

Supporting Capacity Development in Land Administration in Namibia: The NUST Experience

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SUMMARY

Land administration (LA) as an academic discipline provides professionals with access to vast knowledge, skills, and sustainable development tools. It covers essential knowledge for understanding how information infrastructure can support the implementation and management of land tenure, land development, land valuation, and land use planning within a legal framework, to promote efficient land management and effective land markets. This paper explores how the Department of Land and Property Sciences at the Namibia University of Science and Technology (NUST) has been supporting the LA sector in Namibia and southern Africa through capacity development and continuous curriculum enhancement initiatives following global standards. It presents an overview of the method of (or approach to) LA teaching at NUST – a technique which has enabled the capacitation of land professionals in the effort to boost local and national capacities in the implementation of efficient land administration by the Namibian Government. The vital contributions of the paper to ongoing debates on capacity development in LA is threefold. First, it presents the capacity development needs in Namibia. Second, it identifies the core roots of NUST's capacity development strategy as an agent of education and capacity development in LA. The NUST strategy could be useful for other universities or research institutions still at the point of developing their own capacity development strategy. Third (and finally), it brings to fore the experience of NUST's learning and exposure to LA studies and sector developments through The Network of Excellence on Land Governance in Africa.

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1. NUST AS AN INSTRUMENT OF LAND ADMINISTRATION (LA) CAPACITY FOR DEVELOPMENT

Universities, wherever they are situated, have long existed as a unique space, "driven by a commitment to the generation of knowledge" and "a belief in the value of disseminating that knowledge to students" and other seekers of knowledge (Brennan & Cochrane, 2019; 118). This meant that universities were expected to produce and transmit knowledge in different ways and various contexts. Experience from Namibia not only confirms these expectations. Instead, it also indicates an interconnection between knowledge generation from universities and changes in the socioeconomic systems of societies where universities are situated. This scenario (i.e., universities' roles) is easily identifiable within the Namibia's land sector where the Namibia University of Science and Technology (NUST) has a tremendous impact in the development of capacities in land administration. This effort in capacity development in land administration at NUST is currently championed by its Department of Land and Property Sciences (DLPS).

The need for improved land reform and land management in Namibia led to land administration initiation (and related courses) at the NUST, previously known as the Polytechnic of Namibia (PoN). This demand was initiated and supported by the Ministry of Agriculture, Water and Land Reform, previously the Ministry of Lands and Resettlement (MLR). The curriculum development started with two certificates that focused on land surveying and land management. In early 1997 The PoN welcomed a partnership with MLR and ITC to deliver academic qualifications in land management. The decision to partner with government and an international university was in line with the PoN core mandate is to support education and applied research for sustainable development (Tjivikua, 2012). Graduates from the programme were still considered job-ready, 'IT Savvy and internationally 'competitive' (Tjivikua, 2012).

As of today, graduates with land administration (LA) skills are employed at various levels of Government, local and international NGOs. The first graduates in land related courses completed certificates in 1998. To date the programme has continued to evolve with over seven degree programmes covering aspects of tenure, valuation, and land use planning and land development. Through engagement with industry, local and international stakeholders the degree programmes have been revised to meet local, regional and international needs with regards to land administration for sustainable development. The degrees have been recognised as supporting sustainable development by the national planning commission in Namibia (United Nations, 2002). Moreover the need for LA related skills are noted in the national housing policy approved by cabinet in 1999 (Republic of Namibia, 2009). The Dutch government supported the initial establishment and development of programmes in land

administration through professional and curriculum development through partnership with the International Training Centre for Aerial Survey (ITC)-(Ros, 2010; Paresi & Sharif, 2004) .

In 2005 PoN celebrated a 10 year anniversary on supporting Land Administration capacity in Namibia here, the importance of land administration for development was emphasised to decision makers, researchers, and the private sector. At this event, Professor van der Molen, (2005) highlighted how LA is an operational activity that would require the execution of scientific methods on concepts of tenure, functioning land markets and approaches to legislation enactment and land use planning.

To date there are few studies on the level of capacity in LA in Namibia, this paper provides a short overview on the approaches used by DLPS for the past 23 years in supporting land administration capacity development in Namibia. Moreover, the paper explores how the DLPS at NUST has been supporting the LA sector in Namibia (in particular) and Southern Africa (in general) through capacity development and continuous curriculum enhancement initiatives following global standards. It presents an overview of the method of (or approach to) LA teaching. This method has enabled the capacitation of land professionals to boost local and national capacities in the implementation of efficient land administration by the Namibian Government. To understand the perspectives of the subject, the paper has been structured into five sections. Apart from the first section (the introduction), the second section describes the state of LA in Namibia and the role of NUST in its development. The third section presents the NUST approach to programme development and delivery as an essential element in its contribution to capacity development in LA in Namibia. The fourth section depicts NUST's role in LA capacity development in the Southern African region. This section centres on NUST's position as a hub of capacity development in land governance in the region. The fifth (and final) section concludes with a discussion on issues emerging from NUST role in capacity development in LA.

2. LA IN NAMIBIA AN OVERVIEW

Land administration in Namibia is influenced by the colonial history. The different tenure system provides challenges in terms of how access to land information is used and land policies are applied to support tenure, valuation, land use and land development. The legislative environment has for years been improved to the current context. With many of the colonial legislations with regards to land been repealed (De Villiers, Christensen, Tjipetekera, Delgado, & Mwando, 2019).

2.1. Why land administration matters to Namibians and Namibia

Namibia gained its independence in 1990 from the apartheid South African administration, this left the country with skewed land distribution, influenced by a prolonged history of land dispossession (Werner, 1993). The apartheid policies of the colonial government left a legacy of land problems that still exist today. "Not only was land unfairly distributed along racial lines, but a sharp division in land governance also existed between the commercial central and

southern regions, and the communal northern regions of the country"(Middleton, Von Carlowitz, & Becker, 2016). The land administration is applied according to the different tenure systems (Werner, 2021).

In 2018, land ownership was/is concentrated in the hands of a few (De Villiers et al., 2019) white minority, with 53% of farms owned by German nationals , followed by 29.3% owned by South African nationals and 6.8% of land owned by Americans(NSA, 2018, p. 33). Considering the historical perspectives of land issues in Namibia, one phrase that fully justifies why land administration is essential in the country is land reform. The aim of the government's land reform programmes was to improve equitable distribution and access of land to previously disadvantaged Namibians. In order to enhance economic growth and reduce income inequities and poverty(Thiem, 2014).

A Second National Land Conference was held 2018 to look at addressing some of the policy gaps with regards to land administration in urban and rural areas. The conference brought various themes for improved land administration, this ranged from land reform for commercial land , communal land , urban land , and land taxation and valuation (Republic of Namibia, 2020). The attainment of these resolutions will need capacitated professionals at all levels of Government.

Implementation of land administration at local level is headed by 54 local authorities and two main ministries (Ministry of Urban and Rural Development, Ministry of Agriculture Water and Land Reform) at national level. Land for local authorities is an essential part of revenue collection (ALAN/SKL International Partnership, 2010). However, to date many authorities are challenged with land delivery for housing. Despite the levels of LA related skills available, Namibia is still plagued by high levels of informality, poor revenue collection and struggle to deliver efficient services. To date it is reported that 40% of the urban population resides in informal settlements, this number is higher for the capital city of Namibia(Nakale, 2018). Residents in this areas have limited to no access to sanitation facilities(Gold, 2013), many rely on communal water points , no electricity. The demand for land for housing has increased the pressure on government to improve land delivery (De Villiers et al., 2019).

Namibia has a total coverage of 82 400 000 ha of land. This is classified in state land (17%), communal land (35%) and freehold (48%)-(NSA, 2018). Each having its own land administration approach. Communal land registration has for the past decade been implemented with flexible approaches to capturing of boundaries, adjudication using orthophotos and boundary demarcation using handheld GPS. To date only 39% coverage of the 245 000 existing customary land rights have been registered (Werner, 2021, p. 29). The use of handheld GPS devices for finalisation boundary registration was noted as the leading cause for delays in communal land registration (Werner, 2021, p. 29).

Majority of land in urban areas is classified under freehold, with local authorities having the jurisdiction to administer all land within its boundaries according to the Local Authorities Act, 23 of 1992 as amended (Republic of Namibia, 1992). Namibia is set to be over 51% urbanised, which causes challenges for local authorities to efficiently deliver land for housing. This has

led to a high increase in informal settlements. Progress has been made with implementing secure land rights for the urban poor. The Flexible Land Tenure Act, Act 4 of 2012 is being piloted (Republic of Namibia, 2012) by the ministry of Agriculture Water and Land Reform (GLTN, 2020). Two of the pilots sides for the registration of Land Hold titles completed successful registration with support from international development agencies (Nembwaya, 2020; New Era Staff Reporter, 2021). The Flexible Land Tenure System was initiated as an innovative approach to land surveying and registration in Namibia, through the partnership with *Ibis* a Danish member organisation through the Lands Project with the MLR (Christensen, Werner, & Hojgaard, 1999). The training of professionals to aid in the implementation of FLTS was supported by NUST as early as 2004 (Christensen, 2005). The focus was on the use of para-professionals/technical land surveyors to aid in the survey of land for registration (W. de Vries & Lewis, 2009). To date, two local authorities have successfully delivered Landhold titles to over 1000 households, after 20 years of initiating the flexible land tenure system.

Skills relevant for improved land administration are needed in all levels of land governance. There are various institutions supporting land governance in Namibia, this range from the Deeds registry within the MAWLR, the local authorities that includes, municipalities, town and village councils (De Villiers et al., 2019, p. 9).

Chigbu and Sakaria (2020) called for responsible land reform in Namibia to balance the country's skewed landholding structures. Responsible land administration is a vital component of any reform that would empower disadvantaged Namibians. This is a significant reason why capacity development in LA is a mandatory part of such a reform.

Land surveying and land registration only cover part of Namibia. This is due to the country's colonial history, which confined most of its people to former "homelands" (now referred to Communal Areas) and barring them from owning land and securing tenure through formal means (Namhindo, 2012). Concerning the need for LA in Namibia, As Namhindo (2012) notes that:

"In many municipalities, towns, villages and settlements there is frustration about inability to plan, survey and register land rights and the difficulty of accessing credit for investment and development. In the rapidly expanding urban areas, many poor people from rural areas in search of work opportunities have no official right to own or even reside on the land on which they have resettled. Other land challenges include uncertainties about long standing traditional right to land on the edges of growing towns in communal areas, and how these rights will be effected by the expansion of urban boundaries and the establishment of new municipalities."

Uncertainties surrounding landholding in Namibia (especially on communal lands) have arisen due to legally recognised authorities' inability to act in terms of their mandates. The Government of Namibia's determination to address these concerns and remove uncertainties surrounding land issues have granted men and women equal rights when applying for rights to communal lands in the country (Republic of Namibia, 2003). While these steps are laudable and worthy of emulation from other countries, the vision behind it may not be fully realised

unless appropriate land administration systems are put in place and operationalised responsibly. Therefore, land administration matters to the development and the empowerment of disadvantaged Namibians.

2.2 The Capacity Development Context of LA in Namibia

The task of developing Namibia and empowering disadvantaged Namibians is a crucial aspect of Namibia's nationhood. Therefore, capacity in land administration is an essential part of the effort towards Namibia's development. Capacity can be described as the ability to perform (Tan, Pattyn, Casiano Flores, & Cromptvoets, 2021) and deliver a specific task or activity according to established needs. The need for these capacities (including education) in LA exists because of the plethora of land challenges which the country must overcome to attain its vision of sustainable development. The country's chosen path to achieving this has been hinged on implementing a pro-poor and redistributive land reform. The current rate of the land reform implementation in Namibia shows there is a dire need for land administration skills, which will help implement national goals and resolutions. Land administrators are needed for improving various aspects of capacity needs, including urban land management and land registration in Namibia (Fourie, 1998), which supports the attainment of sustainable development. The role of NUST in capacity development is crucial because of some crucial challenges facing Namibia (Figure 1).

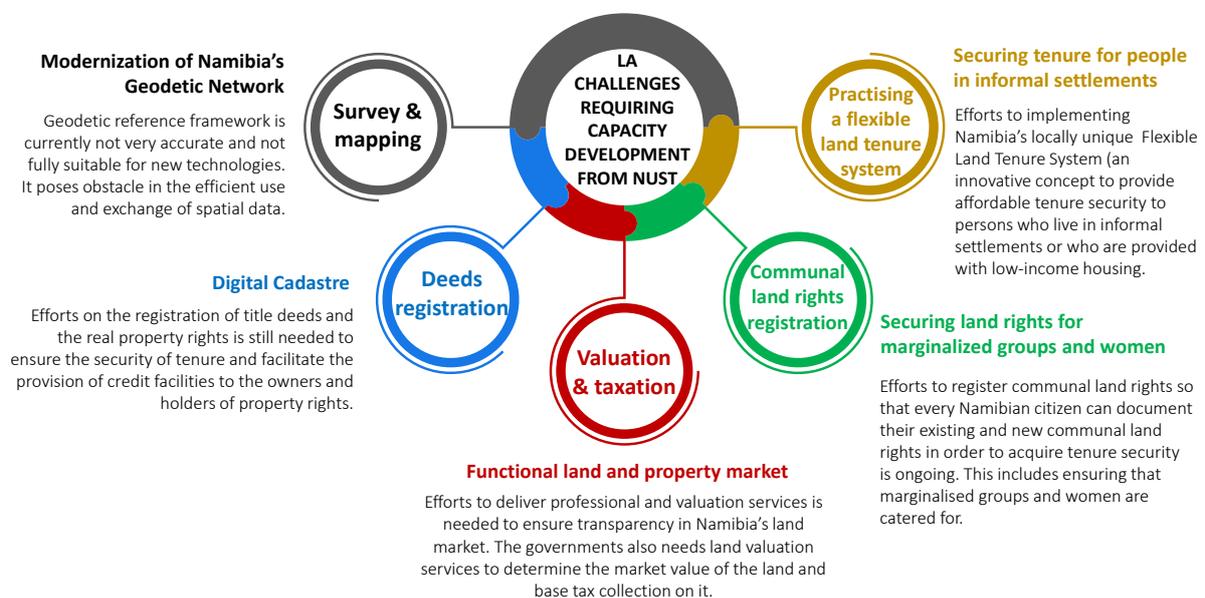


Figure 1 The LA challenges requiring capacity development from NUST

Figure 1 presents the key LA challenges that necessitates capacity development inputs from NUST as its contribution to the ongoing land reform and process of development in Namibia.

- **Modernization of Namibia's Geodetic Network:** Geodetic reference framework is currently not very accurate and not fully suitable for new technologies. It poses obstacle in the efficient use and exchange of spatial data.

- Securing tenure for people in informal settlements: Efforts to implementing Namibia's locally unique Flexible Land Tenure System (an innovative concept to provide affordable tenure security to persons who live in informal settlements or who are provided with low-income housing).
- Securing land rights for marginalized groups and women: Efforts to register communal land rights so that every Namibian citizen can document their existing and new communal land rights to acquire tenure security is ongoing. This includes ensuring that marginalised groups and women are catered for.
- Functional land and property market: Efforts to deliver professional and valuation services is needed to ensure transparency in Namibia's land market. The governments (at various levels) also need land valuation services to determine the market value of the land and base tax collection on it.
- Digital Cadastre: Efforts on the registration of title deeds and the real property rights is still needed to ensure the security of tenure and facilitate the provision of credit facilities to the owners and holders of property rights.

The above-mentioned challenges form key capacity development concerns in NUST's effort to provide training and education that would be useful to the land sector in Namibia. For more details on the overall land-related challenges in Namibia, see the works of Middleton, Von Carlowitz, and Becker (2016), Chigbu, Sakaria, de Vries and Masum (2017), De Villiers, Christensen, Tjipetekera, Delgado and Mwando (2019), and Mabakeng, (2021) among many others.

The provision of these capacity needs by NUST an essential task of the institution, which was founded on a mandate to contribute to education and capacity development in Namibia. Land administration capacity on local level is evident in the role of property officers, who in the majority of local authorities are graduates of NUST, with a background in land administration, land use planning and land valuation. Supporting activities on land transfers, land use planning. While only the major 'municipality's employ land surveyors and town planners, the rest usually hire consultants for the technical implementation of land development projects. The lack of capacity to implement an accelerated national in the resettlement programme (Chigbu, Sakaria, de Vries, & Masum, 2017) is an area that NUST can meet, with current programmes addressing valuation, planning and land registration in the different courses across four degrees.

3. THE NUST APPROACH TO CAPACITY DEVELOPMENT IN LA

NUST is the only academic institution in Southern Africa that have programmes solely centred in education on land administration. This section is concerned with the how-to aspect of NUST's (through its DLPS) capacity development work in LA. It also provides an overview on the need for land administration capacity in Namibia, current land administration and governance challenges and an in-depth description on the approaches used by NUST through curriculum development, local and international exchanges and partnerships with industry and its position in Southern Africa as a Hub for the Network of Land Governance in Africa. A starting point for grasping NUST and its engagement in LA education and capacity development is to understand approach (Figure 2).

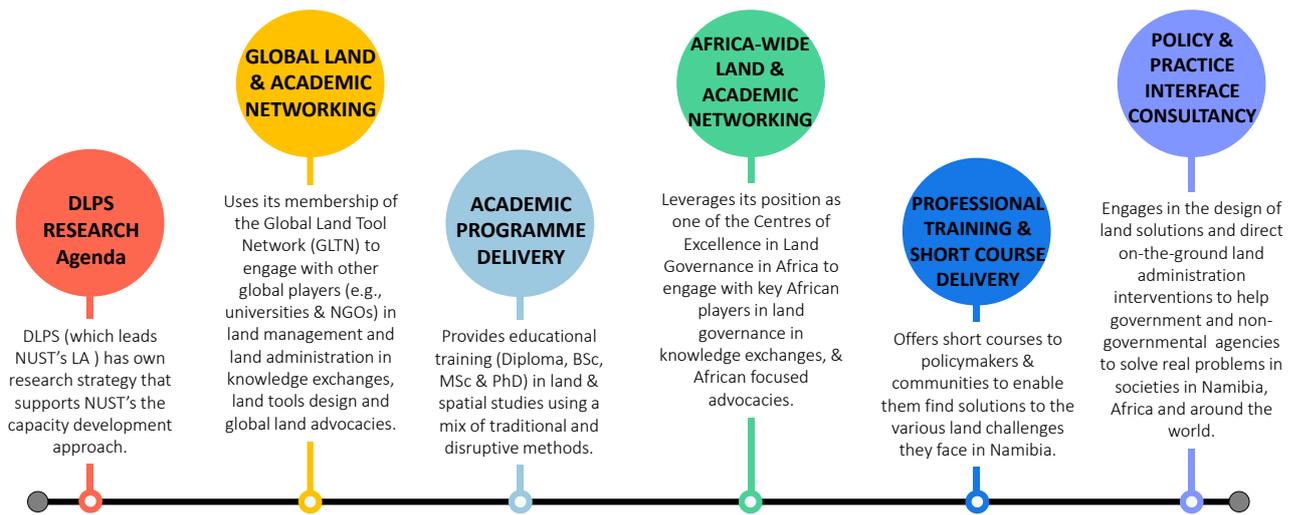


Figure 2 The core roots of NUST's capacity development approach

The NUST capacity development approach represents the sets of steps and processes it applies (or embraces) on its path to capacitating individuals, organizations, and local communities in Namibia to develop requisite knowledge and skills for strengthening the needs of the Namibian land sector. This approach is not static and is applied flexibly by NUST based on specific operational frameworks and as allowed by existing legislations, educational policies, and opportunities for action. Figure 2 shows the core elements or roots of the NUST capacity development approach which are explained below.

- NUST's Department of Land and Property Sciences (DLPS) research agenda: The DLPS (which leads NUST's LA) has own research strategy that supports NUST's the capacity development approach. This departmental research strategy provides the guidelines for research-oriented engagements in LA activities.
- Global land and academic networking: NUST strives to engage, broadly, with other academic institutions around the world. This is considered essential for its knowledge exchanges and knowledge sharing visions in LA. One of its notable global engagement is its membership of the Global Land Tool Network (GLTN).¹ It uses its GLTN platform to engage with other global players (e.g., universities & NGOs) in land management and land administration in knowledge exchanges, land tools design and global land advocacies.
- Academic programme delivery: NUST provides educational training (Diploma, BSc, MSc and PhD) in land and spatial studies using a mix of traditional and disruptive (i.e., innovative) methods.
- Africa-wide land and academic networking: NUST leverages its position as one of the Centres of Excellence in Land Governance in Africa to engage with key African players in land governance in knowledge exchanges, and African focused advocacies.

¹ A dynamic and multisectoral alliance of international partners committed to increasing access to land and tenure security for all, with a particular focus on the poor, women, and youth. The Network's partners include international rural and urban civil society organizations, research and training institutions, bilateral and multilateral organizations, and international professional bodies. For details about GLTN, visit www.gltm.net

- Professional training and short course delivery: NUST offers short courses to policymakers & communities to enable them find solutions to the various land challenges they face in Namibia.
- Policy and practice interface consultancy: NUST engages in the design of land solutions and direct on-the-ground land administration interventions to help government and non-governmental agencies to solve real problems in societies in Namibia, Africa and around the world.

In summary, the above-listed elements of NUST approach indicates that continental and global networking is core to its LA leadership role in Namibia and Africa. Furthermore, a people-centric and community focused LA service delivery (through consultancies) allows the university (through DLPS) to engage with people in the land sector in solution oriented manner. This also allows it to derive relevant knowledge which it uses to educate and capacitate its clients (organisations, governments, and communities) and students or learners. A better understanding of the NUST approach is possible by grasping its programme delivery in LA.

2.2 DEPARTMENT OF LAND AND PROPERTY SCIENCES (DLPS) PROGRAMME DELIVERY IN LA

The DLPS is situated with the Faculty of Natural Resources and Spatial Sciences (FNRSS), with a vision to be a reputable partner for research and educational excellence in integrated land management. With a mission to provide quality education, research and service in integrated land management. The values are all embedded within the LAND acronym= Life Long learning, Accountability, iNnovation and Dedication. Currently the department provides degrees in Land Administration, Property studies and a Masters of Spatial sciences. Both bachelor's degrees have Work Integrated Learning Embedded in the programme. The emphasis on the paper will be on the bachelor of land administration that covers cross cutting issues essential for improved land administration. The Bachelor of land administration is a three year exit degree, with 360 credits (NUST, 2021).

Like most universities curriculum review is carried through a consultation with industry experts and academics from within the institution, the region and internationally. This ensures that the degree is relevant and address current technical and theoretical aspects within the sector. According to programme documents of the Bachelor of Land Administration:

“The programmes aim to provide a skilful and competent labour force for the land administration and management industry in Namibia. The programme provides a systematic and coherent introduction to the knowledge principles, concepts, data, theories and problem-solving techniques of the land administration sector. The programme further aims at capacitating graduates with the practical and theoretical skills necessary for successful land administration and applied technologies that can be used as decision supporting tools. The focus of the programme is on the development of essential practical.”

Members of the Programme Advisory Committee have endorsed the programme while other institutions of higher learning have been consulted for purposes of benchmarking. The NUST curriculum for supporting land governance was reviewed in a study on 'Africa's needs in capacity development in land. and did meet some of the components required by the African Land Policy Initiative for supporting development (Chigbu, Tenadu, & Mwasumbi, 2017).

Students are required to complete work integrated learning as part of the degree. This gives students the opportunity to apply theoretical knowledge within the workplace. In addition, students are expected to complete a short empirical research.

Experts in any of the land administration functions (tenure, valuation, land use, development) are continually invited to give lectures in classrooms. With the advent of the COVID-19 pandemic and online learning this has been easier to organise. To date, DLPS has had an opportunity to have lectures presented by experts from FAO, GLTN, and GIZ to mention a few. This approach enhances the learning for students and intensifies the relevance of the theories to real life situations.

3.1. WORK INTEGRATED LEARNING

Since the inception of the land management and administration programmes at NUST. There has always been an emphasis on the practical application of theory. This created the high level of job-ready graduates. The internship course has over the years been improved to the learning and application of knowledge of students in the workplace. In addition, improvements have been made to support student research.

Work integrated learning component of the qualifications equips students to apply the theoretical knowledge to the practical work environment. In the Department of Land and Property Sciences the objective is to connect 'student's theories, tools and technologies that can support the capacity gap in the land administration sector. This ensures that, when students are attached during work integrated learning, knowledge can be exchanged- either at national, regional or local Authority levels. The collaboration with civil society, through memorandum of understanding for internships and the programme advisory committees provides the insight in what is needed.

3.2. NUST IN SOUTHERN AFRICA: NETWORK OF EXCELLENCE IN LAND GOVERNANCE IN AFRICA (NELGA) CAPACITY DEVELOPMENT IN SA REGION

NUST was selected as the Southern Africa Node for NELGA 2018, but operational since June 2017. To date there are 30 partner academic institutions in 12 Southern Africa countries (excluding non-academic institutions). The note was supported with funding for DAAD Scholarship (MSc and PHD). In addition, there is cross coordination from partner institutions to support curriculum Review/Development (Universities: South Africa, Malawi, and Zambia). Exposure of staff members to teaching approaches and research academic exchange was organised to Namibia from out of country University staff members and other exchanges to

Sweden, Germany. In supporting enhanced capacity development, masterclasses and Land Governance Training were delivered in 2019. NELGA² supports policy Dialogues (conferences, seminars, symposium, colloquium, workshops etc.). The latest output from the node is the Land Governance in Southern Africa Synthesis report, which provides an overview on progress on land governance in the region. Currently the node is developing a Research and Capacity Development Strategy for Land Governance Innovation in Southern Africa.

4. EMERGING ISSUES AND CONCLUSION

NUST is well positioned as an institutional leader in capacity development in land administration. Providing programmes that have been certified relevant to the LA sector in Namibia. The existing land administration challenges in Namibia further gives rise to the relevance of having capacity to meet the current demands for improved administration of land for sustainable development.

Capacity in land administration is vital to support national development. This paper provided an overview of how the department of land and property sciences at NUST has supported capacity development efforts in Namibia. Data collected from graduates from land administration related backgrounds and officials in land administration roles shows that capacity alone cannot improve land administration. Despite the availability of skills, graduates still face challenges in addressing the land administration challenges.

Feedback from professionals trained at NUST show that these are still some of the challenges faced by graduates supporting the implementation of land administration systems:

- Outdated policies and internal systems create a challenge in the speedy implementation of project activities. It was noted that bureaucracy and political interference in administration matters also hinders progress.
- Lack of up to date digital cadastral data creates a challenge when local authorities have to plan for land delivery or report on progress to the national Government.
- Land delivery process is slow, lack of filling resources, land applications piling up, line ministry take long to approve, politicians intervene in administration, no proper management system
- Land delivery for housing in urban areas is a leading cause for informal settlements, where residents have high levels of tenure insecurity and limited access to services such as water, toilets and electricity.
- Inadequate serviced land, expensive cost of servicing land, long and statutory approvals, high demand for urban land because of rural-urban migration.

² NELGA is a partnership of leading African universities and research institutions with proven leadership in education, training, and research on land governance. Currently NELGA has more than 50 partner institutions across Africa. To strengthen human and institutional capacities for the implementation of the African Union's agenda on land, the African Land Policy Centre (ALPC) established NELGA in cooperation with Germany, World Bank, and other partners. Its key objectives include (among many others) the provision and facilitation of academic education and training for African land professional and practitioners. For details on NELGA, visit the official website of NELGA at www.nelga.org

- Insecure land tenure in communal Land. Securing all land rights for Communal landowners

Educating communities on the role of land administration agencies emerged as an essential point that DLPS can undertake as part of its community outreach activities. Sustainable development can be achieved when local institutions and academia works closely together. DLPS is well positioned locally and regionally to meet the current demands for capacity development, through its teaching approaches, professional staff, and its continued engagement with local and international organisations. The LA administration challenges faced by Namibia can be overcome with the application of learned methods and approaches taught to graduates. There is a need for political will and enhanced investment in technology, especially with communal land registration, registration of flexible land rights and managing upgrading projects for informal settlements.

Finally, this paper has been written to present the role of NUST in capacity development in Namibia, and the Southern African region. Efforts have been put to identify the approach of NUST or how it goes about its capacity development effort in LA. The narratives have been presented to only reflect the critical areas worthy of discussion with a global audience such as the International Federation of Surveyors (FIG) community. Hence, the brief structure of this paper. What has been presented in this paper does not reflect the full capacity development effort of NUST. Rather, it reflects the perspective of the DLPS of NUST. An understanding of the full NUST strategy to education would require overall understanding of all land-related departments at the university (including, planning, architecture, natural resources management, human geography, among many others). Therefore, it is crucial to judge the content of this manuscript from the DLPS context.

REFERENCES

- ALAN/SKL International Partnership. (2010). *Capacity Building Programme to Support Local Governance in Namibia: Position Paper of the Consultation Paper Working Group*. Windhoek.
- Brennan, J., & Cochrane, A. (2019). Universities: in, of, and beyond their cities. *Oxford Review of Education*, 45(2), 188–203. <https://doi.org/10.1080/03054985.2018.1551198>
- Chigbu, U. E., & Sakaria, P. (2020). Reflections toward a Responsible Fast-Track of Namibia's Redistributive Land Reform. In W. T. de Vries, J. T. Bugri, & F. Mandhu (Eds.), *Responsible and Smart Land Management Interventions: An African Context* (1st Editio, pp. 79–94). <https://doi.org/10.1201/9781003021636-10>
- Chigbu, U. E., Sakaria, P., de Vries, W., & Masum, F. (2017). Land Governance and Redistributive Reform – For The Sake of Accelerating the National Resettlement Programme of Namibia. “2017 WORLD BANK CONFERENCE ON LAND AND POVERTY” *The World Bank - Washington DC, March 20-24, 2017*, 1–18. Retrieved from https://www.conftool.com/landandpoverty2017/index.php/10-11-Chigbu-150_paper.pdf?page=downloadPaper&filename=10-11-Chigbu-150_paper.pdf&form_id=150&form_version=final.
- Chigbu, U. E., Tenadu, K., & Mwasumbi, A. (2017). Curriculum reform in land governance education: The need for transforming existing curricula in Africa. *Annual World Bank Conference on Land and Poverty*, 1–23.
- Christensen, S. (2005). Flexible land tenure in Namibia. *GIM International*, 19(3). Retrieved from <https://www.gim-international.com/content/article/flexible-land-tenure-in-namibia?output=pdf>
- Christensen, S., Werner, W., & Hojgaard, D. (1999). *Innovative land surveying and land registration in Namibia*. 82.
- De Villiers, S., Christensen, Å., Tjipetekera, C., Delgado, G., & Mwando, S. (2019). Land Governance in Namibia. In *NUST-NELGA Symposium*. Retrieved from NELGA website: [http://landsymposium.nust.na/sites/default/files/2019-08/Land Governance in Namibia 3-4 September 2019.pdf](http://landsymposium.nust.na/sites/default/files/2019-08/Land%20Governance%20in%20Namibia%203-4%20September%202019.pdf)
- de Vries, W., & Lewis, J. (2009). Are urban land tenure regulations in Namibia the solution or the problem? *Land Use Policy*, 26(4), 1116–1127. <https://doi.org/10.1016/j.landusepol.2009.02.002>
- Fourie, C. (1998). The role of local land administrators: An African perspective. *Land Use Policy*, 15(1), 55–66. [https://doi.org/10.1016/S0264-8377\(97\)00040-9](https://doi.org/10.1016/S0264-8377(97)00040-9)
- GLTN. (2020). *Improving Tenure Security Through the Establishment of a Digital Land Registry*.
- Gold, J. (2013). *Sanitation Issues in Namibia*. Retrieved from https://assets.publishing.service.gov.uk/media/57a08a4ee5274a31e000052c/Research_Report_Namibia_Study_Jan_2013.pdf
- Mabakeng, M. R. (2021, February 26). Implementing Land Administration Systems That Will Fast-Track Land Delivery. *The Namibian*. Retrieved from <https://www.namibian.com.na/209121/archive-read/Implementing-Land-Administration-Systems-That-Will-Fast-Track-Land-Delivery#>
- Middleton, J., Von Carlowitz, L., & Becker, H. G. (2016). Land management as a vital basis

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- for the implementation of land reform in Namibia. *ZfV - Zeitschrift Fur Geodasie, Geoinformation Und Landmanagement*, 141(2), 91–98. <https://doi.org/10.12902/zfv-0099-2015>
- Nakale, A. (2018, October 4). 40 % of Namibians live in shacks. *New Era*. Retrieved from <https://neweralive.na/posts/40-of-namibians-live-in-shacks>
- Namhindo, A. . (2012). Land Administration in Namibia for Sustainable Economic Development. *Geospatial Industry and World Economy*. Retrieved from https://geospatialworldforum.org/2012/gwf_PDF/Anna H. Namhindo.pdf
- Nembwaya, H. (2020, March 20). Oshakati Implements flexible land scheme. *The Namibian*, p. 5. <https://doi.org/10.1155/2010/706872>
- New Era Staff Reporter. (2021, March 8). Gobabis residents receive land hold titles. *New Era*. Retrieved from <https://neweralive.na/posts/gobabis-residents-receive-land-hold-titles>
- NSA. (2018). *Namibia Land Statistics Booklet*. Windhoek.
- NUST. (2021). *Year Book- Part 7 Faculty of Natural Resources and Spatial Sciences* (NUST, Ed.). Retrieved from https://www.nust.na/sites/default/files/documents/Final_eYearbook_FNRSS_2021.pdf
- Paresi, C., & Sharif, M. (2004). Land Information Management in Southern Africa Focus on technology management training in Surveying and Mapping in Namibia. In *ISPRS 2004 : Proceedings of the XXth ISPRS Congress : Geo-Imagery Bridging Continents, 12-23 July 2004, Istanbul, Turkey. Comm. VI. Pp. 7-12 (Pp. 7-12). International Society for Photogrammetry and Remote Sensing (ISPRS).*, 1999–2001. Retrieved from https://webapps.itc.utwente.nl/librarywww/papers_2004/peer_conf/paresi.pdf
- Republic of Namibia. *Local Authorities Act 23 of 1992.* , Pub. L. No. 23, 1992 (1992).
- Republic of Namibia. *Communal Land Reform Act 5 of 2002.* , 33/2003 § (2003).
- Republic of Namibia. (2009). *Namibia National Housing Policy*. Retrieved from http://www.ohchr.org/Documents/Issues/Housing/sub-nationalgovernments/201114_Response_Namibia2.pdf
- Republic of Namibia. (2012). Flexible Land Tenure Act , Act 4 of 2012. *Government Gazette*, 4693(142).
- Republic of Namibia. (2020). *Progress Report on the implementation of the second National Land Conference Resolutions*. Retrieved from https://opm.gov.na/nl/archive/-/document_library/BFb3E1XtpdEc/view/1000168?_com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_BFb3E1XtpdEc_navigation=home&_com_liferay_document_library_web_portlet_DLPortlet_INSTANCE_BFb3E1XtpdEc_fileEntryTypeId=
- Ros, M. (2010). *Higher education and research*. <https://doi.org/10.1787/9789264088757-13-en>
- Tan, E., Pattyn, V., Casiano Flores, C., & Cromptvoets, J. (2021). A capacity assessment framework for the fit-for-purpose land administration systems: The use of unmanned aerial vehicle (UAV) in Rwanda and Kenya. *Land Use Policy*, 102(December 2020). <https://doi.org/10.1016/j.landusepol.2020.105244>
- Thiem, M. (2014). *A decade of communal land reform in Namibia* (P. Caplan, Ed.). Windhoek: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.
- Tjivikua, T. (2012). *Speech by Prof Tjama Tjivikua on occasion of the signing of a memorandum of collaboration, NHAG AND PoN* (pp. 1–5). pp. 1–5. Windhoek: Polytechnic of Namibia.

- United Nations. (2002). *Namibia country profile*. Johannesburg.
- van der Molen, P. (2005). *Capacity Development for Land Administration 10 years anniversary Polytechnic of Namibia*. (October), 1–13. Retrieved from https://www.oicrf.org/-/decision-makers-meeting-on-good-administration-of-land-in-africa-land-administration-for-poverty-reduction-and-economic-growth?_cur=3
- Werner, W. (1993). A brief history of land dispossession in Namibia. *Journal of Southern African Studies*, 19(1), 135–146. <https://doi.org/10.1080/03057079308708351>
- Werner, W. (2021). Land tenure and governance on communal land in Namibia. In *Land, Environment and Development Project*. Retrieved from http://www.lac.org.na/projects/lead/Pdf/Land_Governance_on_Communal_Land.pdf

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