Development of a National Land Use Classification Standard, Methodology, and Symbology for South Africa

1. Introduction

1.1. The Chief Directorate: Spatial Planning and Information initiated a project to develop a National Land Use Classification Standard for South Africa.

1.2. The project is divided into three phases: with the first phase being consultation with various stakeholders, the process which took place in November 2012.

1.3. The second phase of the project which is the current phase, is the development an interim framework for Land Use Classification that will inform the third phase of the project which is the development of a National Land Use Classification Standard for South Africa.

2. Background

2.1. The first phase of the Project as indicated above took place in November 2012 and the report from that engagement forms the basis for further discussions towards a National Land Use Classification standard for South Africa.

2.2. The main purpose of these workshops was to present and deliberate on a possible framework within which land use classifications are to be developed and provide feedback on a number of studies that have been done by various stakeholders in the recent past.
3. **Workshop Participation**

3.1. Participation at these *Service Provider* facilitated workshops was incredibly overwhelming and comments and inputs collected will form the basis for further discussions and engagements towards a National Land Use Classification standard for South Africa.

3.2. The final report on these workshops has been published and can be viewed on the DRDRLR website under Spatial Planning and Information page. Amongst other general recommendations towards the next phase of the project is that participants proposed the establishment of *Working Groups* (WGs) that will look at matters as raised by participants of the workshop in more detail in order to finalise the proposed *Interim Framework* that can be used by all while national land use classification standard is being finalised.

3.3. In consideration of the recommendations made in phase one, the Chief Directorate: Spatial Planning and Information is in a process of establishing various Working Groups (WGs) composed of the Planning and GIS community to explore further the issues as raised in phase one of the project. The proposed focus areas of the WGs are outlined below:

<table>
<thead>
<tr>
<th>Working Group</th>
<th>Proposed Focus Area</th>
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<tbody>
<tr>
<td>Framework</td>
<td>Two definitions are relevant in this regard:</td>
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<td></td>
<td>First: <em>A framework is a logical procedure for coordinating decisions that link development goals with the actions intended to achieve those goals.</em></td>
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Table 1. **Working Groups and Proposed focus areas**
Second: A framework is about coordination, cooperation, consultation and collaboration amongst agencies.

Generally, both definitions emphasize the importance of an entity having the responsibility to coordinate the development of the land use classification system.

- The purpose of a framework according to the United Kingdom (UK) government is that it is required to provide a complete, consistent, detailed and up-to-date land use dataset for a country.
- Furthermore, the purpose of a framework is to harmonize existing land use and other classifications (e.g. land cover, topographic) using a multi-dimensional approach.
- The Intergovernmental Relations Framework Act (No. 13 of 2005) provides the framework for consultation between national, provincial and local government and should be considered.
- This WG must therefore establish a logical coordination/dedicated structure with a budget to coordinate, consult, facilitate cooperation and collaboration between national departments, provincial planning commissions, planning associations, SALGA provincial heads of planning, CD: SPI Provincial Directors, Parastatals, and private sector representative as well as any other relevant stakeholders.
- This WG must coordinate the work of all other WGs to ensure alignment and cooperation on matters that are interrelated and to avoid duplication of efforts in all areas.
- The WG must provide continual feedback to stakeholders, in order to address various aspects of the National Land Use Classification system.
- Recognize the importance of considering other/ existing structures where possible to enhance collaboration;
• the coordinating mechanism must consider all levels of authority including the traditional authority and the Indigenous knowledge
• Explore further the possibility of using a Land use Meta Language for harmonization of existing land use and other classifications.
• The role of Technology in accomplishing the development of a flexible and user friendly land use classification system for the country must be highlighted.
• A plan of action is required that clearly defines activities that need to be undertaken to develop the framework for a land use classification system. This plan of action is an on-going process that must be consistent with the law. It must allow for continuous adjustments to the framework and the development of the land use classification system. Part of the plan of action is to develop a budget and resource plan for the implementation of the framework.
• To enable the harmonisation, alignment and synchronizing of the different classification systems the development of a mechanism such as a land use meta-language ` (LUML) would be required.

**Monitoring and evaluation is a key component of any framework.** Monitoring and evaluation strategy should be developed that includes the identification of indicators to monitor and evaluate the implementation of a national land use classification system. Monitoring involves annual tracking of the implementation of a land use classification system while evaluations should be done in sync with strategic planning processes such as IDP and MTEF and used to determine whether a land use classification system is being implemented effectively.
### Definitions

- A full review of the South African legislation at a national, provincial and municipal level is required. This is to ensure that the framework for land use classification in South Africa is consistent with these laws in terms of identifying land use classes and categories, defining land uses and using appropriate mechanisms for the implementation of the framework. A fairly comprehensive review of legislation is presented in Section 4.2.1. of the Report.
- **Concepts, definitions and principles**: Concepts and principles underpin the development of the land use classification system and provide guidance on how it is to be implemented.
- Within this framework *definitions* for land use classes can be effectively developed. NB: SPLUMB has identified a number of principles for the implementation of land use management systems in the country at all spheres of government.
- Identification of land uses and their definitions and categories, taking cognizance of existing land use classifications and legislation is required and must be compiled in line with legislation.
- Thus, it must be done either by lawyers or data custodians, or a joint effort of these two bodies and the lawyers’ opinion must be obtained if lawyers have not been involved to avoid any legal implications that may arise).

### Classification

- Land use classification is one of the main components of the framework.
- The development of *a two pronged approach or top-down/bottom-up or vertical/horizontal approaches* in integrating aspects of the land use classification system in South Africa has been recommended and must be considered and explored further by this WG.
Such approach involves the following:

- **Top-down:** the development of an over-arching land use classification in the form of a Land Use Meta-language (LUML). The LUML will create a set of rules that will allow land uses in different classifications to be translated into a national land use classification. The LUML must also allow the integration of land uses and zones from land use scheme up to SDFs.

- **Bottom up:** Land uses are defined at the local level and it must be possible to combine land uses based on a set of rules in the LUML to create zones or Spatial Planning Categories (SPC) as defined in the SDF.

- In the development of the land use classification, key components will be to identify land uses and their definitions (working closely with the Definitions WG) and develop a hierarchical categorization of land use classes (primary, secondary, and tertiary classes).

- An inventory of land uses (classes and Broad categories) and land use classification systems and methods used in their development, including land use schemes and SDFs, is seen as a critical component of a framework.

- Categories to be explored further includes Undeveloped category

- The WG must ensure that the classification covers all land uses and the rural and urban land uses must be clearly defined and differentiated, taking indigenous land uses, cultural, and religious and traditional authorities into consideration for the first time.

- The land use classification must link to existing classifications for land cover, topography, Spatial Development Frameworks (SDF), environmental management, property valuations and land use
Thus, a methodology will be required that ensures flexibility in integrating these land use classifications into a national standard. In this regard the use of a “land use meta language” has been identified as a potential mechanism for this to be accomplished.

- A strong emphasis of land use classification systems is that it must define land use classes for all types of areas in a municipality including agriculture, wilderness, water and traditional authorities.
- There is also the need to *align different classifications* designed for defining land cover and topographic feature types.

**Symbology/notation**

- The WG must pay attention to the development of a national symbology set, noting that at the various spheres of government, symbology sets have been developed and are in use.
- A set of guidelines will be required, building on the work already done by some stakeholders such as in KwaZulu-Natal (guidelines for zoning schemes) and on SDFs in various provinces, that will illustrate the work already done on the land use meta-language, land use classification and symbology sets.

The following must be taken into consideration:

- Symbology must be developed and be software independent
- That any effort must consider what is currently being used by cartographers and planners
- And that black and white printing be kept in mind
- Colour coding using RGB model with values
| Curriculum Inputs | • This WG constitute a bigger representation by academic institutions, planning associations and other relevant stakeholders to develop curricula/courses to train planners at the graduate and post-graduate levels based on the outcomes of the work being proposed in the report.  
• Capacity development: From an international perspective it is proposed that formal relationships be established with academic institutions and associations so that training programmes for professionals in the GIS and planning fraternities on the development of land use classification systems be established. |
| Guidelines         | A guideline document will need to be produced that describes the methods and procedures on how to develop and or use land use classification system. The purpose of the guideline is to provide an overview to all those involved in land use planning from ministers to municipalities commissioning land use schemes (FAO, 1996). |

4. PURPOSE OF THE WORKSHOP

4.1. To launch the WGs that are tasked with the development of an interim framework for land use classification that will inform the National Land Use Classification standard for South Africa.

5. THE MAIN OBJECTIVES OF THE WORKSHOP

5.1. To provide feedback on phase 1 consultation workshops that took place in November 2012.

5.2. To identify relevant stakeholders and experts who will participate in the proposed WGs.

5.3. To collect inputs covering areas highlighted under table 1 above, as well as towards finalization of the focus areas for all WGs.
The final report for Phase one can be accessed through the following link:  

Alternatively go to http://www.ruraldevelopment.gov.za ; Branches: Spatial Planning and Land Use Management: Spatial Planning and Information. The Report can be found under topic: Related Documents

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