GENERAL NOTICES

NOTICE 873 OF 2006

DEPARTMENT OF AGRICULTURE

PUBLICATION OF RANGE AND FORAGE (VELD) POLICY FOR PUBLIC COMMENTS

The Minister of Agriculture hereby publish the range and forage (veld) policy for South Africa for comments by the general public. Comments must be submitted in writing within 30 days of publication of this notice to:

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Minister of Agriculture

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Agriculture
REPUBLIC OF SOUTH AFRICA

RANGE AND FORAGE (VELD) POLICY FOR SOUTH AFRICA

Directorate: Animal and Aqua Production Systems

March 2006

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1. INTRODUCTION

1.1 Background – Range and Forage Production in South Africa

Almost 80% of the land available for agriculture in South Africa can be classified as semi arid, with an average rainfall that is neither sufficient nor reliable enough for the sustainable production of cultivated crops. In addition, the interaction of climatic and ecological factors has created a number of biomes (Fig.1) with natural veld types that can and should only support some form of animal production, using either domestic or wild herbivores singularly or as a balanced combination.

Veld (Rangeland) is the main source of fodder for most of the 13,964 million cattle, 28,952 million sheep and 6, 98 million goats in South Africa. Thus, breeders, producers and keepers of herbivores are therefore essentially range and forage farmers using the available resources to produce breeding stock, meat, milk, fibre, hides and skins for domestic use and sale to international markets. It is therefore important to use these resources as effectively as possible and sustainable to ensure the long-term stability of the animal production (livestock and game) sector.

The range and forage resources should therefore be seen as critical components of food security at local and national level. The animals using these resources provide food security by way of edible products as well as generate income that can be used to buy food.
Rangeland, namely range and forage production units, determines the amount of animal products that can be produced from a given source. Rangelands that are in good condition (in terms of fodder production) within the natural ecological system are the core determinants of a more sustainable animal production. A complete understanding of the dynamics of the ecological system and time and spatial inter-relationship between rangeland, pastures, climate and animals is essential for sustainable animal production, be it from ideal good or poor quality (sick/degraded) veld.

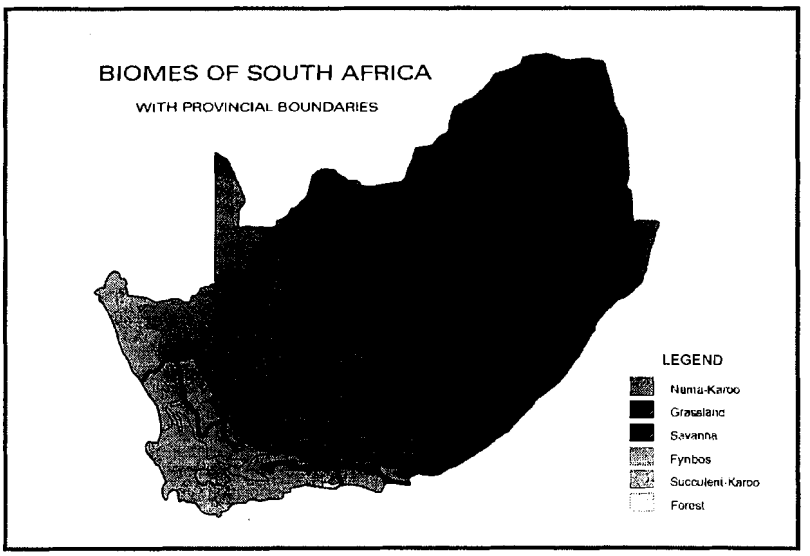

Fig.1. - THE NATURAL BIOMES (PRODUCTION ENVIRONMENTS) OF SOUTH AFRICA

1.2 Rainfall Variation and Rangeland Productivity

The total seasonal rainfall contributes to the production potential of vegetation with a given are. However, it is seasonal distribution of rainfall that determines the fodder flow within a given season. Hence, animal keepers and farmers experience a variable fodder supply from year to year. The condition (health-state) of rangeland plays an important role in stabilising this variation in fodder supply. The better the condition of rangeland, the smaller this variation and the more stable and sustainable animal production will be. Furthermore, rangeland in a good condition is not only more efficient in converting rainfall into dry matter; it also helps to prevent soil erosion as a result of a more stable basal cover.

1.3 Rangeland Condition and Animal Productivity

Rangeland has a major impact on animal productivity and therefore, thus the economic viability of animal production sector. Sustainable animal production is only possible when range and soil conditions are productive and stable. Furthermore, farm size is more likely to have major bearing on the economic viability of a production system when the condition of the rangeland within the farm is in good condition. A rangeland in good condition is able to offset the risks associated with droughts, especially in respect to the intensity and frequency of seasonal droughts.

The condition of rangeland in South Africa is under a continuous degradation process. For example, in the False Thornveld of the Eastern Cape Province, the capacity of a rangeland to support livestock for commercial pastoralism is currently at 49% of its potential.

1.4 Stocking Rate and Animal Productivity

In a livestock enterprise, the stocking rate applied is the single operator-dependent variable that has the greatest influence on the biological output of saleable animal products, the economic return to the farmer and the long-term condition of the rangeland. Conservative stocking rates increase the farmers' resilience towards drought without adversely affecting profitability. Rangeland condition plays a critical role in determining profitability per hectare. Therefore, the stocking rate used must fulfil both financial and biological requirements of a rangeland. Neglecting any of the two will ultimately cause the system to collapse.

1.5 Management of South Africa's Range and Forage Resources

South Africa's range and forage resources can be classified either into veld types on the basis of the general structure and composition of the vegetation in the ecological system or into seasonal use classes on the basis of the seasonal quality and quantity of the forage it produces. Both classifications are used in defining the value of range and forage to animal production.
Classification into veld types provides valuable information on the types of animals, to which the range and forage is suited, whereas classification based on seasonal quality and quantity of range and forage influences the type of animal production system to which the area is most suited. (Fig.2)

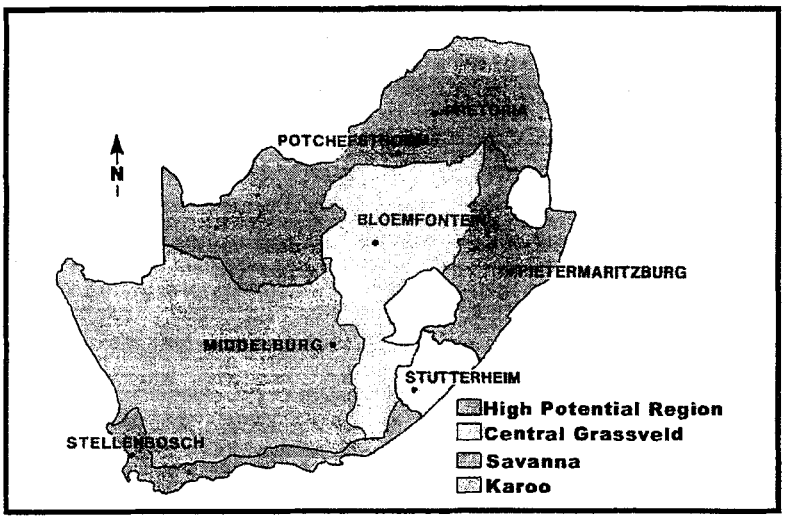

FIG.2. - ECOLOGICAL VELD REGIONS OF SOUTH AFRICA

As the form and function of range and forage areas varies, it is obvious that management practices will also vary. Grasslands and savannah, in particular need careful management, as they can support large numbers of animals and therefore contribute substantially to the agricultural economy.

Much work has been done on the characterisation, evaluation and management of the different veld types in SA such as:

- Investigation of the Drought Commission in 1923: the categorization of range and forage deterioration.
- The classic work on the Vegetation of Southern Africa by J. P. H. Acocks
- The National Grazing Strategy (1970's).
- The Agricultural Research Council (ARC)'s range and forage institute: Research on various aspects of range and forage resources.
- The Grassland Society of Southern Africa (GSSA): showcasing committed range and forage scientists and technologists.

Despite all these attempts to halt deterioration, SA range and forage resources continue to deterioration (by inter alia-desertification, bush encroachment and the loss of palatable plant species), causing a serious threat to sustainable animal production.

1.6 Support services

The infrastructure to service range and forage -farmers is also well catered for by past initiatives that established development centres with research capacity in all the main biomes (Fig. 3). While it would appear as though more than adequate provision has been made to provide biome-linked and production area-linked services, the areas are not confined to provinces and this creates a problem as far as integrated service delivery is concerned. More details appear in the problem statement.

At present, support services directed at the sustainable use and management of range and forage resources are fragmented and research and development functions are spread amongst the nine PDoA's, the DoA and the ARC. This situation weakens the impact and effectiveness of research as well as extension services.

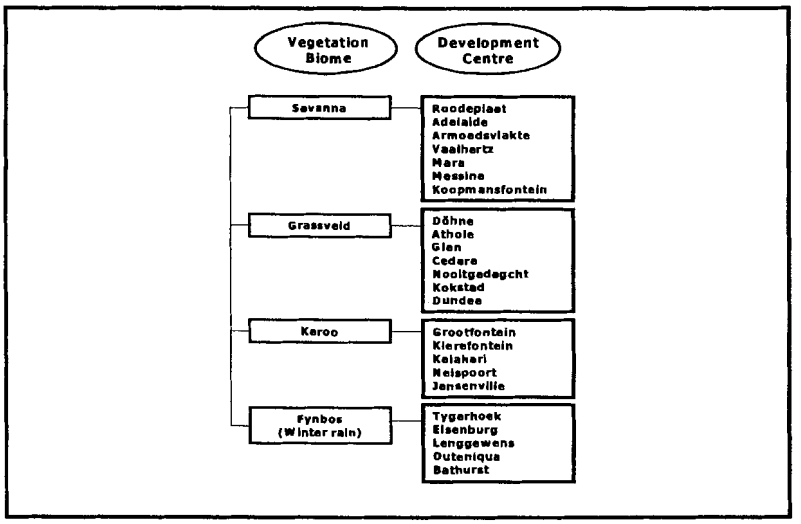

Fig.3. - DEVELOPMENT CENTRES AVAILABLE FOR RANGE AND FORAGE RESEARCH AND DEVELOPMENT WITHIN THE KEY BIOMES

1.7 Legislation

The main DoA - legislation controlling the use of range and forage is as follows:

(i) Conservation of Agricultural Resources Act, 1983 (Act No 43 of 1983)(CARA)
(ii) Subdivision of Agricultural Land Act, 1970 (Act 70 of 1970)
(iii) Fencing Act, 1963 (Act no 31 of 1963

CARA makes provision for the Minister to prescribe control measures with regard to:

- the grazing capacity of veld, expressed as hectare per large stock unit;
- the maximum number and the kind of animals which may be kept on veld;
- the prevention and control of veld fires; the utilization and protection of veld which has burned;

The Minister may also, with the concurrence of the Minister of Finance, by notice in the Government Gazette establish a scheme in terms of which assistance, out of moneys appropriated by Parliament for this purpose, may be granted to land users by means of the reduction of the number of animals being kept on land in order to restrict the detrimental effect of a drought on that land.

DEAT administers two key Acts that control the use of natural resources, namely:

(i) Biodiversity Act, 2004 (Act No 10 of 2004) and
(ii) National Environmental Management Act, 1998(Act 107 of 1998) (NEMA).

Of particular importance are the NEMA regulations as they impact on a number of range and forage - farming operations. Section 24 of NEMA requires that the environmental impact assessment of any listed activity that needs authorization by any organ of state must be considered prior to the implementation of that activity.

DWAF administers:

(i) National Veld and Forest Fire Act, 1998 (Act 101 0f 1998)

This Act also impacts on range and forage management – particularly where fires may be used for bush control purposes and other range and forage management practices.

2. DEFINITIONS / GLOSSARY OF TERMS

2.1 Terms

Conservation	in relation to the natural agricultural resources, includes the protection recovery and reclamation of those resources.
Grazing capacity	The production capacity over the long term to meet the feed requirements of animals in such a manner that the natural vegetation thereon does not deteriorate or is not destroyed.
Degraded	In relation to range and forage, means that it has lost its production potential as a result of over utilisation, erosion and other factors.
Grazing/Forage value	A combination of palatability, food value and bulk of the relevant vegetation in relation to the grazing/browsing animal.
Large Stock Unit	"An animal with a mass of 450 kg and which gains 0.5 kg per day on forage with a digestible energy percentage of 55% (Meissner, 1982).
Veld	The natural vegetation – grass and browse – available for herbivores – Range and Forage have corresponding meanings.
Planted pastures	Dry land or irrigated pastures that have been cultivated with the specific purpose of providing fodder for herbivores.
Range and Forage	Range is indigenous vegetation used as grazing and / or browsing, and Forage is that portion of a living plant that is available for consumption by animals.
Animal	A kind of animal or an animal of a specified breed of such kind of animal which has in terms of section 2 been declared as an animal for the purposes of the Animal Improvement Act , 1998 (Act No 62 of 1998).
Herbivore	In terms of this policy, any animal using natural range and forage as a primary source of food
Department	Department of Agriculture in the national government;
Regulation	A regulation made in terms of the relevant Acts - ;
Game farming	In terms of this policy, any farming activity involving wild herbivores
Sustainable use	The management of range and forage resources for animal production in an environmentally sound way that does not compromise the ability of future generations to meet their own needs from the same resource.
Game animal	In terms of this policy, any wild herbivore using range and forage as a primary source of food and shelter.

2.2 Acronyms

DoA	National Department of Agriculture
PDoA	Provincial Departments of Agriculture
ARC	Agricultural Research Council
WRSA	South African Game Organisation
DEAT	Department of Environmental Affairs and Tourism
DWAF	Department of Water Affairs and Forestry
GSSA	Grassland Society of Southern Africa
R&D	Research and development
SUAR	Sustainable Utilisation of Agricultural Resources
DLA	Department of Land Affairs

3. PROBLEM STATEMENT

3.1 Continuing deterioration of the range and forage resources

The productivity of South Africa's range and forage resources has been degraded over many years by overstocking, overgrazing, etc., resulting in desertification, bush encroachment and loss of palatable species. Should this deterioration be allowed to continue, sustainable animal production will not be possible in the long-term and economic growth will be stifled.

3.2 Past actions have been ineffective

While there have been a number of in depth studies, investigations and strategies in the past to address the erosion of South African rangeland, degradation processes are still continuing. This clearly shows that the many research and extension efforts and strategies that evolved from national investigations have been ineffective.

3.3 Lack of understanding of the role and vulnerability of range and forage resources

Despite the fact that there is a wealth of information on the range and forage resources of South Africa – including ways to evaluate, classify and manage the resources in every biome, there is still a general lack of understanding of the critical role of range and forage management in sustainable animal production.

3.4 Inadequate and potentially conflicting legislation

While the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983) makes provision for control measures – such as grazing capacity and stocking rates - deterioration of the natural vegetation continues and remains one of the largest agricultural and environmental problems in South Africa. Some successes have however been realised and this can be used as reference for future interventions.

In most cases, the game farming industry has not yet been subjected to any measure of monitoring or control, and as a result overstocking and the use of incorrect species has led to serious degradation. Game farming need to be seen as an agricultural activity as far as the use of natural resources are concerned and

hence subjected to similar control measures as livestock farming. The implementation of these measures should be a joint DoA, PDoA's, and DEAT responsibility as current provincial game ordinances

Current legislation also has no definitions for terminology such as game, game farming, range and forage, planted pastures and browse. Therefore, it may be necessary to consider a new legislation, a Range and Forage Improvement Act, that could make more specific provision for the monitoring, conservation, improvement and sustainable use of South Africa' range and forage resources.

3.5 Need for Continuous Technology Development

DoA, PDoA's and ARC must contribute to ensure that the natural resources are optimally utilized for animal production. Continuous technology development, technology transfer and application of this knowledge is imperative.

3.6 Insufficient and uncoordinated human resources

The complexity of solving a comprehensive problem such as vegetation deterioration requires inputs from a range of researchers and expertise from the relevant sub-disciplines of plant and animal science. At present, the required scientific and technical community is compartmentalized and unable to function as a unit.

The mere fact that range and forage degradation is still a threat to sustainable animal production, irrespective of the number of investigations, indicates that research organizations within animal production, do not take the problem seriously, do not recognize the importance of this resource towards animal production, or they are not prepared to put in place a proper prioritization mechanism. Unless, these constraints are addressed, range and forage degradation will continue

3.7 Fragmented support services

Support services directed at the sustainable use and management of the range and forage are currently fragmented. The R&D functions are spread amongst the nine PDoA's, DoA and the ARC. This fragmentation weakens the effectiveness of research as well as extension efforts.
The existing development centres have the capacity to provide services to animal owners, keepers and producers within the different biomes, but these resources are not being deployed efficiently and there is a general lack of national focus across provincial boundaries. Biomes/ browsing & grazing areas are not confined to provincial boundaries. For R&D (including extension services) to succeed, to eliminate duplication, and to strengthen the effectiveness of research, it is essential that projects should be carried across provincial boundaries.

4. OBJECTIVES

The objectives of the policy are to:

4.1 Provide a framework to promote and facilitate the sustainable use of South Africa's range and forage resources for animal production.

4.2 Assist with poverty alleviation through the sustainable use of range and forage resources for animal production.

4.3 Support the revival of existing structures to facilitate R&D within biomes and across provincial boundaries.

4.4 Provide a framework for effective range and forage monitoring and evaluation with the capacity to support legislation to act against those who do not comply with the relevant regulations regarding the sustainable use of this resource.

4.5 Provide motivation for more specific legislation on range and forage – as well as more effective and consistent regulation thereof.

5. POLICY TO ADDRESS THE PROBLEM

5.1 The various policy options available to the department and Policy option recommended to address the problem.

In developing an effective range and forage policy, attention must be given to the following:

5.1.1 Norms and Standards for the sustainable use of range and forage resources

All existing norms and standards should be revised and consolidated, taking all the relevant legislation including the NEMA regulations and Biome–linked issues into consideration. This information must be used to develop an integrated set of Norms and Standards for sustainable range and forage management and extensive animal production in South Africa.

These Norms and Standards should include the provisioning of artificial water supply systems, fencing considerations, infrastructure and management practices.

5.1.2 National Range and Forage program

Using the previous National Grazing Strategy and the National Animal Production and Improvement Program as guidelines, a National Range and Forage strategy, programme and implementation framework, plan should be developed as products of this policy.
This programme shall include practices to deal with the issues around communal grazing, taking cognizance of work done in some of the former homelands where communities managed their own resources with a high degree of success. This programme will link all the activities to be discussed below and should be endorsed at Cabinet level as a national priority with sustainable use of the natural resources and food safety and security as basis.

5.1.3 National Range and Forage Databank

A central databank using the DoA-AGIS system should be developed and maintained as a key component of the National Range and Forage Development Program. This databank should include information on access to range and forage resources for emergency situations such as disaster fires and droughts.

5.1.4 National Range and Forage Working Group (NRFWG)

A National Range and Forage Working Group should be established as a sub-group under the existing National Working Group established during the process of the Livestock Development Strategy. This subgroup should assist with all the issues raised in this document and should include representatives from all the relevant programs in the relevant Departments (DEAT, DWAF, DTI and DLA) as well as Provincial Departments of Agriculture (Veld Scientists); DEAT; ARC-Range and Forage Institute (ARC-RFI), GSSA and WRSA.

5.1.5 Interdepartmental Technical Working Group (TWG) on the sustainable use of natural and agricultural resources

Consideration should also be given to the establishment of an interdepartmental technical working group on natural and agricultural resources. The TWG should be established as a standing committee under the ITCA structure. This TWG should deal with issues relating to integrated monitoring and evaluation, regulation and service delivery to the animal production, game and aquaculture sectors, and it should include DEAT, DWAF, DTI and DLA representatives over and above the normal agricultural role players.

5.1.6 Establishment of a National Range and Forage improvement scheme

(i) A "Range and forage Improvement Scheme" similar to the Animal and Plant Improvement Schemes should be established to ensure efficient animal production within the constraints of the natural resource and without degradation of the ecosystem. This must include a national range and forage assessment and monitoring system to relate range and forage condition to livestock productivity, efficiency and risk management.

(ii) As there is a shortage of Range and forage technicians and scientists, suitably qualified graduate interns will be trained and deployed in all the biomes/production areas to provide technical support to inspectors appointed in terms of CARA and to assist with monitoring, evaluation and planning of farms. This should be linked to range and forage development centres in the respective areas. As these cross provincial boundaries, the ARC-RFI and GADI should jointly manage this.

(iii) Range and forage monitoring and evaluation system. There is a need for a system to enable animal owners at all levels to effectively monitor and evaluate the condition of their resources. This should be linked to a decision support system to reduce the risk of environmental degradation and animal mortality by managing the climatic impact on animal production

5.1.7 Biome centres of excellence / Central centre of excellence

Centres of excellence that work across provincial boundaries need to be established – using the existing structures in Fig.3. The ARC Range and Forage Institute should be recognised as the central range and forage centre of excellence for Southern Africa.

5.1.8 Research and Development (R&D) needs / issues

The research agenda for range and forage must address the loss of bio-diversity, cover and species, bush encroachment and invasion of alien plants.

Attention should also be given to:

(i) Legume and indigenous grass species
(ii) Fodder crops including drought tolerant fodder crops
(iii) Diversification from animal production to other livelihood options to reduce dependency on the natural resources

Government and research organisations such as the ARC, Producer Organisations should allocate more funds towards range and forage R&D if the degradation of the resource is to be reversed.

5.1.9 Land tenure, use and farmer settlement issues

(i) Farmers need to have secured rights to resources for viable production systems. In particular areas this implies changes to the tenure system in rural areas.

(ii) Tenure security can only be successful if there is appropriate institutional support that should be provided by government. Functional and well-supported local institutions will be in a better position to manage local resources, including extension.

(iii) A serious constraint is the weak researcher-extension-farmer linkage, which amongst others, impedes a full understanding of the complexity of the communal land tenure systems and the relation between poverty and resource degradation. Researchers and extension personnel must work closer together.

(iv) A service to determine the current condition of the range and forage and to advise on carrying capacity, stocking suitable species, breeds and combinations as well as production systems should be made available to all existing and prospective farmers. All farmer settlement initiatives involving domestic and/or wild herbivores should be subject to evaluation and planning prior to any animal farming activity.

(v) There is a need for a national register for all farms and their main activities. In addition they must be a compulsory evaluation and permit prior to any changes in land use.

5.1.10 Farmer support services

(i) Mentorship / Stewardship programs

A program linked to the National mentorship program but aimed at effective range and forage management should be initiated, using voluntary and contracted mentors. A register of master range and forage farmers,

domestic and wild herbivore farmers that farm effectively with the resources at their disposal should be established as a reference database.

(ii) Involvement of NGO's: GSSA and WRSA

The GSSA has a pivotal role to play as a strategic partner in training, policy inputs, management advice and R&D initiatives. Close cooperation with GSSA is therefore of critical importance. WRSA is also a key partner as far as the game industry is concerned. Game farmers/ranchers need to follow the guidelines for correct species and number stocking as all users of land are subject to the provisions of CARA.

(iii) Incentives for range and forage farmers

Since sound range and forage management practices can be costly (fencing, water points, etc.) and many farmers and communities cannot afford it. Attention should therefore be given to support for sound range and forage management practices. A system to assist and encourage rural communities to manage communally used range and forage resources shall also be developed.

5.2 Justification of the recommendation in terms of efficiency, effectiveness, social effects, environmental impact and technical feasibility of the option.

Policy option

In addition to the key components above, the existing CARA or future SUAR Act, should be used to used to establish a National Veld and Forage scheme along with specific regulations for the monitoring and control of South African's range and forage resources.

Justification of the Policy

As Range and Forage management is a critical factor in all animal production systems, it is important to give urgent attention to the following issues:

- A National Range and Forage Programme and scheme that will include ways to promote more sustainable use of communally grazed range and forage resources
- Range and Forage Working Group
- Revised Norms and Standards, and guidelines (for Range and forage assessment, grazing capacity, etc).
- Biome development centres of excellence

Most of this will be possible within the framework of the current legislation and will be consistent and aligned with recommendations and actions emanating from the Animal Production and Improvement Program. It is also clear that this will only be possible as a joint initiative involving DoA-AAPS, LUSM, ARC-RFI, DEAT, DWAF to ensure consensus on the shared responsibility of caring for the range and forage natural resource base.

5.3 Summary of stakeholder inputs as well as responses to expressed suggestions and objections

The reference document, Natural Agricultural sector was drafted by ARC-RFI in consultation with GSSA and provincial pasture scientists. Thos document was also incorporated in the ITCA-driven Livestock Development Strategy, highlighting the rangeland management issue as one of the key result areas.

5.4 Institutional implications

The establishment of a NWG and TWG (Closer Corporation with DEAT) on the management of range and forage resources, and the reactivation of Biome-linked Range and Forage Centers as facilities of joint responsibility, indicate the acceptance of the principle of shared responsibility amongst all role players.

5.5 Communication implications

5.5.1 Publication of the final document along with explanatory notes in the government gazette and popular media.

5.5.2 Ongoing communication via the working groups and AGIS.

5.6 Legislative and regulatory implications

5.6.1 Declaration of a National Range and Forage Improvement Scheme in terms of CARA.

5.6.2 More effective use of Legislation to enforce compliance where necessary.

5.6.3 Revision of the SUAR Bill or possible drafting of a more specific legislation for the management of range and forage resources in South Africa.

5.6.4 Close cooperation with DEAT to link the NEMA regulations with this policy and with DoA legislation.

6. INDICATORS OF PERFORMANCE

6.1 Adoption of the policy
6.2 Functional Range and Forage Working group
6.3 Functional Interdepartmental Technical Committee on Range and Forage Management
6.4 Published integrated Norms and Standards
6.5 Functional Range and Forage Conservation and Improvement program (that includes a program for the communal sector) as is linked to the Animal Production and Improvement program
6.6 Functional Biome-linked service centres
6.7 Positive response from all those using range and forage resources – a paradigm shift towards a culture of farming with the range and forage resources
6.8 Documented progressive range and forage improvement

7. TIMETABLE AND IMPLEMENTATION

Action	Time frame	Key Role players
Final decision on policy option	January 2006	DoA (STC, DEXCO), DEAT, DWAF, PDoA
Publication of a draft policy for public scrutiny and inputs	February 2006	DoA, ARC-RFI, DEAT, DWAF, WRSA, GSSA, Stock owners and keepers
Establishment of Range and Forage Working Group	June 2006	DoA, ARC-RFI, PDoA, GSSA
Reactivation of biome-specific range and forage development centres	2006	DoA, PDoA, ARCRFI
National Veld and Forage improvement program (as part of the approved Animal Production and Development Program)	2006	DoA
ARC RFI as a National and regional centre for Range and Forages	2006	ARCRFI, DoA
National Veld and forage reference database on AGIS	January 2007	DoA

8. THE MAIN POLICY AREAS CONCERNING THE DEPARTMENT ARE CLUSTERED AROUND THE INHERENT NEEDS OF THOSE ENGAGED IN AGRICULTURAL ACTIVITIES NAMELY:

8.1 Access to and sustainable utilisation of natural resources such as land, water, flora and fauna.

8.2 Capacity to optimally utilise the resources dependent on infrastructure, finance, technology, services and skills development.

8.3 Competitiveness of the individual enterprises and the entire sector relative to that of similarly endowed or competing economies to be addressed through improved efficiency and productivity, free and fair markets and innovation.

8.4 Confidence and stability brought about by objective and effective regulation, by risk alleviation measures, sound customer relations and effective governance of the sector.

8.5 Responsibility underpinned by the sector's strategic role as society's basic food provider, employer of the less skilled, and as social safety net for rural society.

9. REFERENCE DOCUMENTS

9.1 National Livestock Development Strategy
9.2 Animal Improvement Policy
9.3 Natural Agricultural Sector
9.4 SUAR Bill
9.5 South African Legislation (various legislations as referred in this document)

10. POLICY OWNER

This policy is owned by DoA-AAPS.

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11. DOCUMENT INFORMATION

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