

Creating a Neo-Customary Land Administration System for Sustainable Land Management

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Key words: land administration, land management, customary tenure, institutional change; data collection; fit-for-purpose; land registration; land information systems.

SUMMARY

Poverty in the less developed world is largely a rural phenomenon, and in sub-Saharan Africa, poverty traps are most often found where there is subsistence agriculture taking place on land held either communally or on customary tenure terms. In the Kingdom of Eswatini (formerly Swaziland) 54% of land is held by the King in trust for the Nation with powers delegated to Chiefs to allocate this land to family groups who hold it on customary tenure terms and use it for their livelihood needs. Improving the use and productivity of this land received support from the European Union's global land governance programme for a project of Sustainable Land Administration and Management, which provides chiefdoms with tools to collect and maintain land information and capacities to use this information for managing land use. Implementation in four pilot areas has secured traditional authority and community support and proved project feasibility. Scaling up to the remaining 300+ chiefdoms depends on the generosity of donors. Early indications of the potential for sustainability are promising: open source software solutions adopted for field data collection and processing appear robust; chiefdoms are adding unclaimed landholdings and new allocations to their registers; other chiefdoms are coming forward to request that the project covers their area. Tenure security is expected to improve, but sustainability, contingent in large part on institutional arrangements, remains the principal doubt.

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1. INTRODUCTION

Social, political and economic life in most of Sub-Saharan Africa revolves around land – where land-based activities, such as agriculture, are fundamental to food and livelihoods security. Land is often an “issue” not just because of socio-economic-political dimensions but also historical, with a continuing legacy brought about by colonialism. The embodiment of the “land issue” in Africa may well be the Kingdom of Eswatini, a small landlocked nation in Southern Africa, known until recently as Swaziland, where culture, society, politics, economy, and land are inexorably linked.

Although urbanisation gathers apace across the African continent, many countries remain predominantly rural in their demography and economies. Of Eswatini’s population of 1.1 million, 80% reside in rural areas, and although the economy is relatively diverse for a small African nation with a gross national income per capita of \$3,904 (World Bank, 2018), the economy is built on the pillars of agriculture, manufacturing, and public administration (GOE, 2015). The Government’s development agenda is guided by the National Development Strategy (GOE 1999) that highlights, among other things, constraints to agricultural sector growth caused by the land tenure system (and limited investment in commercial agriculture on customary tenure land), land disputes, and complex land institution arrangements. The latest two-year National Development Plan (GOE, 2019) reiterates these constraints and adopts prior strategies that includes approving the 2009 National Land Policy and enacting the 2015 Land Bill.

2. ESWATINI LAND TENURE AND ADMINISTRATION

The “land issue” in Eswatini, and principally the reason why land policy and legislation reforms are long stalled, relates in large part to historical and political developments of the ‘Swazi Nation’. Briefly, the ruling Dlamini family and other clans entered southern Eswatini about 250 years ago; they established the Swazi Nation, either peacefully or forcefully absorbing the various other clans (SNTC, 2017). At one time the Nation extended far into what is today South Africa, but the arrival of the Boers and the British during the 19th century pushed back the Swazi to present day borders. Although Swaziland was declared a ‘protectorate’ of Great Britain, the Boer farmers and British miners settled large tracts under “concessions” granted by King Mbandzeni, which amounted to a “paper conquest” of the Swazi Nation (SNTC, 2017). The chaotic award of concessions¹ was often ill-defined and overlapping and considered by the settlers to be grants or sales and by the Swazi to be permissions to share use of the land. This created multiple problems that led the British administration to partition the country, allocating two-thirds to the settlers and one-third reserved for the “natives”². The resentment Swazis felt

about this was then compounded by the conversion of most of these concessions into freehold titles, with the land surveyed and registered in the Deeds Registry in Pretoria, South Africa.

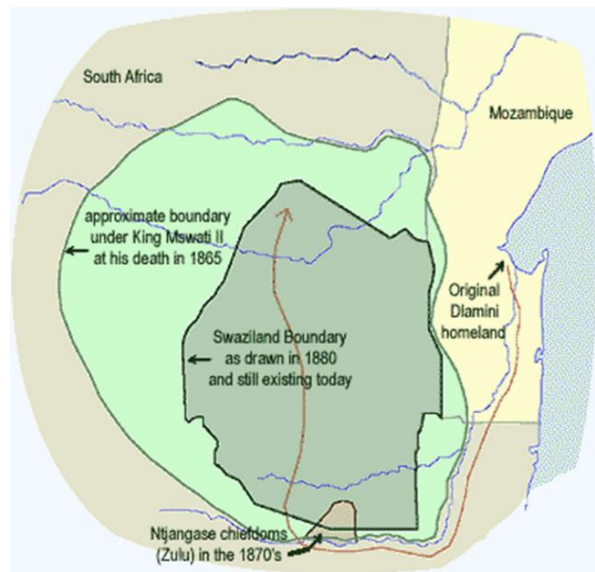


Figure 1: Eswatini (Swaziland) historical development (courtesy Swaziland National Trust Commission)

The land lost to the settlers posed a threat for the ruling family, whose authority stemmed in large part from control over land; allegiance must be pledged to the King and to a Chief in order to access and retain land for agriculture and livestock grazing, and many Chiefs are members of the ruling family, although more influential clans would retain their leadership lineage.

Recognising that the land could not be taken back by force, King Sobhuza (1921-1982) initiated a buy-back programme funded by taxes levied on Swazis working in the South Africa mines. This, and other sources of funds, has enabled the Swazi Nation to reacquire large tracts of the land lost to settlers, such that now about 60% of the country is held by the King in trust for the Swazi Nation, with about 25% remaining in private ownership and 15% belonging to the government.

The history of how land was lost, first when the colonial power defined the Kingdom's borders, then to foreign settlers, and the time and cost to return the land to Swazi Nation has left a legacy that still dominates any discourse on land tenure, administration and management matters. Traditional authorities, inherently conservative by default, view any proposal or initiative involving or impacting Swazi Nation Land with great circumspection. Proposals for tenure reform, however well-meaning, made by the political or modern government based in the capital city Mbabane, are frequently thwarted by the traditional government (King's councils and Council of Chiefs) based in Ludzidzini.

3. SUSTAINABLE LAND ADMINISTRATION AND MANAGEMENT

Into the complexities and sensitivities of the land issue in the Kingdom of Eswatini a project for sustainable land administration and management is being introduced and tested. Like many such past initiatives the project is promoted by the modern government and supported by a development partner or donor, in this case the global land governance programme funded by the European Union³. Although in its design the sustainable land administration and management (SLAM) project envisages a key role for government agencies in all aspects of implementation and operation, the approach and methodology then adopted re-focuses the project's objectives on chiefdoms and traditional authorities and promotes a vision of building a neo-customary land administration and management system at local, chiefdom level.

The purpose of the project remained unchanged, “to provide tools and capacities for sustainable land administration and management at national, regional and chiefdom level”, but activities are now focussed more on chiefdoms than on government bodies. The outputs and outcomes to be achieved remain largely the same, and these are:

- Result 1: Tools are developed and used for more efficient land administration of Swazi Nation Land at national and *inkhundla* (district) level.
- Result 2: Relevant stakeholders capacitated to use the cadastre and manage Swazi Nation Land more efficiently and sustainably.
- Result 3: Institutional arrangements for Swazi Nation Land are reviewed and stakeholders accept the recommended revised arrangements.

3.1 Land Administration Tools

The tools defined in the project terms of reference include, among other things, a system of land identification and recording that is developed and tested in the four pilot areas, creating a computer-based land records registration system; in other words, customary land rights data held within a Land Information System (LIS). For reasons highlighted later, the records of customary landholdings would not, at this juncture, be part of the formal deeds registry system, but would be held independently and maintained by each chiefdom, although the land records database is duplicated centrally for use by national authorities, either modern or traditional, and for security.



Figure 2: Stages in the process of compiling the register and LIS

Compiling the register and creating the LIS is a multi-stage process. The stages, illustrated in Figure 2, are typical for many large-scale systematic land rights recording, titling or registration projects. The process starts with building political support, then raises wider awareness, followed by data collection, processing and checking, before finalising, delivering and sustaining the results.

The SLAM project adopted the same standard process but in the local context with different emphasis. Securing the necessary political, traditional authority, support required strict observance of customary protocol and ranking hierarchy. After getting the go-ahead from His Majesty the King this message was transmitted verbally to all Chiefs, then to Chief's inner councils and then to community members in each chiefdom forming part of the pilot project. Meetings were organised and conducted by traditional authorities according to customary norms. The messages delivered at each meeting emphasised the support of the King and were carefully crafted to address political economy concerns and to promote the benefits of land rights recording and registration for effective local administration and management of customary tenure land by chiefdom communities and their leaders.

The approach proved successful, and the project moved on to the next stage of data collection, commencing with community leaders identifying through participatory mapping, community-held lands such as communal grazing lands and wetlands. This process used high resolution (0.25m) orthophoto maps, compiled two years prior by high altitude aerial photography. The same image maps, covering the whole country, provided the spatial framework for homestead landholding data capture.

A fully digital workflow is in place for collection and recording of landholding data. The IT components of the system consist of: mobile devices, a central server and geo-database, and desktop GIS.

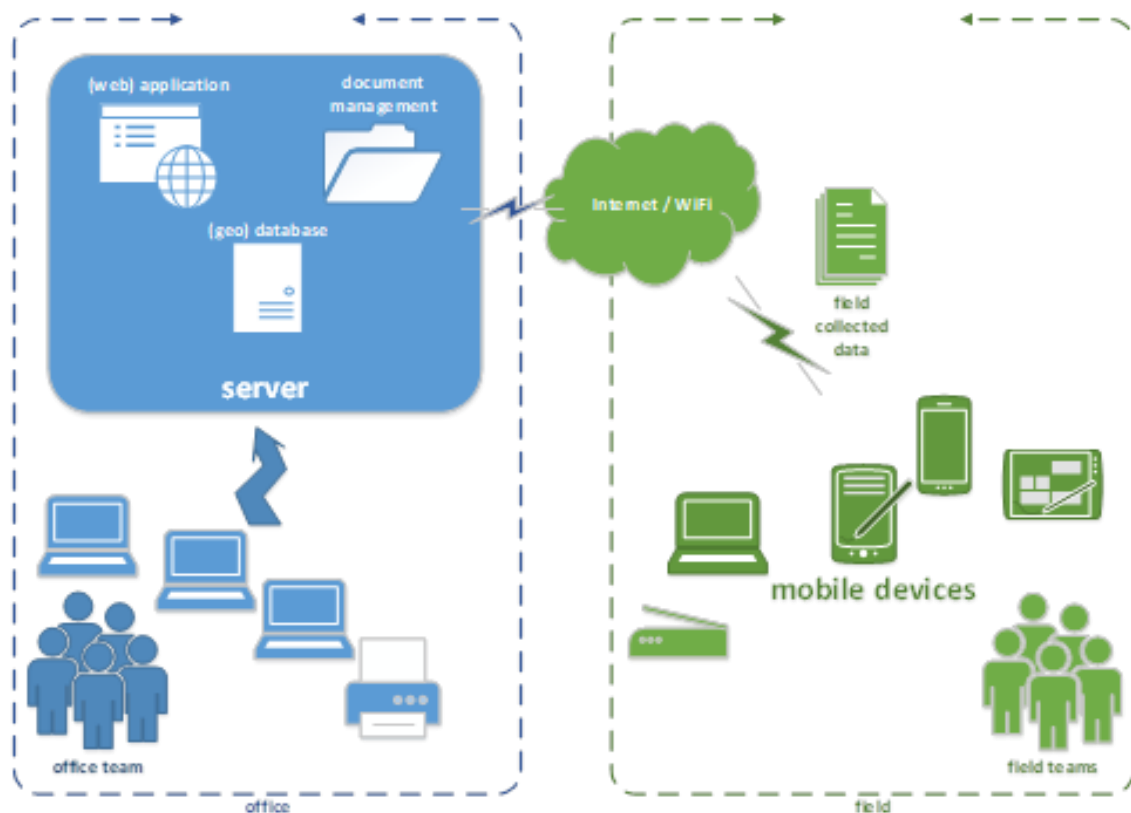


Figure 3: IT/GIS set up

Field data collection uses Open Data Kit (ODK)⁴ and Geo-ODK⁵ open-source Android software tools for mobile devices. A trained enumerator (one day of training proves to be sufficient in most cases) uses a structured questionnaire form that combines both spatial and attribute data collection that includes:

- Respondent's name
- Homestead head's name and spouse names(s)
- Recognised Chief and chiefdom
- How homestead was acquired and year of allocation
- Location geometry and census number of homestead
- Geometry of homestead landholding (one or more parcels)
- Current land use
- Geometry of land lent out or borrowed from others
- Incidence and details of any disputes

The questionnaire survey can be completed “offline”. High-resolution digital orthophotos and the in-built GPS receiver on the mobile device provide the location and geometry of the landholding. The use of mobile devices and technologies for collection of (geo) information in the field has grown popular in the last decade, avoiding the use of pen and paper-based surveys and questionnaires. The challenges associated with paper-based methodologies are avoided and Table 1 summaries the project’s experiences with technology use.

Table 1: Summary of advantage and disadvantages of technology use for field data capture

The use of digital tools for field data capture in the SLAM project	
Advantages	Disadvantages
<ul style="list-style-type: none"> – Enforces consistency and completeness in recording – Improves quality control – Enables linking of supporting documents – Avoids transcription errors during transfer – Provides an audit trail – Flexible and easy to modify forms – Increases productivity – Use of local enumerators (tech savvy young adults) – Low training overhead 	<ul style="list-style-type: none"> – Requires skilled/experienced IT/GIS staff to setup and administer the XML forms, database server, etc. – Need for some field support for accidental software resets – Loss or damage to mobile devices – Cost of mobile devices

No attempt is made during mapping of landholdings to demarcate or precisely define the boundaries between landholdings. These were marked out by traditional authorities together with the allottee and community elders usually by tying knots in the long grass during a land allocation ceremony, and most are now easily identifiable on the ground and/or on orthophotos as linear features such as fences, field lines or vegetation. Prior demarcated landholding boundaries are widely respected, and the project found few disputes about them. However, the project did avoid directly identifying any chiefdom boundaries because these are more contentious.

Data processing employs a central server running a PostgreSQL geodatabase⁶ accessed using QGIS 3 open source desktop GIS software⁷. Some programming of ‘plugins’ by experienced software developers has been necessary for automating processing tasks and creating customised user interfaces. Database scripts are used to overcome one of the more technical challenges related to coordinate reference systems and image file formats and the need to seamlessly transition back and forth between the local Lo system⁸, in which the orthophoto maps are held in ECW⁹ format, and WGS84 and MBTiles¹⁰ file format used on the mobile devices.

GIS staff at the Surveyor General's Department in Mbabane are presented with unedited geodata illustrated in Figure 4 for 'cleaning'. Another unique feature of the SLAM project is that the spatial attributes of each landholding are collected independently of adjoining land parcels. Usually, land tenure data recording is a more collective effort with neighbours present and pointing out and perhaps agreeing their common boundaries. Collecting data independently avoids delays and problems associated with getting agreement about boundaries.



Figure 4: Unedited SLAM data (showing shifts between Lo (black) and WGS84 coordinate reference systems (green))

The data processing task, albeit labour intensive, aligns the polygons with features visible on the orthophoto map and snaps nodes and vertices to adjoining polygons in appropriate instances. Where larger overlaps exist, they can be corrected by the enumerator if the issue is one of misidentification, but in other cases they represented possible land or boundary disputes. These are flagged for action during the verification stage.

As with most land tenure data collection projects, verification consists of taking maps and lists back into the field for public display to identify errors or dubious claims. More uniquely, the SLAM project recognises traditional authority and shares the draft results first with the Chief and chiefdom inner council, who initiate their traditional form of mediation to attempt to resolve any disputes identified during data collection.

Mistakes in data collection are corrected and the results of disputes resolved are added to the records prior to preparation of the registers, maps and databases for delivery to each chiefdom. Modelled on a land title register, each landholding has a page in the register with sufficient space to write in updates and there are blank pages for new allocations of land made by the Chief. A laptop computer with customised QGIS software and 'GeoPackages'¹¹ is provided that enables the Chief and inner council to view and query their land information, but not to change or update the data.

The pilot project did not envisage or provide Internet connectivity between each chiefdom and the central database server for continuous updates. This complexity may be introduced in a later phase of the project. Training and support are provided for maintaining the register manually, and the database will be updated periodically by the Surveyor General. Sustainability is largely depended on access to and use of the information, the guidelines developed, and the training provided for improved outcomes in local land management.

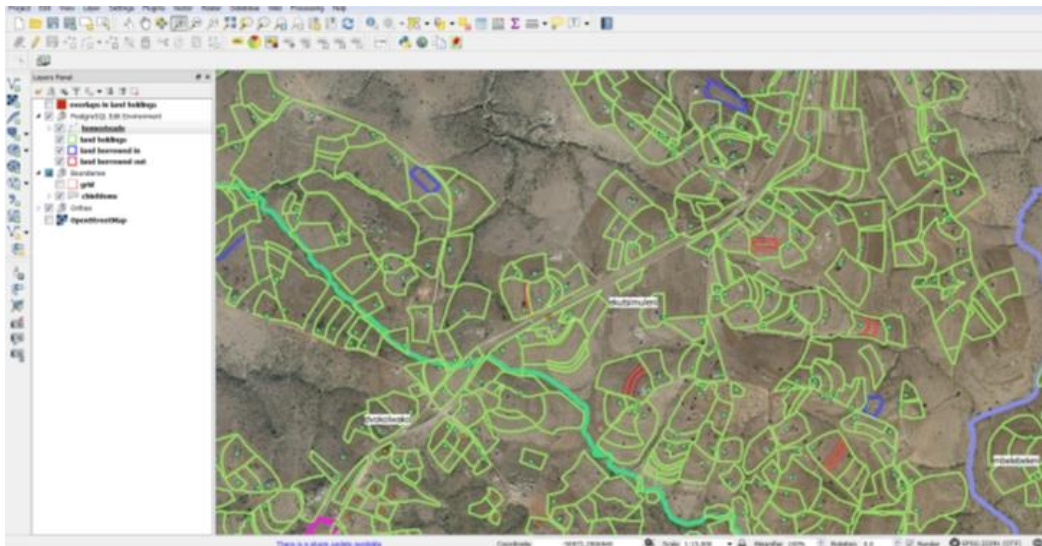


Figure 5: Edited, verified and finalised landholding parcels with land lent/borrowed shown in blue and land with unresolved disputes in red.

3.2 Land Management Outcomes

The project's purpose of providing tools and capacities for land administration and management relates to the objective of improving security of tenure and access to land for women and the rural poor, thereby improving food security (GOE, 2015), principally by:

- Documenting, in 'official' registers (recognised in customary law and by the Constitution), family rights to hold and use land.
- Making land information available for informed and transparent decision-making on access to land with appropriate uses.
- Increasing land use efficiency by facilitating secure land rental markets.
- Using land information for controlling land use change.
- Promoting the effective resolution of land disputes by providing reliable tenure data.

Customary law prescribes the process of how land is accessed by either allocation or inheritance. Sales are not permitted, which is why the project did not produce separate documents or certificates of title for each homestead; official recognition only requires registration.

Improving the outcome of land allocation required improving the process, and this in turn requires standardisation and documentation. Overcoming conservative resistance to codification of customary law required taking a small first step, producing a very generalised and non-prescriptive guideline on chieftdom land administration. Its acceptance should initiate small incremental reforms.

Although land is lent to and borrowed from other members of the same community, this occurs in less than 3% of landholdings. The amount of unused or underutilised land is perhaps ten times as great¹², which reflects fears that land lent out may not be returned. Land register records should allay such fears, improving tenure security, and encouraging use of more land by productive farmers.

Land disputes are pervasive but not prevalent (see Table 1).

Table 2: Incidence of land disputes

Homesteads with land disputes	6.0%
Homesteads in dispute with chieftdom about land	2.8%
Homesteads in dispute with others about land	2.6%
- others are another homestead	45.4%
- others are family members	24.5%

Disputes with a Chief and inner council are particularly hard to resolve; these may require appealing to the King. Of the homesteads in dispute with other homesteads less than 10% of these relate to boundaries or encroachment; the majority are about irregular, informal and illegal occupations. Deceitful and illegal sales of land by family members are become more common. The traditional means for dispute resolution, increasingly under pressure from land shortages and people using the more formal court system, employs a form of mediation – described as ‘the politics of harmony’ (Rose, 1992) – where disputants are encouraged to sort out their differences themselves. Building on this traditional form of dispute resolution, the project provides training for local-level mediators. This new capacity together with available land information is expected to reduce the backlog of ongoing disputes, with some dating back to 1960 in the pilot area, but most arising since 2008.

4. INSTITUTIONAL CHANGE

Eswatini’s Constitution includes a clause that any proposed law before parliament that affects Swazi law and custom including Swazi Nation Land must be referred to a council of Chiefs and that a two-thirds majority in parliament is needed for the proposed law to pass. The consequence is that customary land tenure law and practice reform is difficult to achieve and subject to the sanction of a traditional authority ‘government’. A national land policy drafted in 1999 then re-drafted in 2009 has not succeeded in securing the support of traditional authorities, and nor has the Land Bill of 2015 that proposes, among things, the imposition of institutional change on Swazi Nation land governance.

A further complication is that there are three government ministries and a parastatal agency holding important responsibilities for land administration and management. Proposals for creating a unifying ministry for land have remained no more than just a proposal.

The SLAM project includes a component for reviewing and recommending revised land institution arrangements that would be acceptable to stakeholders. Although the project design limited the scope to Swazi Nation Land, the implementation approach broadened this to include private title deed land. The reason for this relates to sustainability and whether it is justifiable to build a separate and parallel institution and technical arrangement for customary land administration and management? Also, and recognising that achieving consensus among a diverse group of stakeholders would be difficult, the project instead explored various feasible options for reform, and stakeholders agreed to nominate three to four and to forward these to higher authorities for deliberation on a political level. These options are:

- Maintain the current dual structure of separate administration and management arrangements for customary and title deed tenure land and build and strengthen traditional authority land administration and management.
- Retain a dual structure but build stronger linkages between government and traditional authority and strengthen government to help support traditional authority administration and management of customary tenure land.
- Unify administration and management of all land tenures in a single body located in either a government ministry or agency, a traditional authority body, or an independent agency.

Progress on discussion and further development of these and the preferred option(s) will be contingent on scaling up the SLAM project and rolling it out to cover the remaining 300+ chiefdoms nationwide. The pilot project covered only 20 chiefdoms, albeit some quite large, as shown in Figure 6.

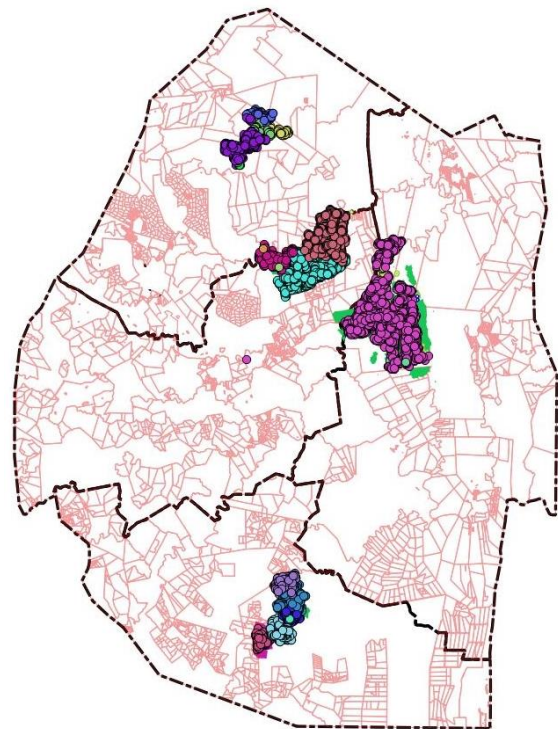


Figure 6: SLAM pilot project customary tenure data collection result in 20 chiefdoms, (registered cadastral data shown in red)

5. CONCLUSION

The SLAM pilot project has demonstrated the plausibility and feasibility of strengthening land governance and improving tenure security on Swazi Nation Land with the support of traditional authorities by providing tools and building capacity for a new customary form of land administration owned and operated at the chiefdom level. This presents for the first time a real opportunity for advancing meaningful reforms and modernisation of customary land administration and management to strengthen governance, improve land use, and to promote agricultural livelihood outcomes for the rural poor.

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NOTES

¹ Concessions Act No. 3 of 1904

² Concessions Partition Act No. 28 of 1907

³ <https://africalandpolicy.org/eu-programme/>

⁴ <https://opendatakit.org/>

⁵ <http://geoodk.com>

⁶ <https://www.postgresql.org/>

⁷ <https://www.qgis.org/>

⁸ The Lo system is a south oriented CRS using the Cape Datum of 1950 with a point of origin near Port Elizabeth in South Africa, the Clarke 1880 ellipsoid and Gauss Conform Transverse Mercator grid in 2 degree zones (Mugnier, 2015).

⁹ Enhanced Compression Wavelet (ECW) is a proprietary wavelet compression image format optimized for aerial and satellite imagery.

¹⁰ MBTiles is a specification for storing tiled map data in SQLite databases.

¹¹ A GeoPackage is an open, non-proprietary, platform-independent and standards-based data format for geographic information system implemented as a SQLite database container (Wikipedia).

¹² Based on estimates from interpretation of orthophoto maps.