

Through the Ukwanda Collaborative Care Project, undergraduate health science students work with community health workers in Worcester's Avian Park and Zwelethemba communities and conduct home visits as part of their clinical training. These students then report back to a group of students from a range of different courses to decide on the ongoing management of patients.

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*"Virtual home visits enabled us to carry on helping the people in these communities."*

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When Covid-19 struck, these visits had to move to a virtual platform.

Instead of visiting patients in their homes, a student would phone them. If they could not get a good understanding of what was happening or were concerned, a community health worker was sent to visit the patient and interact with the students on a voice or video call from the patient's home.

SU's Division of Social Impact awarded a grant to the Ukwanda Collaborative Care Project for the virtual home visiting project. Through this project community health workers are provided with data to enable them to communicate with students via WhatsApp.

"Our research has shown that the students make a significant impact in terms of patient care through home visits. Virtual home visits enabled us to carry on helping the people in these communities," explains Ms Jana Müller, Ukwanda Collaborative Care Project Coordinator.

"The project not only allowed for virtual patient follow-ups, but also for collaborative interprofessional team discussions on a virtual platform. More importantly, it has demonstrated the value of engaging with local community health workers on the ground to do patient follow-ups and prevent readmission to hospital or the development of secondary complications. This is a great learning experience for students, but also a crucial development to managing patients in a resource-constrained environment, especially patients living in rural areas where access to healthcare is limited."

According to Ms Nandipha Klaas, one of the community health workers, virtual home visits have allowed them to continue serving the community by connecting them with medical professionals.

"There is a great need for this service, and it is important to patients and the community at large."





## *Addressing nutrition needs during Covid-19 pandemic*

The Covid-19 pandemic offered final-year Dietetics students participating in the Ukwanda for Dietetics programme an opportunity to gain more experience in practical integrated healthcare and to engage with a broader scope of platforms offered by non-governmental organisations (NGOs) and community-based organisations (CBOs).

This social impact programme offers health and nutrition services at two rural training platforms in Worcester and Hermanus and focuses on the integration of the three fields of Dietetics (community nutrition, food service management and therapeutic nutrition).

Normally, interventions include nutrition education and counselling, nutrition support and referral, providing collaborative care to patients, home visits with community health workers, staff training, facility audits and feedback, supporting food service activities, planning menus, and delivering radio talks on various nutrition topics. Beneficiaries include staff, children and individuals in various settings, namely crèches, old age homes, farms, factories, Department of Health clinics, hospitals and mobile units, and other CBOs.

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*“Some of the students helped me with the garden, while others explained to me how to prepare healthy food that fills the stomach quickly. I learned a lot from them.”*

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However, due to the Covid-19 pandemic and subsequent restrictions in 2020, the Worcester and Hermanus training platforms could not be accessed.

“The programme was adapted according to the specific needs at the time, namely food provision to vulnerable communities. Covid-19 nutrition-specific responses included developing and preparing nutritious soup recipes at a CBO, compiling guidelines for emergency food parcels, and initiating food garden training and skills development. Students also attended webinars about relevant nutrition topics,” explains coordinator Dr Lynette Daniels, a Lecturer in the Division of Human Nutrition at Stellenbosch University’s Faculty of Medicine and Health Sciences.

Ms Antoinette Seronne, who runs a soup kitchen in Fisantekraal, appreciated the students’ assistance. She wanted to expand her vegetable garden to address the increased need for food during the pandemic and subsequent lockdown and needed advice about the best, most nutritious options.

“Some of the students helped me with the garden, while others explained to me how to prepare healthy food that fills the stomach quickly. I learned a lot from them.”

Students responded positively.

“Ukwanda 2020 might have had to change its location due to the pandemic, but the experience was not compromised. As a future dietitian I gained precious knowledge and practical skills,” was one student’s feedback.



## *A tool to advance traditional smallholder farming*

Generally, smallholder sheep and cattle farmers have relied on traditional methods of recordkeeping. Whilst Dr Annelin Molotsi, Lecturer in Animal Sciences, completing her Doctor of Philosophy (PhD) identified an opportunity for the development of a recordkeeping application to assist smallholder livestock farmers in South Africa.

The development of a Livestock Management Database System (LMDS), a mobile application using Information and Communication Technology (ICT), could assist farmers with a more structured approach for recordkeeping and improve production outputs, creating an opportunity for them to enter niche farming markets as free range and organic producers. Most smallholder livestock farmers are already practising low input livestock farming, however, their products are not being marketed in such a way owing to the lack of records to prove their methods of farming.

Although the recordkeeping application is still in the development phase, the aim is to retrieve all the necessary information that will assist the farmers to access niche and formal farming markets dependent on their farming system and practices.

According to Molotsi the application will contribute to the improvement of production, reproduction,

traceability and provide insight into the economic value of farming and result in improved profitability for the farmer.

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*“Using the recordkeeping application would be helpful to obtain support from the banks.”*

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Through collaborative efforts with the Western Cape Department of Agriculture and the Agriculture Research Council in North West, the application will provide access to information and allow farmers to share challenges and retrieve advice on improving and advancing their farming methods in real time.

Due to restricted movement imposed by the Covid-19 pandemic and lockdown levels, alternative field-work methods of engagement had to be explored and utilised for about 40 smallholder livestock farmers in the Western Cape and North West provinces. This included the use of WhatsApp and Facebook for farmer groups who have pages for their associations.

A prototype of the application was developed and introduced to some of the farmers in the Western Cape as part of a Master of Science (MSc) degree study in Sustainable Agriculture. Smallholder livestock farmers, who are largely made up of disadvantaged individuals and includes youth and women, using a tool like LMDS will provide a platform to engage with the mainstream farming economy. This will lead to growth and the sustainability of the smallholder livestock farming sector.

*“As a small farmer (currently), I would like to enter the market, and using the recordkeeping application would be helpful to obtain support from the banks.”*





## *Financial literacy despite Covid-19*

Altogether 58% of South African households are experiencing great financial pressure due to the Covid-19 pandemic and subsequent lockdown according to Old Mutual's Savings and Investment Monitor (OMSIM). Compared to 2019, significantly more South Africans also applied for formal and informal loans in 2020.

The Stellenbosch University (SU) Law Clinic's Financial Literacy Project (FLP) seeks to empower local communities by sharing knowledge about financial matters and informing people about their rights as consumers.

Through collaborative relationships fostered between the Faculty of Law, Faculty of Economic and Management Sciences, SU Language Centre, the offices of the National Credit Regulator and Western Cape Consumer Protector, the Department of Social Development and the SU Law Clinic, the project aims to educate, broaden access to justice, uplift, and support individuals.

As part of the FLP, student volunteers who study Law of Civil Procedure 371 and Financial Planning 378 annually present empowerment sessions about basic skills in financial literacy at farms and schools.

Despite the pandemic, the FLP's mission and strategic goals were still achieved in 2020 thanks to technology and digital platforms.

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*"Information was distributed to schools and farms where farm workers or learners could watch/listen to it in a safe environment."*

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The registration and training of student volunteers took place before the lockdown, and students' draft presentations were discussed and evaluated during online sessions with the project coordinator, Mrs Susann Louw.

Each group received two subthemes for which they had to prepare a PowerPoint presentation, podcast or video that was aimed at either learners or farm workers. The subthemes included: The difference between needs and wants, how to create a budget, the importance of saving, good versus bad debt, tips about spending and the Consumer Protection Act, and tips about credit and the National Credit Act.

"A total of 11 schools and 18 farms in the Stellenbosch area received a package of presentations and, complying with Covid-19 regulations, information was distributed to schools and farms where farm workers or learners could watch and/or listen to it in a safe environment," explains Louw.

"Group collaboration in a virtual environment as well as the creation of the videos, podcasts or PowerPoint presentations also prepared students for future work environments," she adds.



## *Environmental studies using aquatic bio monitors*

Prof Jacques Bezuidenhout, Associate Professor in Physics for the Faculty of Military Science, is heading the Social Impact initiative *Environmental studies using aquatic bio monitors around the Southern African coastline*. This initiative originated from collaborative research efforts with the Joint Institute for Nuclear Research in Russia (JINR) and the Saldanha Bay Water Quality Forum Trust, a non-profit organisation that monitors the ecological state of Saldanha Bay and the Langebaan Lagoon, which is a Ramsar site.

With progressive global warming contributing to serious environmental problems, the further exploration and understanding of marine and coastal ecosystems can make a significant contribution. Pollution trends and levels of contamination need to be studied, and bio monitors such as mussels and oysters are perfectly suited for this purpose, explains Bezuidenhout.

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*“Global warming [is] contributing to serious environmental problems.”*

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The initiative investigates Saldanha Bay, with the study expanding to larger parts of the Southern African coastline to assess the natural environment and the health of seafood. With aquafarming increasing exponentially worldwide the testing of various contaminants impacting on the safety of human consumption is increasingly necessary.

Bezuidenhout explains that the results will be derived through inductively-coupled plasma-mass spectrometry (ICP-MS) from different locations, which range from pristine to perceived polluted areas. This type of mass spectrometry makes use of an inductively coupled plasma to ionize the samples. ICP-MS analyses will be conducted, and elemental concentrations will be extracted. Emphasis will be placed on toxic elements and elements that are related to pollution. The ICP-MS is complemented by Neutron Activation Analysis that is conducted at the JINR in Russia.

Despite the impact of Covid-19 on the seafood industry, aquafarmers can benefit through the recommendations made to produce seafood with less toxic elements and pollutants. The geographical location and the seasonal effects of toxic elements

can be determined, and this will also help the farmers to farm in a manner that prevents contamination of their livestock. The element concentrations will be an indicator of trends of pollution and these results can be disseminated to industries by the Saldanha Bay Water Quality Forum Trust to assist industries to mitigate negative impacts. The industrial sector will be able to decrease the environmental impact they have on the Bay and the Lagoon by implementing the recommendations of the initiative.



# Investigating the changes in bathymetry of Saldanha Bay

Dr Ivan Henrico, a Senior Lecturer in Military Geography specialising in remote sensing and dual spatial geographic information systems, has been investigating the changes in the bathymetry of Saldanha Bay over the past four decades. Bathymetry is the science used to study and measure the depths of the ocean floor.

The differences in water depth, underwater slope and ocean floor structure will be investigated with the use of a geographic information system (GIS) to determine the changes to the hydrodynamic sedimentation processes in Saldanha Bay as a result of the harbour constructions that took place in the early 1970s. The construction of the harbour included the massive dredging operations and resulting relocation of 30 million m<sup>3</sup> (cubic meters) of soil.

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*“The data which is reflective of more than 40 years (1977 – 2021) will contribute towards combating erosion and the influence of marine life within the bay more strategically.”*

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Initial investigations into this project highlighted the need for new and updated bathymetry data of the Saldanha Bay; and subsequently, a meeting was scheduled with the hydrographer of the SA Navy. Approval was given to measure the whole Saldanha Bay before the end of 2020.

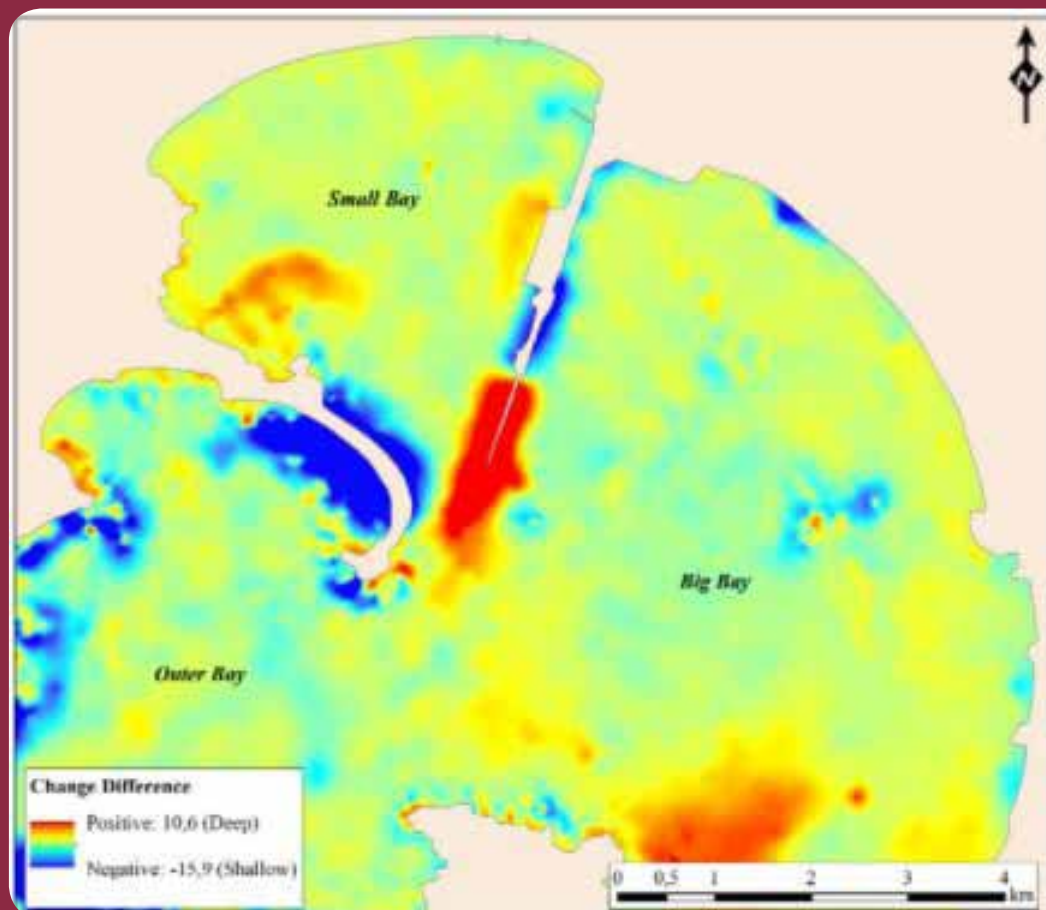
The initiative will therefore determine how the Saldanha Bay sedimentation process changed after the harbour construction in 1976 compared to the current situation. It will provide important information on current beach erosion and siltation challenges that exist within the Saldanha Bay.

The initiative has gained interest from the Water Forum of the Saldanha Municipality and the Western Cape Department of Environmental Affairs and Development Planning. Prof Burghard Flemming, a researcher who conducted research up until 1977, was intrigued by the initiative and serves as a consultant.

The major impact of this study shows that Saldanha Bay was naturally formed over an extended period of time and also how the natural process within the bay is being altered due to anthropogenic activities. The data which is reflective of more than 40 years (1977 – 2021) will contribute towards combating erosion and the influence of marine life within the bay more strategically.

Mr Piet van Zyl, Head of Department of the Western Cape Department of Environmental Affairs and Development Planning, explained that dredging is periodically required for the expansion and maintenance of these and other port facilities in the bay and the increasing impact of climate change specifically with regards to erosion and accretion occurring in the area is expected to increase. Due to the identified needs, the proposed geographic scope of the work, the strategic nature of the opportunities in the area, and the shared benefit that will be derived from the study, the Department has been in support of the study over the past four decades.

A research article titled: Determining the change in the bathymetry of Saldanha Bay due to the harbour construction in the seventies has been published in the South African Journal of Geomatics, Vol. 9. No. 2, in September 2020.



Bathymetric map of Saldanha Bay showing the difference before (1957) and after (1977) the harbour construction.





## **A second chance despite the impact of COVID**

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# Embedded Social Impact

refers to the integration of SI into the essential dimensions of all the academic and co-curricular practices of SU through the notion of engaged scholarship and engaged citizenship.

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