1 Introduction

This document aims to contribute to MSP debates and policy proposals on developing an integrated land information system. Towards the end of 2018 and the beginning of 2019, LandNESS has participated in a range of Presidential Expert Advisory Panels (PEAP) which have culminated in the Final Report of The Advisory Panel on Land Reform and Agriculture. Through the following concept note, LandNINES presents an overview of South Africa's land data ecosystem and an initial set of ideas towards an essential but insufficient condition for the (re)designing land data/information ecosystems.

LandNESS suggests that for the government to be efficient in the execution of its governance obligations, it requires access to basic but critical data. Governance that is based on informed decisions, especially in allocating resources is reliant on accurate and up to date data. The challenges associated with delivery of land reform and the implementation of sustainable human settlements are a function of the organisational design of government and a reflection of the lack of a comprehensive national approach to land data, which is an impediment to land governance.

Manona (2020) provides an analysis of how the full sets of ‘old order’ policy instruments find their way into the post-apartheid order:
- It is argued that these policy designs and approaches were deployed at any particular phase of the transition from the apartheid regime in respect to land governance.
- The result of this was poor policy instruments that lacked coherence and that were not mutually reinforcing.

Therefore, LandINESS began making calls for ‘repurposing’ or a broader policy redesign of South Africa’s land governance and admin system that aimed to align policy goals with appropriate policy instruments in light of this policy and instructional incoherence. This concept note focuses on repurposing the data sphere within a goal of bringing wider transitions to the wider system of land administration.

2 An Overview of South Africa’s land data ecosystem

The main government actors in South Africa’s land data ecosystem are:
- Constituted by multiple interconnected layers of three spheres of government, local, district and metropolitan municipalities, national and provincial departments as well as state owned entities.
- Each having varying extents of interlocking as constitutionally prescribed.
- The post-apartheid state structure along with split land governance mandates led to land data fragments anachronistically in multiple state departments. For an example, the Department of Sports, Arts and Culture (DSAC) seems remotely related to land, upon closer examination is a major player, a producer and custodian of at least three key land datasets through unrelated statutory instruments. From this point of view the DSAC is an important player in land governance, but also a generator and custodian of an important land datasets.
- Within the government structure outlined above, there are multiple interlocking bureaucratic functions that entail extents of generation, storing and sharing of a variety of land datasets, i.e municipal boundaries, cadaster and land use data. Some spheres of governance use a range of state owned fragmented web sites to share and store data products, such as the Municipal Demarcation Board. Although, municipalities are the bulk generators of land data.

Other initiatives to store data such as the Municipal Barometer, the Department of Human Settlements (DHS) and the Housing Development Agency (HDA) however, neither make data of developing human settlements available.
Similar findings of poor data integration prevail in other state and state owned sectors including the National Geo-spatial Information® (NGI) which also does not store any data on gazetted land restitution claims. Therefore, calls for an integrated land information system date back the White Paper on South African Land Reform which has influenced LandNESS’s movement towards encouraging the opening up of access to land data. LandNESS also advocates for a break from the traditional silos perception to land to an approach that understands land as an interconnected system that involves the various sectors of government. The land observatory is a good example of an approach that integrated land data across the traditional silos.

3 The national policy environment

- The South African Constitution anchors the need for an open government and one that is transparent. In support of this the Promotion of Access to Information Act #2 of 2000 (PAIA) was designed and passed into law to bring to life this imperative, specifically, the right of access to information that is held by the State or by a private person. However, a lack of compliance in the public administration exists where requests for information are routinely ignored, despite the existence of the PAIA.
- Upon analysing randomly selected land laws, excluding the Constitution, it is evident that the state has not lived up to the transparency and accountability as a legal requirement.
- The statute does not commit to currency of data as the constitution demands the constitutional imperative. One of the Bills currently in the parliamentary process cue, the Expropriation Bill 2016 also fail to tick the ss195(1)(g) box, in that the Bill does not make any transparency with respect to process and status of land.

There is an intersection between the land data regime, the National Internet Communication and Technology (ICT) infrastructure and state architecture as these entities are poorly aligned between constitutionally entrenched policy goals and instruments that are not mutually reinforcing. It is evident that while the Constitution commits to transparency and accountability, the state has not outlined the minimum standards as requirements for policy instruments and infrastructure regarding land. LandNENES’s call for a land observatory and associated institutional frameworks is aimed at this lack of ‘integration’ and poor coherence of land data. This implies that the proposed land observatory, necessary as it is, is insufficient to realization of constitutional imperatives, but should be accompanied by requisite institutional reforms.

4 Relevant global trends

On a global scale, there is a growing realization for the need for an integrated approach to land informational infrastructure. In Africa, in particular, Burkina Faso, Cameroon, Madagascar, Mali, Uganda, Senegal, Chad and South Africa (the now defunct University of Pretoria based South African Land Observatory) are some of the countries that have set up land observatories. South Africa has an opportunity to draw lessons from some of these countries as a land observatory presents many opportunities. Given the broad scope of the proposed land observatory, LandNENES proposes an incremental approach to the development of the facility.

5 Key elements of the vision

- As a small part of a wider process of data ecosystem, it is appropriate to set out guiding principles as a contribution to rebuilding a capable state.
- Land data systems should address the simultaneity of land systems, the diversity of perspectives and values.
• Due to the scope and depth requiring extensive changes that occur over long durations, there is a need for durable platform/s as vehicles for solving complex land data systems challenges.

• The notion of repurposing of land administration imports the notion of ‘infrastructuring’ from ICT studies and requires teams of experts to embark on a redesign guided by contours of problems and innovations within the organisations. These efforts should be targeted at all the identified spheres of government, departments, state owned entities and private sector entities.

• South Africa’s proposed land observatory requires some level of interoperability of systems between and across different generators and users of land data. Figure 1 below illustrates the principle of pooling data from multiple computers into a single system.

![Model demonstrating interoperability and computer networking](image)

In an example of a municipality, that land data generated by one department becomes available in real time to other departments within the organisational boundary of the municipality and beyond.

• A pipeline alignment design planned by the engineering department within the context of a municipality, would be accessible to departments within the organisational boundaries of the municipality, in real time. The very same concept can be applied at a national government department or to a national government scale/s. This implied that the land observatory would have an integrative function by harvesting land data from multiple sources while closing the gaps in the data ecosystem.

• In response to the complexities associated with land resources and the perception of knowledge silos, transboundary governance frameworks and transdisciplinary teams must be considered as they place a large emphasis on multiple scales of knowledge on the basis that each scale constitutes a critical part of a broader governance framework.

• The financing options for land observatory include funding provided by the state, private sector and should be governed by these entities including civil society. During the set up and upscaling phases, donor funding is necessary.

6 Immediate Steps

• It is recommended that South Africa undertakes a state of readiness study which focuses on issues of political commitment, public sector readiness, existing legal frameworks, public sector institutional frameworks, public sector culture, financial and sustainability considerations and technical infrastructure considerations (i.e. interoperability).

• At the center of the study will also be to identify specific institutional adjustments that are required. The United Nations Economic Commission has some guidelines for more detailed planning procedures.

• SALO may be considered by the MSP to be a viable option, there is merit in LandNESS securing resources for the upkeep. Lastly, MSP has an opportunity of resuscitating the defunct South African Land Observatory (SALO), by acquiring both the infrastructure and the existing data. SALO could be handed over to a multi stakeholder governing body.
7 Why is this important for SA?

- For SA as recording of land rights is link to the UN Sustainability Goals.
- In addition, all spheres of government will benefit in reduced costs associated with multiple fragmented systems.
- A land observatory provides data to South Africans and could be used to manage climate change impacts and adaptation initiatives.
- This initiative will assist in providing raw and aggregated data readily available from different government sources creates new opportunities for value addition, as it creates opportunities for different actors to add value to the data and in the process enhancing knowledge (data analytics).
- Credible and current data is critical to planning at all levels of government as well as vertically.
- The planning as well as monitoring for both land reform and land management in general is greatly enhanced.
- Enhance government accountability to citizens, and create conditions for citizens to get involved in policy and governance decisions (active citizenry).
- In a nutshell, Open Government Data creates new opportunities for South Africa into the 4IR.

LandNNES takes a view that this proposal will save the country money rather than require money. A number of land information repositories such as those held by parastatals and SOEs could benefit from a specialized land information infrastructure, which relieves them of managing multiple infrastructures.