

Community-led Informal Settlement Upgrading

Portfolio of relevant Expertise
Integrated Land Management Institute

2021



NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

In collaboration with



Shack Dwellers Federation of Namibia
and Namibia Housing Action Group

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1. About

The **Namibia University of Science and Technology (NUST)** is a leading university of science and technology with a mandate for teaching, research and community service.

The **Faculty of Natural Resources and Spatial Sciences (FNRSS)** hosts major urban-related disciplines combined under one roof. It houses the Departments of Architecture and Spatial Planning (DASP), Land and Property Sciences (DLPS), Geo Information Sciences and Technology (DGST) and Agriculture and Natural Resource Sciences (DANRS).

The **Integrated Land Management Institute (ILMI)** is a centre at FNRSS that was established as a semi-autonomous entity to undertake consultancies, potentiate the existing research capacity within FNRSS and direct it towards issues of critical social relevance by means of developing trans-disciplinary research.

The **Shack Dwellers Federation of Namibia (SDFN)**, is a community-based network of housing saving schemes, aiming to improve the living conditions of urban and rural poor, while promoting women's participation. SDFN is affiliate to Shack Dwellers International (SDI). The **Namibia Housing Action Group (NHAG)** is a Non-Governmental Service Organization, aiming to support and add value to the activities and processes of the Shack Dwellers Federation Namibia. It was established in 1992 to support the savings groups of the Shack Dwellers Federation as an umbrella organization. NHAG became a separate NGO in 1999, when it was established as a Trust to support the peoples' processes of the Shack Dwellers Federation of Namibia.

Since 2015, NUST has an MOU with SDFN and NHAG through which several of the following activities have been implemented.

2. Informal settlements in Namibia

Namibia's future is urban.

Informal settlements, while rare at the time of independence in 1990¹, have become home to the majority of urban dwellers today².

This is an astounding transformation, which is nevertheless still in progress, as the population in urban areas is set to almost double in the next thirty years³.

This is exerting extraordinary pressure in all aspects

that urbanisation entails: infrastructure development, governance, housing opportunities, among many others.

At the same time, Namibia has had a remarkable record of bottom-up organising around issues of housing and access to land⁴.

As one of the speakers at the Urban Forum in 2017 at NUST noted, action is required as soon as possible: "if you do not intervene early on with a range of solutions, it gets harder and more expensive to produce equity"⁵.

¹ This has been documented in early urban research in the 1990s, see: Peyroux, E. & Graefe, O. 1995. *Precarious Settlements at Windhoek's Periphery. Investigation into the Emergence of a New Urban Phenomenon. Centre for Research, Information, Action for Development in Africa.*

² Through the self-enumeration efforts that the Namibia Housing Action Group and the Shack Dwellers Federation of Namibia conduct, it is estimated that about 2/3 of the urban population in Namibia lives in a shack. This is according to their recent "Profile of Informal Settlements 1998-2008".

³ See: Lühl, P., & Delgado, G. [2018]. *Urban Land Reform in Namibia: Getting Ready for Namibia's Urban Future. Presented at the Second National Land Conference, Windhoek: Integrated Land Management Institute. Retrieved from http://dna.nust.na/landconference/submissions_2018/policy-paper-urban-land-reform-2018-final.pdf*

⁴ For a historical overview, see: Keulder, C. 1994. *Urban Women and Self-Help Housing in Namibia: A Case-Study of Saamstaan Housing Cooperative. [NEPRU Working Paper 42]. Namibian Economic Policy Research Unit; and MRLGH & Ibis. 1996. Upgrading of Shanty Areas in Oshakati, Namibia. OHSIP Best practice report. Namibia: Ministry of Regional and Local Government & Housing and IBIS. For a contemporary account of recent processes, see: Mitlin, D. & Muller, A. 2004. *Windhoek, Namibia: towards progressive urban land policies in Southern Africa. International Development Planning Review. 26(2):167–186.**

⁵ A remark made by Sheela Patel during the closing session, as documented in the book of proceedings: Delgado, G., & Lühl, P. [Eds.]. [2019]. *Namibia's Urban Future: Rethinking Housing and Urbanisation. Proceedings of the Public Forum on Housing and Urbanisation. 27-28 February 2017. Windhoek, Namibia. Namibia University of Science and Technology. <http://urbanforum.nust.na/sites/default/files/Namibia's%20Urban%20Future-Rethinking%20Housing%20And%20Urbanisation-EBOOK.pdf>*

3. The National Alliance for Informal Settlement Upgrading

The **National Alliance for Informal Settlement Upgrading (NAISU)** is a partnership to scale up security of tenure and housing opportunities through co-production between organised communities, local and regional authorities, central government, and universities; with the aim of taking efforts nation-wide.

Apart from NUST, NHAG/SDFN, partners include:

Namibia Association of Local Authorities Officials (NALAO) / Association of Local Authorities in Namibia (ALAN). NALAO and ALAN represent local authorities in Namibia. Contact: Nathaniel Areseb nalao@windhoekcc.org.na / Maureen Kambala mkambala@alan.org.n

Civil Society Organisations Working Group on Land Reform (CSO-WGLR). The CSO-WGLR currently consists of the Namibia National Farmers Union (NNFU); Council of Churches in Namibia (CCN); National Union of Namibian Workers (NUNW); National Youth Council (NYC); Namibia Housing Action Group (NHAG); Shack Dwellers Federation of Namibia

(SDFN); //Naosan /Aes (Movement of Landless People); Trade Union Congress of Namibia (TUCNA); Namibia Rural Women's Assembly (NRWA); Namibia Development Trust (NDT); Legal Assistance Centre (LAC) and the Desk for Social Development of the ELCRN (DfSD-ELCRN), which currently serves on behalf of NANGOF as the Secretariat, convening the CSO-WGLR and coordinating and implementing project activities and programs. From the 12 organizations, 8 are active on a daily basis whereas others occasionally participate in activities. Some individuals from universities and research institutions as well as individual activist participate in the work of the CSO-WGLR. Contact: Uhuru Dempers uhurud@hotmail.com

Ministry of Urban and Rural Development (MURD). MURD is the line ministry for urban and rural development in Namibia. Contact: Naomi Simion nsimion@murd.gov.na and Tobias Newaya tnewaya@murd.gov.na

For more information, see: <https://nationalalliance.nust.na/>



Roundtable participants after a courtesy call to President Geingob at State House

4. List of ongoing informal settlement upgrading projects

**SUMMARY: Informal Settlement Upgrading Initiatives:
Communities with NHAG/SDFN/NUST and LOCAL AUTHORITIES**

Region	Town	Settlement	Year process started	Household Numbers	Population	Average h/hold size	Profiling	Enumeration	Planning			Reblocking & Servicing				House Construction
									Site Analysis	Planning Studio	Concept Layout	Land Survey	Reblocking	Services: Water	Services: Sewer	
10 REGIONS	16 URBAN AREAS	34 INFORMAL SETTLEMENTS	Year	92,392	388,258	3.5										
1 ERONGO		Karibib Usab	2016	623	1764	2.8										
		Omaruru Greenfield	2020	700	2100	3										
		Henties Bay IGoas	2019	444	1332	3										
		Usakos Ongulumbashe	2021	280	1680	6										
		Saamstaan	2021	324	1500	4.6										
2 OSHKOTO		Tsumeb Kuvukiland	2016	2368	9472	4										
		Omuhiya Karitta	2012	439	1756	4										
3 KUNENE		Outjo Ehangano	2019	496	1888	3.4										
		Kap n Bou	2020	660	2640	4										
4 OHANGWENA		Okangwati Okangwati	2020	500	1500	3										
		Helao Nafidi 17 Location	2016	586	1556	2.7										
5 HARDAP	Mariental	Greenfield	2020	198	594	3										
		Donkerhoek O.R	2019	457	1371	3										
		Ombilli O.R	2019	475	1425	3										
		Takarania	2019	367	1101	3										
		Maltahöhe Blikkiesdorp	2020	249	996	4										
		Sundown	2020	44	176	4										
		Sunrise	2020	130	520	4										
		Tierkop	2020	33	132	4										
		Vaalkamp	2020	100	400	5										
		Hoachanas Oshakati	2020	28	140	5										
		Sonop	2020	83	415	5										
		Vlugteling	2020	58	290	5										
		!Goab	2020	107	535	5										
!Harakas	2020	33	165	5												
Hoachanas Central	2020	83	415	5												
Naftal	2020	35	175	5												
6 KAVANGO WEST		Schlip	2021	600	1800	3										
		Rundu Ngwangwa	2019	83	488	5.9										
7 OMAHEKE		Sikanduko	2019	2049	10245	5										
		Ozohambo	2018	624	1248	2										
		Gobabis Freedom Square	2012		3072	3										
8 KROMAS	Windhoek	Tuerijandjera	2014	431	1724	4										
		Kanaan A+B	2014	514	1542	3										
		Kanaan C	2014	1460	4380	3										
		Mix Farm	2014	1564	6256	4										
		Kahumba Kandola A	2018	4692	28152	6										
		Omuramba	2018	228	912	4										
		One Nation A	2018	1297	5188	4										
		Nalitungwe	2018	910	5460	6										
		Cuba (Havana)	2018	1021	6126	6										
		Omuhiya	2018	315	1575	5										
		Ehangano & Tweetheni	2012	837	1660	2										
		Greenwell Matongo C	2018	219	1095	5										
		Okandundu	2014	537	2685	5										
		Okahandja Park B	2014	335	1675	5										
		Ondeitotela (soviet union)	2018	313	1455	4.5										
		Samuel Maharero	2018	157	314	2										
		Onghuwo Yepongo	2018	482	4000	8										
Okahandja Park D	2014	522	2208	4.2												
Kilimandjaro	2018	1511	4500	3												
Goreangab Settlement	2014	1030	5150	5												
Lowland Kabila	2014	3800	7600	2												
Okahandja Park	2014	4160	12480	3												
7 de laan	2014	2580	7740	3												
Babilon	2018	1259	3777	3												
8de Laan	2018	2678	13390	5												
Kapuka Nauyalaa	2018	944	3776	4												
Okahandja Park C	2018	207	621	3												
Ongulumbashe A	2018	244	976	4												
Ongulumbashe B	2018	577	2308	4												
9 de laan	2018	828	2484	3												
One Nation B	2018	1321	5284	4												
Brenden Simbwaye	2018	2679	16074	6												
Greenwell Matongo	2018	1587	7935	5												
Abraham Iyambo	2018	235	1410	6												
Maxton Mutongolome	2018	781	3905	5												
Havana 2A	2018	1728	6936	4												
Hilde Amunyela	2018	1304	6520	5												
Kabila B	2018	829	4145	5												
Kabila A	2018	1130	5650	5												
Tlabanelo 2	2018	494	3952	8												
Havana 2B	2018	462	3696	8												
Kabila C	2018	324	1620	5												
Emanguluko Village	2018	1428	8868	6												
Peter Nanyemba	2018	2546	15000	5.8												
Hadino Hishongwa	2018	8971	44855	5												
One Nation B	2018	1321	5284	4												
One nation C	2018	2830	3000	1												
Jerry ekandjo	2018	235	1410	6												
Patrick Iyambo	2018	1660	8300	5												
Tlabanelo 3	2018	1782	18000	10												
Hifikepunye Pohamba	2018	1557	7785	5												
Roiland	2018	484	2904	6												
(Groot Aub) Beverly hills	2018	94	564	6												
Oshakati	2018	1112	4448	4												
Eiland	2018	1195	5975	5												
Dordabis	2018	228	938	3.6												
9 OTJOZONDIJUA	Otjiwarongo	Dordabis	2020	926	3704	4										
		Eie Risiko	2020	900	2700	3										
		Eie Risiko	2020	702	3819	5										
10 IKHARAS	Luderitz	Tsaraxa-Aibes	2020	1660	4980	3										
		Area 7	2020	900	2700	3										
		Amilema	2020	900	2700	3										
Sand Hotel	2020	79	158	2												

Approach: Urban transformation through partnerships



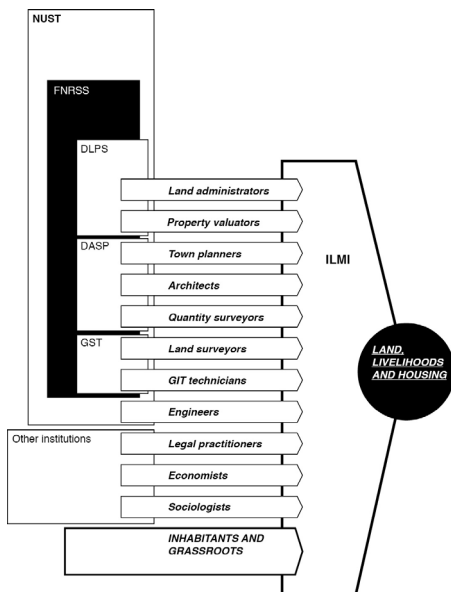
2015 Urban Design Masterclass at NUST with participation by community-based organisations, NGOs, local authorities and professional bodies and practitioners

Challenge: Urban development is currently driven by disciplinary divisions, outdated regulatory frameworks and limited public investment due to the economic downturn.

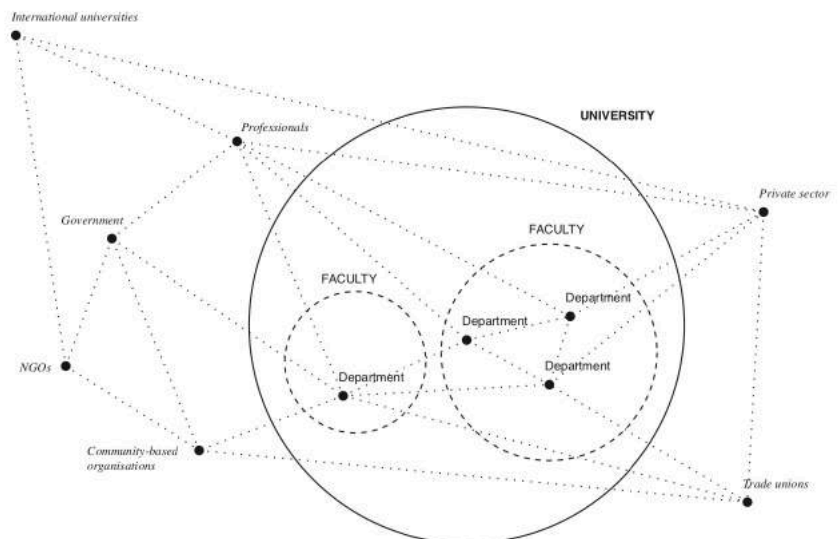
Project: NUST Land, Livelihoods and Housing Research Framework aims at linking all stakeholders in urban development (Central and Local Government, NGO's, Communities and Professionals) into multi-scalar and trans-disciplinary research and development networks.

Innovation: Drive urban development and transformation through experimentation and pilot projects.

- >>> Recognize the potential for urban development to enable wider economic and social development
- >>> Acknowledge the role of the university as a site for innovation
- >>> Work with people and strengthen partnerships
- >>> Work with what is there as a point for departure
- >>> Experiment and learn while implementing
- >>> Ensure evidence-based policy and development

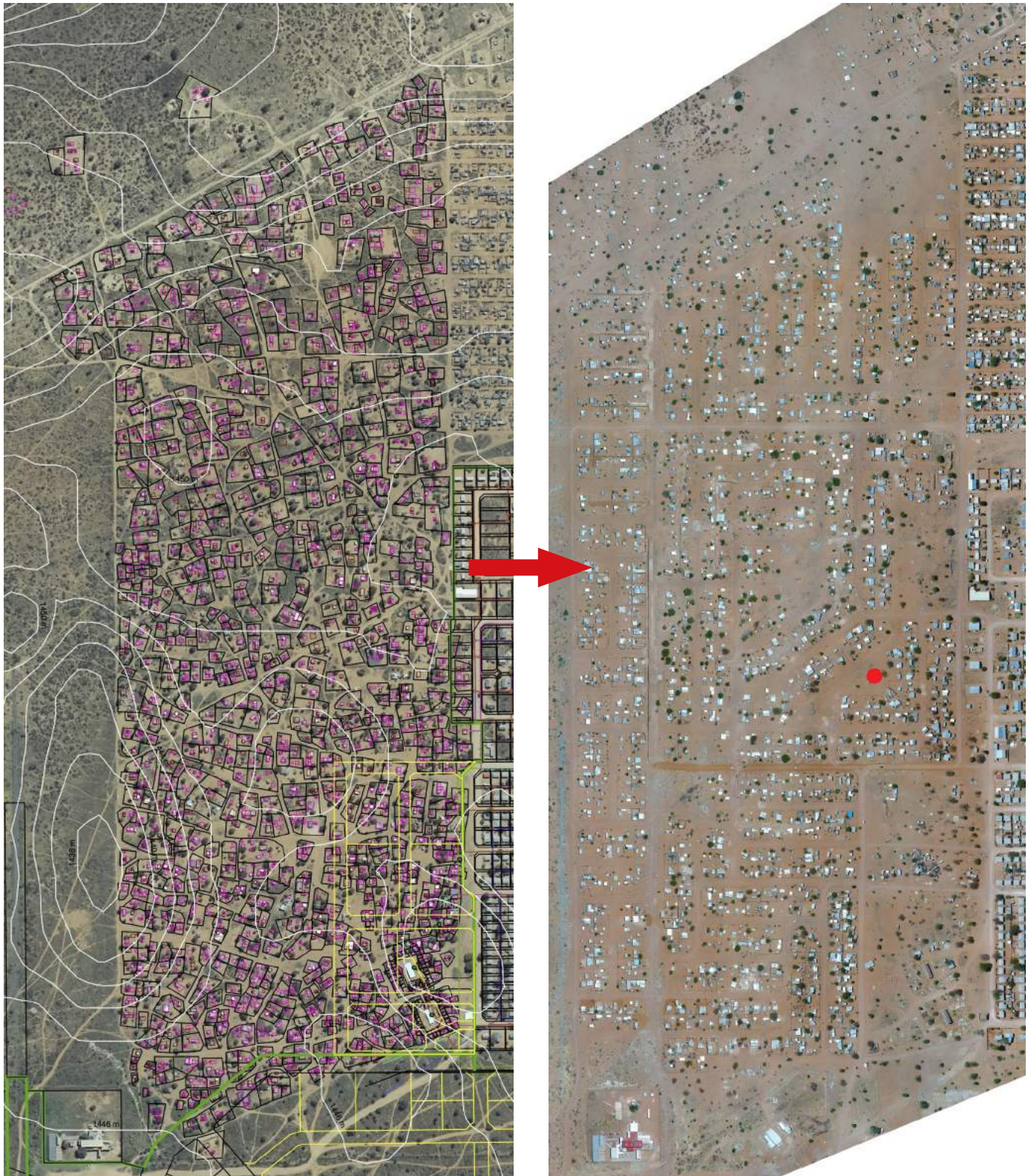


Existing expertise at NUST and other local institutions



Multi-scalar and trans-disciplinary research and development networks

Project 1 - Gobabis Freedom Square upgrading (SDFN/NHAG with NUST)



Freedom Square is the best known pilot for participatory informal settlement upgrading. Planning studios to assist in the layouts for re-blocking were possible through the collaboration between the Namibia University of Science and Technology (NUST), the Association for African Planning Schools (AAPS), the SDI as well as NHAG/SDFN. During the studios and implementation, other stakeholders which include other Local Authorities, the Regional Council, MURD, MLR, ALAN, NALAO, GIZ and UN Habitat became exposed to the work taking place. This resulted in the implementation of an upgrading process that did not end with a planning exercise, but continued to reblocking, service installation and registering the community to secure tenure.

**Text adapted from Gobabis Informal Settlement Upgrading booklet by NHAG/SDFN*

Method: Community-led data collection (SDFN / NHAG / CLIP)



Lüderitz enumeration, mapping structures with GPS, October 2020



Maltahöhe Mapping training, October 2021



Tsumeb Kuvukiland feedback on layouts with students, March 2021



Nkurenkuru profiling, February 2021

Method: Dordabis community planning studios (NUST with SDFN/NHAG)



Explanation of struggles and opportunities by the community to the Councillor, KRC and NUST staff and students



Dordabis community member explaining what the community meant to her group



Map completed by Dordabis community members to indicate landmarks and possible areas of intervention



Mapping of Dordabis with community members, to verify data and to identify possible areas of intervention



Adding notes to images to explore the method of photovoice to understand the Dordabis settlement



Spatial investigation with Dordabis community members, NUST staff and students SDFN, NHAG and KRC



Community giving feedback on the results during a participatory workshop



Community expressing their ideas of 'home' through art



Feedback on the spatial exploration of Dordabis through art

Method: Dordabis community planning studios (NUST with SDFN/NHAG)



Workshop discussion on possible spatial layouts for Dordabis



Community layout planned and drawn by a community member of Dordabis



Meme (Ms) Elizabeth, a SDFN member, explaining their members' active role in the upgrading of Gobabis and laying of sewer pipes



NUST students participating in a feedback session on the spatial investigation of Dordabis



Exhibition for community members to reflect on processes followed during participatory workshops

Method: Community-led servicing (SDFN / NHAG)



Freedom Square community participating in the digging of trenches for water pipes, with 44 people trained how to install water pipes for all 1030 plots

Project 2 - Land Pavilion @ Gobabis Freedom Square (NUST Students)



Coproduction of spatial intervention at the site with community artisans



Site location within the formalised Freedom Square



Community meeting to debate needs



Participatory design process

Challenge: Community-based informal settlement upgrading currently focuses mainly on immediate priorities of basic service provision and tenure security.

Project: The Land Pavilion in Freedom Square, is a public space for social interaction, play and trade developed by NUST students and youth activists

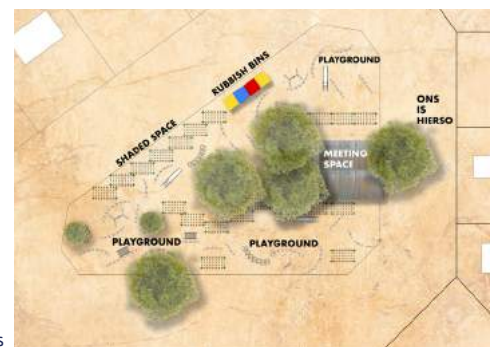
Innovation: Developing and dignifying emerging settlements instead of "eradicating" them by building public spaces and social infrastructure with and for the community.

>>> *Planning, designing and building with the community*

>>> *Frugal innovation – using what is there & allowing for incremental growth*

Cost: N\$ 32,000 (materials only)

Project Team: Malakia David Naholo, Tapiwa Maruza, Corné Bailey, Mutago Nanus, Denzel Awaseb, Saddam Biwa, Varuzjka Meagan Coetzee, Fenni Ndapwa Nghitwikwa, Fellipus Negodhi, Mwalengwa Hillebrecht, Nangolo Olavi, Jeremy Scholtz, Jonathan Ngoni, Maria Erika, Anna Mbango, Amy Simon, Martin Jimmy Namupala, Natache Sylvia lilonga, Rune Larson, Elrico Gawanab, Leo Chikwambi, Melki Namupolo



Final layout drafted by students

Project 2: Covid-19 Support Unit (NAISU)



Informal food vendors



Observation of hygiene requirements for customers

Challenge: To mitigate the impact of Covid-19 on informal settlement residents and communities

Project: With the arrival of COVID-19 in Namibia, the National Alliance for Informal Settlement Upgrading resolved to set up a Unit to prepare for the arrival of the virus in informal settlements. The project focused on documenting the experiences of communities in informal settlements, identifying what initiatives worked in their view, and expanding these further.

Cost: N\$ 350,000

Project Team: Guillermo Delgado (Lead Consultant), Nangula Shilongo, Eneas Emvula, Mersiana Shatyohamba, Fellipus Negodhi, Florian Marembo, and June Muller

COVID-19 GUIDELINES FOR INFORMAL TRADERS (in streets, markets and cuca shops)

COVID-19 is highly infectious.

It spreads through contact with people who have the virus - even those who do not show symptoms. COVID-19 is spread mainly via respiratory droplets. When someone coughs, sneezes or speaks, they spray small droplets from their nose or mouth.

The virus spreads in spaces with lots of people and little movement of air. The particles disperse quickly if you are outside, particularly if there is a breeze, making contracting the virus less likely.

COVID-19 can also spread from touching contaminated surfaces and then touching your eyes, mouth or nose. The virus sticks to surfaces and can survive for hours, and even days, on banknotes, coins, clothes and other things.

Elderly people (over the age of 60); people with diabetes, high blood pressure, heart disease, HIV/AIDS or cancer; and pregnant women are particularly at risk; if they catch COVID-19.

If you are elderly, pregnant or have any of these conditions, or live with someone who does, you should take extra precautions.

If you show these symptoms, you may have COVID-19, which means it is not safe for you to be at work and you can make others sick.



Most people infected with COVID-19 are able to recover at home. If you have a cough, fever, a sore throat and difficulty breathing, seek medical attention.

The World Health Organization provides regularly updated advice for the public at [who.int/emergencies/diseases/](https://www.who.int/emergencies/diseases/)

IF SAFETY GUIDELINES ARE FOLLOWED, INFORMAL TRADERS CAN TRADE AS SAFELY AS FORMAL TRADERS:



1 Wear a cloth mask that covers your mouth and nose. Avoid touching the mask. Wash and iron after use every day. Have a few masks so that you have a clean one to wear every day. Insist that customers wear masks too. Consider wearing a visor to protect your eyes.



2 Avoid touching your face - especially your eyes, mouth and nose. When you cough or sneeze, cover your face with the inside of your elbow.



3 Avoid touching people. Do not greet people by touching them. Keep two metres away from people. Where this is impossible, then at least keep at arm's length.



4 Wash your hands with soap and water often:

- Wash your hands for at least 20 seconds. Clean all parts of your hands and wrists, washing between fingers and fingertips and halfway up your forearms.
- Wash your hands before you start your workday, throughout the day, and especially before eating.
- Wash your hands after coughing or sneezing.
- Wash your hands after any exchanges with customers (of products and cash).
- Wash your hands as soon as you get home.

5 Street and market traders need to trade two metres apart, so local governments need to be flexible with trader layouts and locations.

6 Customers should keep two metres distance from each other, by queuing alongside trader/market stalls or outside cuca shops.

Drawing lines on the ground is a simple way to show how people should queue and how far they should stay from you and your stall/shop.



7 Give priority to high-risk customers (such as pensioners, people with disabilities and pregnant women) by giving them preference in queues.

8 Ask customers not to touch products.



If you or your family develop symptoms please call the toll free number 0800 100 100.

9 Clean all frequently touched surfaces with sanitiser or disinfectant. This includes your cell phone and also door handles and railings.

Street and market traders: Clean your tables and non-food products with disinfectant. House shop owners and employees: Wipe down surfaces such as countertops, tills and handles with disinfectant.

Spray customers' hands with sanitiser.

10 Avoid handling cash: Encourage customers to deposit cash in an envelope, box or jar. COVID-19 droplets can be on coins and banknotes. Consider keeping today's money separate from yesterday's. Wash your hands or use sanitiser between customers. Use digital payment methods such as PayPal, eWallet or Blue Wallet where possible. If you have card payment facilities, clean these with bleach solution before and after each use.

11 Re-use plastic bags can carry the virus. If customers use their own bags, avoid touching them. If you provide plastic bags, avoid re-used ones.

How to make your own disinfectant: If you do not have sanitiser, 6 teaspoons of bleach in 1 litre of water is an effective disinfectant for surfaces.



How to build a wash station: If you do not have running water on site for you and your customers, consider building a wash station. See instructions at set.org.za.



KNOW YOUR RIGHTS:

Even under lockdown, all government officials must respect the right to just administrative action when issuing or revoking licences, adjusting trading fees, allocating trading space, confiscating goods, and evicting moving traders.

Any action taken by a municipal or law enforcement official is an administrative action and it must be "just", according to the law. This right is protected in Article 18 of the Namibian constitution.

TO BE "JUST", THESE ACTIONS MUST:

- BE LAWFUL.** Officials must act within the confines of the law; be authorized to take action and not abuse or exceed their authority.
- BE REASONABLE.** Actions/decisions taken must be rational and linked to the purpose.
- BE PROCEDURALLY FAIR.** They must include the right to a hearing, meaningful consultation with affected traders, and the decision-making must be unbiased.

NOTE: If an official confiscates your goods, they must give you a receipt. This receipt must include the details of what the goods are, the addresses where they will be stored and how long they will be kept.

TO PROTECT YOURSELF, MAKE SURE THAT YOU:

- Follow the health guidelines.
- Always keep a copy of your permit and your documents on you.
- Keep up to date with the permit requirements. These may change during different lockdown stages.

WIEGO has a booklet with information on using administrative law to protect the rights of informal workers including traders.



INFORMAL TRADERS NEED GOVERNMENTS TO:

DO NO HARM:

- Police and other enforcement officials must stop harassing traders.
- Prohibit confiscation of traders' goods during lockdown.

FACILITATE SAFE TRADING:

- Provide unlimited water points so that traders can wash their hands, workplaces and products frequently.
- Provide sanitiser and/or bleach as a matter of urgency.
- Be flexible about trading layouts so that street and market traders can practise physical distancing. Some local authorities have allocated streets for trading.
- Provide health screening at trading sites.

SIMPLIFY LICENSING AND SUSPEND FEES:

- Make the issuing of permits simple and fair.
- Suspend trading fees while traders re-establish themselves.

PROVIDE INCOME SUPPORT AND GRANTS:

- Informal workers have been particularly hard hit by measures to prevent the spread of COVID-19 and need direct income support.

- Traders have used their last savings over lockdown and need cash grants to start trading again.

HAVE REGULAR MEETINGS WITH TRADERS AND LOCAL GOVERNMENT OFFICIALS:

- Traders need to be involved in planning and policy decisions that affect them. As StreetNet International says, 'nothing for us without us'.

These guidelines were developed by WIEGO in close consultation with experts in public health (Professors Rajen Naidoo and Leslie London) and the informal economy/food systems. They are informed by South African realities and may need to be adjusted based on your local conditions. October 2020.



Project 3 - Opuwo Informal Economy (NUST)



Perspective of upgraded Epupa Market

Development stages from left to right:

Construction of Phase 1 on open land; Relocation of traders, clearing of adjacent land, construction of Phase 2; Relocation of traders, clearing of adjacent land, construction of Phase 3; Landscaping.



Challenge: Local economic development initiatives usually focus on formalizing informal trade by relocating traders to municipal markets that are often not well located, leading traders to refuse to move.

Project: Epupa Market Upgrading. Students analysed the local economy to gain a better understanding of the economic and spatial relationship between formal and informal trade. They concluded that informal trade happens where business opportunities are available and designed an upgrading strategy for the market.

Innovation: Instead of relocating the market it was proposed to be incrementally upgraded at its current site.

>>> Evidence-based policy and development

>>> Avoid disruption of peoples livelihoods

>>> Frugal innovation – easier for Local Authorities to finance incrementally

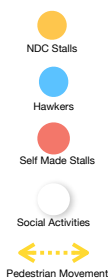
Cost: N\$ 4,5 million (project cost estimated by Quantity Surveying students)

Current status: Market has been demolished and traders relocated. Many lost their livelihoods.

Project Team: Lecturers: Phillip Lühl. Students: Uautua Uarije, Martin Jimmy Namupala, Sharon Ganes, Raahua Ketjizeere, Adolf Kleophas, Vasana Kaviua, Betuel Pendapala Uusiku, Leo Chikwambi, Letitia Aihuki, Tuwilika Nyanyukweni, Anna Mbango, Malakia David Naholo



Current trading activities in central Opuwo



Project 4: Emergency Response Housing (NUST)



Development stages from left to right: Emergency response core unit with brick firewalls on narrow plots; incremental expansion, transformation, brick infill, livelihoods opportunities and street formation.

Challenge: Turnkey housing provision is unaffordable and insufficient. Available affordable housing options for the vast majority of citizens include the common "shack" and the Shack Dwellers Federation of Namibia (SDFN) model house. A shack is inadequate. The SDFN house is adequate and affordable (ca. N\$ 40,000) but requires a community driven process. It is not an emergency response.

Project: Emergency relocation housing model for flood victims in Windhoek. A team of lecturers and students developed a modular steel-frame housing typology for the City of Windhoek.

Innovation: Fast to construct, insulated, includes sanitation, allows for future incremental expansion and transformation by inhabitants themselves.

>>> More houses can be built on the same portion of land with partition firewalls.

>>> N\$50,000.00/per core house. Greater impact / more beneficiaries through frugal design

>>> Higher densities create more local economic potential

Cost: N\$ 58,000 per core unit (cost estimate)

Project team: Lecturers: Phillip Lühl, Sophia van Greunen, Oliver Quarmy. Students: Tapiwa Maruza, Martin Jimmy Namupala, Jeremy Scholtz

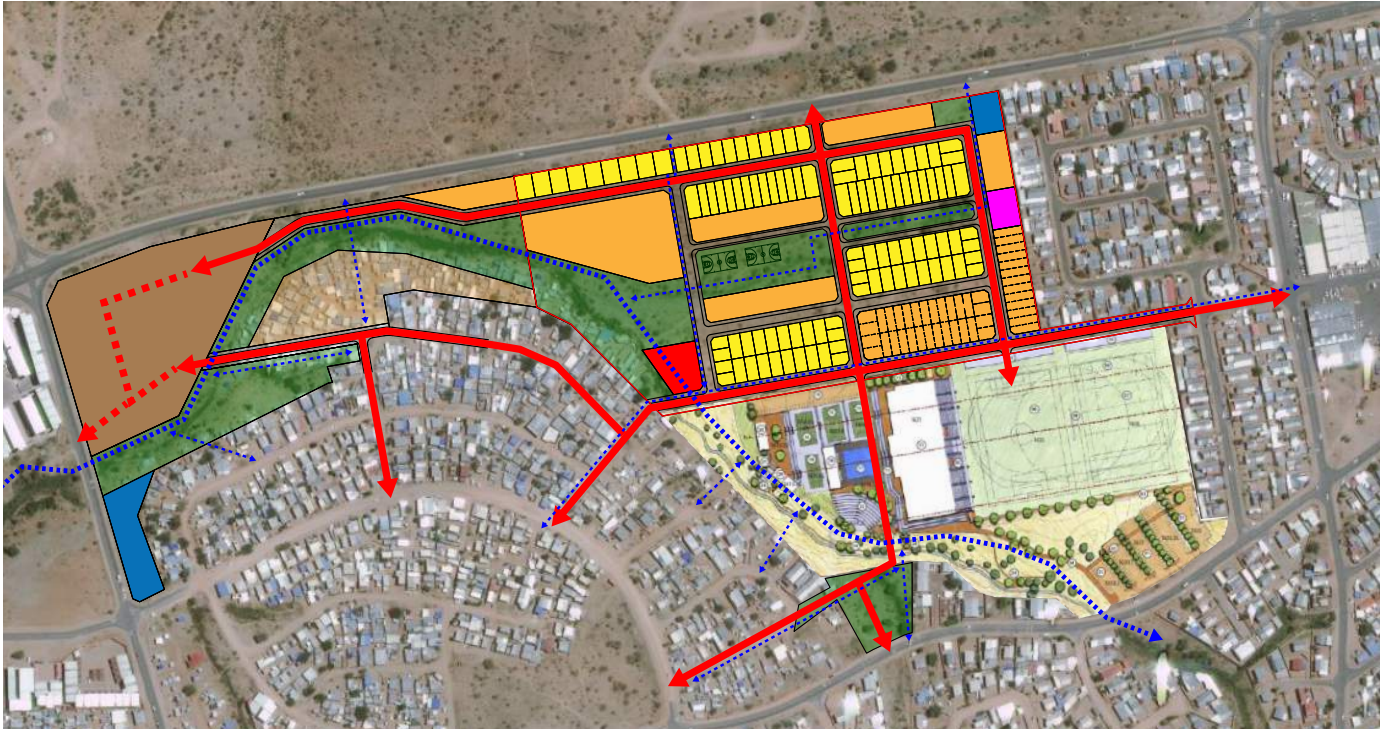


Current affordable housing options: [1] Corrugated iron shack; [2] SDFN model house.



Design principles: [1] Modular steel frame; [2] Metal cladding, insulation and interior panelling; [3] Service core; [4] Core unit (emergency response); [5] Future potential for expansion.

Project 5: Urban Strategy for Infill Housing (NUST)



Otjomuise urban design for emergency relocation housing, public space development and social infrastructure, infill housing and informal settlement upgrading.

Challenge: The urban land crisis is usually confronted by expansion of urban areas through land servicing. This is a costly and slow process, and continues to accommodate the poor at the very edge of the city. Throughout built-up areas of towns and cities there are large portions of underutilized serviced land that hold great potential for medium-density housing.

Project: Urban Infill Housing typologies for the City of Windhoek. A team of lecturers is busy identifying underutilized land through research as a first step towards making land available for development of well-located, low-income and medium-density housing.

Innovation: Focus on urban and social transformation and strengthening of existing local economies through infill housing instead of only expanding cities/towns, especially during the current economic downturn.

>>> *Frugality – work with serviced land that is available and publicly-owned*

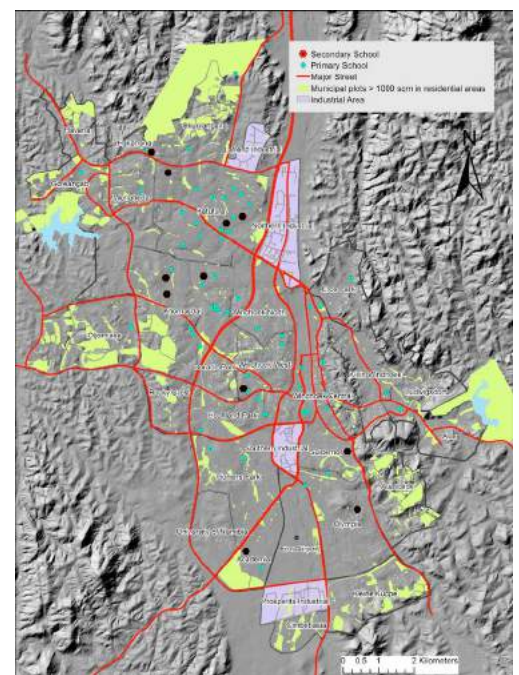
>>> *Increase urban density to potentiate local economic opportunities and to mitigate cost of living*

Estimated impact: ca. 50 000 units in Windhoek alone

Project team: Phillip Lühl, Royal Mabakeng, Jennilee Kohima, Anni Beukes, Cooper Nederhood, José Lobo



Typical underutilized serviced land in residential area of Windhoek with road network, sewerage, water and electricity provision available.



Preliminary map of municipal-owned land of more than 1000 m² in residential areas in Windhoek.



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OF SCIENCE AND TECHNOLOGY

**Community-led Informal Settlement Upgrading
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