

A black and white photograph of a person wearing a straw hat, seen from behind, walking through a dense field of tall corn plants. The person is wearing a dark jacket. The corn stalks are tall and have large, broad leaves. The sky is visible in the background, showing some clouds. The overall tone is somber due to the monochrome palette.

MANDELA UNIVERSITY FOOD SYSTEMS NEWSLETTER

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LETTER FROM THE SECRETARIAT



It has been a great honour and privilege for us to serve as the secretariat for the Mandela University Food Systems programme in the year 2021 and we would like to take this opportunity to say thank you to the programme's Working Group and Steering Committee members. Your invaluable participation, contribution and constructive feedback during the year offered an opportunity for the programme to evolve in various ways, and in particular, connecting with existing food projects and persons interested in food development and sustainability within the institution and beyond.

Our intensive cyclical consultation with internal Working Group members and previous conversation series presentations in the past few months generated evidence of emerging collaborative learning opportunities and social unity in engaging on issues of food to advance poverty alleviation programmes and sustainable development for our surrounding communities. In this year we have deepened our understanding that to attempt to solve societal issues we cannot work alone as an institution but must be inclusive in engagement with our communities.

We are delighted to share our last newsletter for this year with contributions from the Nelson Mandela Foundation, Propella Business Incubator and the Hubs of Convergence. The year 2022 will be an exciting year for the programme filled with more collaborations, particularly with our communities, as there are great activities planned for our work in the food space. Additionally, we encourage students, lecturers, supervisors and all constituents of Nelson Mandela University to reach out to us and share their amazing work and ideas within food and food systems.

Wishing you all the best for the rest of the year, and we look forward to working together again in 2022!

EACH1FEED1 CAMPAIGN - A CATALYTIC VEHICLE TOWARDS SUSTAINABILITY

by the Nelson Mandela Foundation - Mandela Day Analyst, Sylvia Graham



Hhoyi, Mpumalanga: Volunteers distributing food to people in Hhoyi, near the Mozambique border in Mpumalanga.

South Africa is a nation that is perhaps best described as one borne out of solidarity. The means by which we overcame our troubled past was through various sectors of society working together towards a clear goal of justice. The beginning of 2020 reminded us of the need to reignite our culture of solidarity and oneness as we faced the greatest test of our collective character and cohesion since the dawn of democracy. The COVID-19 pandemic has exacerbated already existing social issues and made it more challenging to meet the demands of social justice. This moment in history has come with the devastating loss of

life, exposing the fragility of health and food systems. Millions of livelihoods have been compromised and in some instances people have become increasingly dependent on one another.

Inspired by the Congress of South African Students mantra, Each One Teach One, the Nelson Mandela Foundation has called on South Africans to take action and play their part in the [#Each1Feed1 Campaign](#). By collaborating with old and new partners, the initiative seeks to bring relief to the plight of food insecurity during and after the crisis we are facing due to

the pandemic and subsequent lockdowns. In the past 18 months, we have crisscrossed the length and breadth of South Africa providing immediate relief in the form of a wholesome food hamper that is able to feed a family of five for at least a month.

“The need for innovative, people-driven solutions could not be more urgent.”

The model involves providing food items and electronic vouchers for distribution to identified communities most in need of relief. Mandela Day 2021 served as an important marker for the need to address the immediate challenges faced by communities that do not have access to food. With the same spirit of Ubuntu

“humanity” - “I am because we are” - Nelson Mandela Day 2021 has developed a national campaign for all citizens to donate canned food to the Each1Feed1 programme. The tin (non-perishable) collection initiative has been extended into December and will go a long way in meeting the immediate needs of the most vulnerable members of our society.

We have received resounding support from the private sector as well as like-minded civil society organisations that have contributed to the campaign. However, what has been comforting to observe has been how ordinary South Africans and people across the world have contributed towards the campaign through our [GivenGain platform](#) that has to date raised over R500 000. This is a testament to our collective ability and willingness to contribute towards helping fellow citizens that are in dire need of assistance.



Howick, KwaZulu-Natal: A woman from the Howick area waits for her Each 1, Feed 1 groceries.

The COVID-19 pandemic and the subsequent lockdown(s) have highlighted and unearthed deep-rooted structural challenges faced by our country. Furthermore, the triple burden of poverty, inequality, and unemployment have made the persistent issue of hunger and food insecurity a precarious one in South Africa. Just over 15 million people are dependent on social grants to supplement their income and gain access to food while many others look to the informal economy through trading and other service-based activities to secure income. The need for innovative, people-driven solutions could not be more urgent.

"We need to start to grapple with how this helping hand can become a sustainable driver in addressing food insecurity in our communities."

Whilst South Africa is considered food secure at the national level, the country is still food insecure at the household level, as not all households have access to adequate food. According to Ipsos, "Almost half (46%) of adult South Africans surveyed in late 2020 said that their households often had to go to bed hungry during the Covid-19 pandemic as we did not have enough money for food." This drives the question of how people can be empowered to be able to provide food for their families?

It is noted by ¹Oxfam that "fewer than 2% of households grow the majority of their own food, and the majority of small scale producers in rural areas are unable to feed their families". This can be attributed to a variety of challenges such as access to water and irrigation, tools and equipment as well as technical knowledge and information. This also highlights a clear need to create such opportunities, through the provision of resources and supports, access to markets for small-scale and emerging farmers, the creation of enabling policy environments and leveraging strategic retail partnerships that seek to address food pricing and waste reduction/redirection.

In the past 18 months, the Each1Feed1 campaign has heeded the call to help South Africans put food on the table. We have joined hands with breadwinners in homes across the country to offer a helping hand. However, we have realised that this is not enough. We need to start to grapple with how this helping hand can become a sustainable driver in addressing food insecurity in our communities. As we look forward and reconfigure the programme, our primary objective is to continue to collaborate with like-minded civil society organisations working at the grassroots to support sustainable initiatives that will fruitfully contribute towards tackling food insecurity and hunger, particularly at a household level.

¹Oxfam, *Hidden Hunger in South Africa*, 2014

EXCITING NEWS

Sylvia Graham, from the Nelson Mandela Foundation, visited the Mandela University Food Systems programme in December to meet with the Secretariat and visit a few projects within the Working Group. Keep your eye out for more information about potential future collaborations.

MEET PROPELLA BUSINESS INCUBATOR

by Propella Business Incubator's Senior Industrial Advisor, Grant Minnie

The Propella Business Incubator was launched in 2016, by Nelson Mandela University partnering with Engeli Enterprise Development to assist with commercialising potential Master's and Doctoral products and services as recommended by InnoVolve. The Incubator's core focus is on renewable energy, energy efficiency, advanced manufacturing, ICT, IoT and Smart City solutions.

The rationale behind smart cities is related to the migration of people, from rural communities to urbanised environments, seeking improved quality of lives and employment opportunities. According to the World Economic Forum (WEF), more than 56.2% of the world's population now live in cities. As more increased urbanisation takes place, increasing demand will be placed on limited resources and infrastructure, thus we need to ensure that more gets done with less. Key enablers behind any smart city is a comprehensive ICT infrastructure, the application of technology and a new breed of innovative thinkers and entrepreneurs bringing about new and disruptive solutions to social challenges. The choices that are made about how cities are built, inhabited, and maintained will have long-term global effects. Failures of a city's governance, planning, and service delivery systems can exacerbate its problems - such as socioeconomic disparities, the proliferation of slums and informal settlements, urban sprawl, and the degradation of natural ecosystems.

The demand (and management thereof) for food, water, security and education etc. are issues that require urgent attention. Propella has 3 projects that are related to addressing food and energy challenges. These include:

Tofaa

This company is owned and managed by Elijah and Kamva, Electrical Engineering students

from Mandela University. The project has a focus on producing energy efficient egg incubators and heat batteries to further reduce the cost of energy. Three different prototypes were built in order to experiment with aesthetics, insulation, heat flow and portability / ease of setup. A pilot project has been in operation for more than 4 months now and has produced excellent results with an egg hatch rate in excess of 90% and a reduction of more than 30% in energy costs when compared to existing incubators on the market. A low cost, simple to assemble prototype is reaching its final stages of completion and will specifically target the micro-franchise market, allowing township and peri-urban residents to establish micro-businesses for growing fowls (quails and chickens) for human consumption, thereby generating an income, whilst providing food at an affordable cost.

AquaVentures

This company is owned and managed by Charl and David. The project focuses on the technology required to scientifically farm fish, as opposed to the physical act of fish farming. Three technology platforms are being considered. The 1st focuses on an automated fish feeder, given that fish feed is a significant contributor to the cost of sales and thus needs to be properly managed in order to ensure sufficient margin and sustainability. This fish-feeder is now 98% complete and needs to be piloted over a short time frame. The 2nd platform manages the flow of water from and to multiple water sources and fish farms. This technology is complete whilst the 3rd platform, still at an intermediate stage will manage all the critical parameters associated with maintaining high levels of water quality.

Africa Green Energy

This company is owned and managed by Sibongiseni, a Chemist busy with her PhD at NMU. A domestic bio-digester was imported

at a high cost from Israel to generate methane gas from organic waste. This digester was used to create a benchmark for further development. The project thus had a focus on reducing the costs of the imported digester by making use of 'off-the-shelf' technology where possible in order to create a product that could ideally perform at the same level as that of the '1st world' digester. An IoT solution was developed that monitored the efficacy of the imported digester and these results have been recorded over a period of approximately 6 months. This data will now be used to assess the performance of the low cost digester and guide future design. Given limited space at Propella the low cost digester is not ideally positioned (required direct sunlight) and the production of methane has now only recently started. As we move into the warmer months, this rate of methane production will increase. Once the digester is organically fed with waste, at least 2 – 3 times per week, one could expect approximately 1 000 litres of methane production, more than enough to sustain a household's energy (cooking and limited heating) needs.

Water telemetry

This is a project that is being done in collaboration with Engineering Advisory Services, who are responsible for building a large townhouse complex and have requested that real-time water consumption data be made available in order to better manage water usage and leak detection. Propella in conjunction with Engeli have developed a pulse reader that detects water consumption at each

domestic water meter and sends this data via LoRa into the Cloud. A dashboard has been developed that would inform each Unit owner and Landlord of breaching any consumption thresholds, given that water rates vary, based on volume of use. It is also possible to aggregate the data and validate if any potential leaks are taking place. Each home owner would now be empowered to better manage their water consumption and associated penalties when exceeding a particular rate threshold. Initially the readers were exposed to severe elements and experienced water damage, corrosion and dirt ingress. A new solution has been found to ensure that no further damage takes place to the electronic pcb's, when exposed to the environment.

GET INVOLVED

Propella are looking for two Black female youth entrepreneurs that have a proof of concept in the fields of energy efficiency, renewable energy, advanced manufacturing, Internet of Things or Smart city solutions. If you are interested, or know of anyone who may be interested, contact Grant Minnie [here](#).

CONVERGING ENGAGEMENT AND TEACHING & LEARNING

WHAT WE LEARNED WHILE COLLABORATING TO RETHINK VISUAL STORYTELLING

by Nicole Collier-Naidoo, Nandipha Ntengenyana and Ntombovuyo Linda



Over the course of September and October 2nd and 3rd year Graphic Design and Photography students visited the five local Community Kitchens, accompanied by Photography and Design lecturers, and members of the HoC and Ikhala Trust. Here, 3rd year Photography student, Shuaib Agnew, shows youngsters in Booyens Park the pictures he has taken.

Photo: Jade Williams (Photography 3rd year)

In its relatively short existence, the Hubs of Convergence[1] (HoC) has encountered some of the most inspirational community projects: people and initiatives that would restore one's faith in humanity yet are almost invisible to anyone beyond their immediate location. How is it that this work can begin to be represented with the care and admiration it deserves?

This is the question the HoC team had been pondering as they received and shared the few pictures that were available to document their collaborations.

At the same time, Nii Botchway, Glenn Meyer, and their colleagues in Graphic Design and Photography were searching for ways to

connect their students' learning to meaningful real-world initiatives. While Design sought to add engagement projects to the predominantly corporate-focused curriculum, Photography found that their efforts to resume engagements with local communities and projects was made impossible during the COVID-19 pandemic.

While the pandemic has created extra pressures for universities, and limited students' access to in-person learning environments, it has also laid bare the precariousness of the livelihoods of so many people worldwide. Our university's response to the crisis was manifold and sought to shift resources towards initiatives which would not only respond to some of the most urgent issues, but also contribute towards building resilience for the longer term. In the Community Convergence Workstream[2], for example, Mandela University has made efforts to lean in towards its communities to better understand their needs and to co-construct mutual and

reciprocal programmes responding to these needs.

It was one of the initiatives within this workstream that provided an opportunity for convergence between community groups and NGO partners working with the HoC, and the Graphic Design and Photography Programmes in the Department of Visual Arts. An opportunity to explore the possibilities for collaborative, interdisciplinary and mutually beneficial work that connects the worlds of teaching and learning with those of engagement. Seen through the lens of Mandela University's Vision 2030, this collaboration signifies an important moment of converging strategic focus areas (see Figure 1).

The particular initiative is the Sustainable Food Relief project, in which the HoC has worked with local NGO, Ikhala Trust, and six community groups to support the development of



In Moeggesukkel, on the outskirts of Kariega, community members provide hot meals, a safe place for children to play and learn, and tend a vegetable garden. Here they are shown holding an alternative fire extinguisher called FireKilla, as part of a pilot project alongside a local SMME, as well as Mandela University's eNtso, Emergency Medical Services and the HoC.

Photo: Dion Nonyane (Photography 3rd year).



We brought with us the ingredients for Umpokoqo with Amasi and Imifino and concluded our visits with a shared meal – a valuable moment to connect and debrief.

Preparing imifino at Kuyga, Greenbushes.

Photo: Diana Lendrum (Photography 3rd year)

“The Community Kitchen provides an opening towards an alternative: an invitation to the table, to eat, yes, but perhaps more so to imagine and to bring about together, a new system premised on the foundation of a dignified life for every one of us.”

Community Kitchens in Moeggessukel (Kariega), Jacksonville, Booyens Park, Wells Estate and Kuyga (Greenbushes). This exploration has been made possible by funding from the Mandela University Convergence Fund, and has involved both material support and capacity-building. It is an ongoing process of clarification, shaped by

our engagements and our reflections.

The “Community Kitchen” speaks to the reimagination of soup kitchens as more than just sites of charitable food aid, but dynamic, community-owned, problem-solving spaces, distinguished by their collective, solidaristic nature and the empowered effort to use existing assets and resources to address local challenges. One might say that Community Kitchens as concept are premised on the notion of food as a powerful connector which strengthens community relationships. Indeed, the need for such spaces is itself a critique of a system defined by massive hunger for many in the face of an abundance of food (and concomitant waste) for a few. The Community Kitchen provides an opening towards an alternative: an invitation to the table, to eat, yes, but perhaps more so to imagine and to bring about together, a new system premised on the



Unathi Meslane (right) from Ikhala Trust chats to Bulelwa Sinethemba Phathikhala, who grows vegetables amidst herbs and fruit trees, in her front and back gardens, and is one of the network of home food growers connected to the community kitchen in Kuyga, Greenbushes.

Photo: Yente Retief (Photography 3rd year).

foundation of a dignified life for every one of us. This collaborative work, we realised, provided fertile ground for exploring how the University – and these disciplines in particular - could contribute towards the Community Kitchen as material space and as concept.

What we have learned thus far:

- Careful consideration of the ways in which this work impacts on and benefits each collaborating member is essential. Reciprocity - as a key principle guiding the work of the HoC - emphasises the exchanging of co-created knowledge and resources through the principles of generosity, solidarity, co-creation, responsiveness, and inclusion for the mutual benefit of all stakeholders.
- Moments of convergence like this are the product of numerous preceding interactions and engagements that build relationships between the University and its partners in NGOs and CBOs, between university entities, and even with the students who will be involved. These take time and commitment, and flourish within an ongoing cycle of stakeholder engagement, action and reflection.
- Willingness to embrace uncertainty is so important: for the academics, in particular, and even students to some extent, the willingness to adjust curricular plans, schedules and expectations and to accommodate changing variables is valuable.
- For the students, this has allowed an opportunity to learn about the conceptual underpinnings of the HoC's particular approach to engagement as an expression of aspects of the University's Vision 2030. It has allowed students to meet



Breaking new ground at Moeggesukkel.

Photo: Hannah Rumbelow (Photography 2nd year).

and collaborate with their peers after close to two years of pandemic-induced isolation and provided an opportunity for collaborative shared outcomes between not only the Photography and Graphic Design Bachelor of Visual Arts students, but between other entities in the University, and outside of it.

- Participating students have demonstrated a genuine interest in connecting themselves and their learning to the real-life experiences of communities, which they too both belong to.

An unexpected opportunity emerged following this, when we were invited to a workshop by Mandela University Post-Doc, Dr Busisiwe Lujabe. This workshop gathered together the members of Yizani Sakhe, other members of the Wells Estate community, along with a number of students from a variety of disciplines and staff members from the University, Ikhala Trust, and a representative of the NMB Municipality. It was simultaneously a celebration of transdisciplinary possibilities for co-creating solutions as it was a brainstorming session responding to the scourge of hunger afflicting marginalised communities.

This was an invaluable moment of convergence, presenting a deep learning opportunity for

every person in the room, to understand something about different areas of study and what they could offer to this effort to improve food security, about the work and the visions of different entities within the University, about what socially meaningful post-doctoral research can look like, and about how the municipality relates to this work. Most valuably, it was an opportunity for the community members of Wells Estate to hear and respond to other stakeholders ideas and offering, to challenge all of us to turn ideas into practical possibilities.

For the Hubs of Convergence, this is no less than an opportunity to explore what it means to be a university in service of society.

The Hubs of Convergence extends deep appreciation to our community partners and the students and staff at the School of Visual and Performing Arts for their commitment and dedication for making this project a creative success.

[1] The Hubs of Convergence (HoC) is located within the Engagement and Transformation Portfolio

[2] A workstream consisting of projects located within various ETP (what is ETP?) units, coordinated by Hubs of Convergence



Figure 1



Ntombozuko Mdingi, a member of Yizani Sakhe in Wells Estate

Photo: Azola Fumba (Photography 3rd year)



COVID-19 has exacerbated hunger, amongst other urgent needs, within marginalised communities. The pandemic has also challenged the HoC to find ways to bring communities together with university entities to co-create mutual and reciprocal programmes responding to these needs.

Picture of a mask drying on a wire fence in Kuyga.

Photo: Ongezwa Matshaya (Photography 2nd year)



Each visiting group toured the spaces playing host to the activities of each Community Kitchen. While walking through the community, we learned from members something of the story of their initiative, the struggles and the victories of their communities, and their vision for the future.

Here, Design students talk with members of the Jacksonville community kitchen, while Photography students try to capture the vegetable garden.

Photo: Joel Mlambo (Photography 2nd year).



Students sought the angles and spaces that would best capture each Community Kitchen visually, and engaged members in order to inform their design thinking. Here, Mvuyelwa Onke Nyushman zooms in on Malibongwe Mafuduko's hands as he plants a seedling, guided by fellow members of Yizani Sakhe in Wells Estate.

This image was captured by Gqeberha photographer, Lihle Meziwa, who accompanied us on the first visit to help us document the students as they in turn were documenting the work of the Community Kitchens

FEEDBACK FROM STEERING COMMITTEE STRATEGIC MEETING

The Mandela University Food Systems Steering Committee members had their strategic planning meeting on 18 November 2021, to reflect upon this year and the action plan for the year 2022. This plan will be presented to the programme's Working Group members for approval early next year.

It was noted the first six months of the project were based on intensive consultation with the Mandela University stakeholders, who are already active or interested in the sustainable development of food and food systems, within the institution and broader community. The consultation process enabled the development of the programme's Working Group and Steering Committee, comprised of members in the institution to assist and contribute to the conceptualization of the work across various knowledge fields. The conceptualization of the work required consistent and continuous reflexivity and rectification processes of how the University staff and students understand and acknowledge food and food systems within their perimeters.

This process of internal conceptualization excluded the University's surrounding communities. The programme's first and second quarter were responding to phase one and two of the project breakdown, which is the "initiating moment" and "multiple stakeholder engagement". It was very important for the programme to deeply invest in the consultation process as it provided a space of advocacy and ownership for the Working Group members. This solidified and gave a rooted mandate for the secretariat to embark on phase three of the project, which is "project work".

The project work focused on the practical implementation of the programme of action from the Mandela University Food Systems Working Document. Thus far the project has launched its website, internal mapping of food systems projects, conversation series and newsletters. These are some of the deliverables from the programme of action mandated by the Working Group members, which were highlighted as an entry point in initiating engagement and collaboration with our communities.

There are exciting plans for the upcoming year, and we look forward to sharing them with you at the start of 2022!

Find out more:

<https://etp.mandela.ac.za/Projects/Mandela-University-Food-Systems>