



# NC PSDF TOOLKIT 4 | BIOREGIONAL LAND USE CLASSIFICATION



Province of the  
**Northern Cape**  
REPUBLIC OF SOUTH AFRICA

## BIOREGIONAL LAND USE CLASSIFICATION TOOLKIT

This toolkit provides a comprehensive framework for land-use classification in the Northern Cape, aligning with the bioregional planning approach outlined in the Provincial Spatial Development Framework (PSDF). It guides various planning efforts, from municipal Spatial Development Frameworks (SDFs) to detailed farm plans, ensuring consistency and alignment with both regional and local priorities. The toolkit emphasizes a standard land-use framework that transitions from broad provincial guidelines to specific local applications, aiding in coherent decision-making across different planning levels.

### TOOLKIT INTENT

#### This Toolkit is to be Used to:

- Assist district and local municipalities in preparing SDFs that align with bioregional planning principles.
- Help the Department of Co-operative Governance, Human Settlements, and Traditional Affairs, and the Department of Environment and Nature Conservation in preparing biosphere reserve plans.
- Provide a framework for the development of tourism plans across various government levels.
- Assist landowners in developing detailed farm plans that align with broader provincial land-use strategies.
- Establish a consistent land-use framework across the Northern Cape, transitioning from broad provincial guidelines to detailed local planning.
- Facilitate informed decision-making regarding land-use changes, ensuring alignment with local SDFs and zoning regulations.
- Encourage the preservation and rehabilitation of natural landscapes, particularly in areas with significant biodiversity.
- Apply SPCs to manage the symbiotic relationship between natural and human-made environments, supporting sustainable development.

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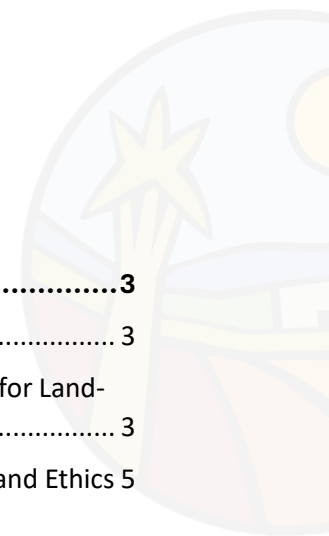
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### KEY ABBREVIATIONS:

SPC	-	Spatial Planning Category
UNESCO MaB	-	Man and the Biosphere Programme

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# 1 INTRODUCTION

The purpose of this toolkit is to guide land-use classification across the Northern Cape, aligning with the bioregional planning approach outlined in the PSDF. This toolkit supports the preparation of:

- SDFs by district and local municipalities.
- Biosphere reserve plans by the Department of Co-operative Governance, Human Settlements, and Traditional Affairs, and the Department of Environment and Nature Conservation.
- Tourism plans by various government levels.
- Detailed farm plans by landowners.

The primary goal is to establish a standard land-use framework for the province, transitioning from broad provincial guidelines to detailed local farm planning.

## 1.1 LAND-USE CLASSIFICATION

Bioregional planning involves land-use classification based on interrelated cores, corridors, and matrices. Using UNESCO's biosphere reserve zoning model, the classification system includes core nature areas representative of the region's biodiversity, linked by natural corridors for migration and adaptation, within a mixed-use matrix.

### 1.1.1 SPATIAL PLANNING CATEGORIES (SPCs): A MECHANISM FOR LAND-USE CLASSIFICATION

The PSDF outlines the comprehensive SPCs consistent with UNESCO's MAB Programme and existing Zoning Scheme Regulations. SPCs do not change current zoning laws but clarify and facilitate coherent decision-making, standardizing land-use decisions across the province. Aligning all zoning regulations with SPCs is recommended, and applying them at all planning levels in the Northern Cape (refer to Toolkit 6).

#### 1.1.1.1 General Aspects of SPC Designation

**SPCs are utilised with the intention to:**

- Record all land units in a spatial data repository (such as the Northern Cape Planning System) for effective land-use administration.
- Indicate both current and desired land uses within a planning area, including types not covered by existing regulations.
- Facilitate decision-making for land-use change applications.

A change in SPC designation from the current zoning requires land use applications to be reviewed by relevant authorities in the context of the land use scheme or management systems and the spatial development framework of the local authority.

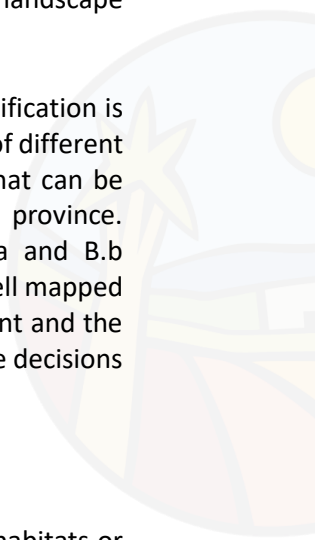
#### 1.1.1.2 Application of SPCs in Natural Landscapes

SPC A and SPC B and, to an extent, SPC C. areas primarily relate to the natural landscape, which contains the inhabited (human-made) landscape (SPC C.b, D, E, and F).

Natural and human-made places are not homogeneous. A classification is required to describe the different characteristics and functions of different types of natural landscapes to develop a common language that can be used for spatial planning purposes throughout the province. Differentiation is, for example, made between Category B.a and B.b describing a higher and lower order status. If SPC areas were well mapped in the municipal SDFs, it would be possible for both the applicant and the officials involved in evaluating the application, to make objective decisions at an early stage of planning.

**SPC B designation illustrates the following:**

- The extent of the area that contains conservation-worthy habitats or habitat units.



- Extent of land, which should, ideally, be rehabilitated to improve the quality of the natural landscape and/or to promote biodiversity conservation.

SPC B.a and SPC B.b areas are primarily private property. The designation of SPC B.a and B.b areas does not imply that it is necessarily undesirable to undertake any development within such areas. Such designation is rather an indication that one must proceed with caution. SPC B.a and B.b explain the nature and extent of the landscape characteristics of the particular area and present a basis for the evaluation of development proposals in the proper context.

SPC B.b designation, therefore, essentially represents an ideal, the achievement of which represents a challenge to the authorities, planners, developers and landowners. SPC B.b designation does not take away any of the landowner's rights, nor does it grant any rights. It merely indicates that the particular tract of land is of importance to biodiversity conservation and, consequently, to the well-being of the people of the area, and that due care should be taken in the management of the land. The above ideal could be achieved through the implementation of innovative strategies, such as the establishment of a Special Management Area, which could be required as a condition of approval for rezoning or development rights on a property.

### 1.1.1.3 Application of SPCs in Human-Made Landscapes

As stated previously, the human-made landscape is contained within the natural landscape. The symbiotic relationships between the two landscape types need to be understood and managed. SPC C (Agriculture), SPC D (Urban), SPC E (Industry), and SPC F (Surface Infrastructure) are land-use types that form part of the human-made landscape. The classification of the landscape in accordance with the SPCs will assist decision-making regarding which type of land-use is considered desirable, or undesirable, in a particular place and what the reasons are for such a decision. For example, it is quite clear that it would be undesirable (in fact it should be impossible) to approve the establishment of an SPC E.c (Light Industry) within an SPC A.a (Statutory Conservation Area).

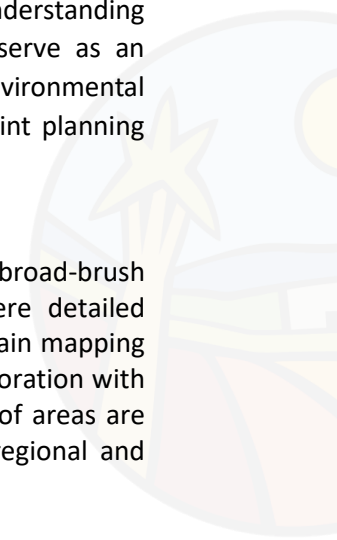
Under exceptional circumstances, it may, however, be permissible to establish SPC E.c in an SPC B.b area (Ecological Corridor/Area). On the other hand, the establishment of an SPC E.a area (Agricultural Industry) within an SPC C (Agricultural Area) will not have to be approached with the same caution as the latter example, because the proposed alternative land-use (agriculture-related) will not be foreign to its setting. Similarly, an application to establish an SPC D.q (Resorts and Tourism-related areas) within an SPC B.a area would be more acceptable than the establishment of an SPC E.d (Extractive Industry) within an SPC B.a area.

In accordance with the SPCs, aspects of the above nature can now be considered by road engineers and managers in provincial, district and local planning spheres much more objectively than was previously the case. In addition, such decisions can be taken in accordance with the requirements of bioregions, neighbourhood areas and biosphere reserves, and in collaboration with the authorities and communities of such entities.

It is important to recognise that SPCs can facilitate a better understanding of the nature and quality of our landscapes and should serve as an important instrument in the preparation of IDPs and in environmental education. However, SPCs do not provide a quick-fix, blueprint planning type of solution which requires little judgement and thought.

### 1.1.1.4 Mapping of SPCs

Provincial SPC mapping should be considered as a first-cut, broad-brush mapping, which provides the overarching framework where detailed refinement is needed at district and local levels. This finer grain mapping ensures accurate land-use representation and involves collaboration with landowners and stakeholders, ensuring the unique features of areas are captured which may be lost with large-scale mapping on regional and provincial levels.



### 1.1.2 PREMISE FOR SPC DESIGNATION: A SYSTEM OF VALUES AND ETHICS

SPCs aim to preserve, restore, and create high-quality places within sustainable development. They incorporate normative and biophysical considerations, guiding local authorities, developers, and landowners. Ethical values form the basis for decision-making, emphasizing the conservation of nature and the quality of life for residents. The approach aligns with UNESCO’s MaB Programme, advocating for ethical, value-based planning to enhance human well-being and environmental integrity.

#### 1.1.2.1 Values and Ethics in Land-Use Decisions

Land-use decisions should reflect the intrinsic, instrumental, and systemic values of places, evaluated through stakeholder collaboration during the municipal SDF processes. This ongoing evaluation ensures that land-use designations align with the qualitative and biophysical characteristics of the environment.

#### Ethical Basis for Land-Use Decisions

A strong system of values, norms, and ethics is essential for sustainable land-use decisions, recognizing the intrinsic and instrumental value of both natural and human-made environments. This ethical foundation supports the conservation of life and environmental integrity, guiding coherent and sustainable development in the Northern Cape.

The below values are to be determined for each planning area in accordance with the following basic questions:

Table 1: Ethical Basis for Land-Use Decisions

a)	<b>Intrinsic Value:</b>	What is the good of the place or thing?
b)	<b>Instrumental Value:</b>	What is the place or thing good for?
c)	<b>Systemic Value:</b>	What is the contribution of the place or thing to the health of the system that contains it?

d)	<b>Current Status:</b>	What is the current status of the place or thing?
e)	<b>Vision:</b>	What could the place or thing look like, or be good for, if it was restored to pristine form?

#### Continuum of Land Use

Land use is organized along a continuum from least to most modified areas. The biosphere designation model helps delineate core, buffer, and transition areas, balancing natural and human-made landscapes for sustainable coexistence.

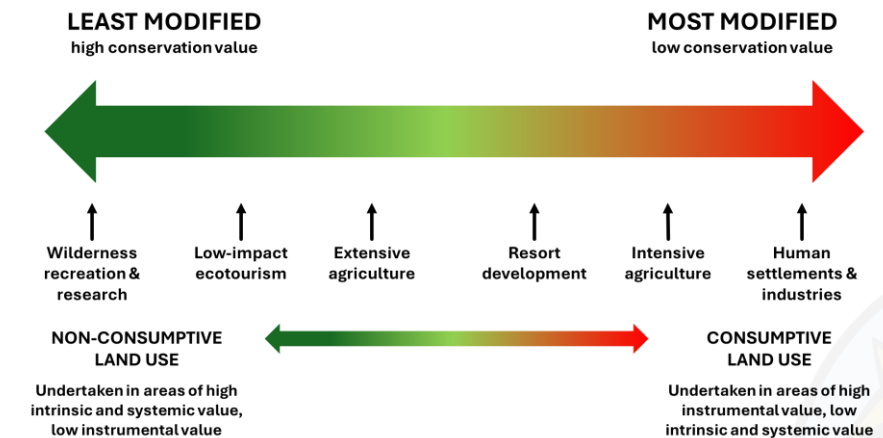


Figure 1: The biosphere designation model

#### Least Modified Areas

This category is generally represented by pristine wilderness and natural areas that have high intrinsic and systemic value, with relatively low instrumental value (considering their low-impact and nonconsumptive land uses). Such areas have the following functions and values:

- ➔ Representing benchmarks for environmental health and self-sustaining ecosystems.
- ➔ Providing secure refugia for source populations and biodiversity.

- Allowing natural processes to continue without human interference (unlike the management of other protected areas, wilderness management is essentially the management of human use and influences to preserve naturalness and solitude, not the management, alteration or control of the natural processes themselves).
- Providing opportunities for solitude or primitive and unconfined types of recreation.
- Containing ecological, geological, or other features of scientific, educational, scenic, historical or cultural value.
- Providing ecosystem functions, e.g. the provision of clean water from catchments, etc.

The intrinsic and systemic value of any natural environment is largely dependent upon the collective value of its components, and any habitat fragmentation will harm the value of the system as a whole.

### **Most Modified Areas**

This category represents the most modified end of the continuum referred to above, and generally represents the most intensively developed cultural landscape, accommodating dense urban settlements and consumptive human activities.

In such areas, little of the natural environment remains and the intrinsic and systemic natural value is generally low. However, the instrumental value of such areas may be high due to their direct contributions to the

industries and industry-related developments that form a part of the economic base of the area. A most important aspect is that even the most modified cultural landscapes can have environmental integrity and that this integrity is influenced *inter alia* by the manner in which people settle and utilise the environment.

In this regard, it is important to recognise that the *spirit of place* is manifested in *location, spatial configuration, and settlement boundaries* (Norberg-Schulz, 1984). Primary *structural properties*, such as the way buildings are constructed, etc. must be preserved in order to retain a particular *local quality* and protect the *atmosphere* of a place (Norberg-Schulz, 1984). In order to ensure that the intrinsic and systemic value of the human-made environment of the Northern Cape is restored and conserved in the long term, it is suggested that the five principles of critical regionalism, namely sense of place, sense of history, sense of craft, sense of nature and sense of limits (Kelbaugh, 1997) be used to guide all future development and restoration.

