



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

PORTFOLIO COMMITTEE BRIEFING (24 AUGUST 2010): PROGRESS REPORT ON RHINO POACHING, EXPORTATION OF LION BONES, CULLING OF ELEPHANTS THE REVIEW AND AMENDMENT OF ALIEN AND INVASIVE SPECIES REGULATIONS, AND THE REGULATORY FRAMEWORK FOR GENETICALLY MODIFIED ORGANISMS IN SOUTH AFRICA

1. PROGRESS REPORT IN TERMS OF RHINO POACHING

Both *Diceros bicornis* (Black rhinoceros) and *Ceratotherium simum simum* (southern White rhinoceros) in South Africa are managed in terms of the National Environmental Management: Biodiversity Act, 2004 (Act No 10 of 2004 (NEMBA) and its associated Threatened or Protected Species Regulations (TOPS) as well as the National Norms and Standards for the Marking of Rhinoceros Horn and the Hunting of White Rhinoceros for Trophy Hunting Purposes. International trade in rhinos is controlled by the National Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Regulations published on 5 March 2010.

Current levels of poaching in South Africa are not endangering the South African white rhino population yet as statistic shows that the White rhino population in South Africa is still increasing. However if the illegal killing of White rhino in South Africa continues at the current rate we could reach the stage where numbers start declining to a point where the mortality rate will exceed the natality rate. The net annual growth rate of the White rhino population in South Africa is 6.6% (M.Knight *in litt*, 2009).

Until relatively recently, thanks to law enforcement efforts, poaching of rhino had been kept under control and held at relatively low levels. However from 2008 onwards rhino poaching has escalated at an alarming rate as has the leakage of both legal and illegal rhino horns held in the various private and government stockpiles with no indication of decreasing.

The brunt of the rhino poaching onslaught over the years has been borne largely by the Kruger National Park (KNP), managed by South African National Parks (SANParks), and the provincial reserves under the management of Ezemvelo KZN Wildlife (EKZNW). Since 2000 the KNP have lost a total of 207 animals and EKZNW a total of 82 animals. The last two years, (January, 2008 through to June, 2010) has shown a dramatic spike in rhino poaching incidents in South Africa. All provinces except Western Cape and Northern Cape, have experienced an increased level of poaching activity on both private and public land. In 2008, 83 animals were poached and in 2009, 122 animals were poached, followed by 105 animals already recorded by 10 June for 2010. The last two years, from 2008 to February 2010, have shown a dramatic increase in rhino poaching incidents in South Africa. In 2008, 83 animals were killed illegally and in 2009, 122 animals were killed illegally. In 2010 thus far, 173 animals have either been illegally killed or darted and horns removed. If poaching continues at the current rate, by the end of the year December 2010, 242 animals will in all likelihood have been poached.

The modus operandi being utilised both locally and internationally in the illegal killing of rhino and the smuggling of their horns in recent years clearly indicates the increasing involvement of highly organised and well structured crime syndicates that are operating a lucrative international enterprise. In addition to the loss of horns through increased poaching, concerns have also been raised regarding "leakage" of South African horns onto the illegal international markets from stocks in the public and private sector. These syndicates are also involved in the "legal / unethical" hunting of rhino in the country.

When comparing the statistics on rhino population growth with the actual number of animals lost through poaching shown in the figures above, it is clear that current levels of poaching are not preventing South African rhino numbers from increasing. However the concern is that should poaching continue to escalate at the current rates, unabated, one could reach the situation where numbers start declining to a point when more animals are being poached than are born into the population – as has been experienced in other rhino range states in the recent past. A properly structured and concerted effort by government and other relevant role-player's, is therefore urgently needed to address this problem, as it poses a significant threat not just to the rhino population but also to the reputation, eco-tourism industry and public image of South Africa. This threat, if ignored, may consequently have a direct or indirect socio-economic impact on people employed at multiple levels in a number of local industries. It might also lead to international pressures to up-list South Africa's white rhino population from Appendix II to Appendix I at CITES which would have very negative consequences to the country.

1.1 RHINO POACHING

The following tables and figures reflect statistics relating to rhino poaching and arrests.

Table 1: Rhino Poaching from 2000 to August 2010 (per province)

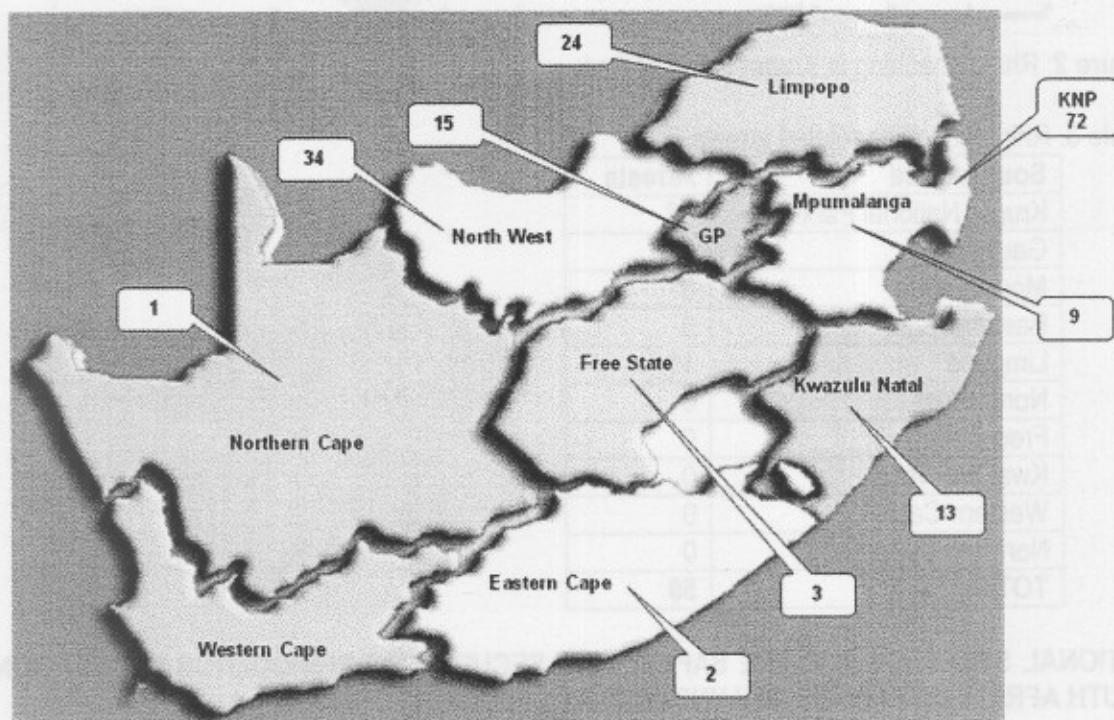
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	TOTAL
Kruger National Park	0	4	20	14	7	10	17	10	36	50	72	240
Gauteng	0	0	0	0	0	0	0	0	0	7	15	22
Limpopo	0	0	0	0	0	0	0	0	23	16	24	63
Mpumalanga	0	0	0	0	0	0	2	3	2	6	9	22
North West	0	0	0	0	0	2	0	0	7	10	34	53
Eastern Cape	0	0	0	0	0	0	0	0	1	3	2	6
Free State	0	0	0	0	0	0	0	0	0	2	3	5
KwaZulu-Natal	7	2	5	8	3	1	5	0	14	28	13	86
Northern Cape	0	0	0	0	0	0	0	0	0	0	1	1
Western Cape	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL ILLEGALLY HUNTED	7	6	25	22	10	13	24	13	83	122	173	498

Total population = 21 087 (black & white rhino)

Table 2: Rhino Poaching Incidents for South Africa Provincial Versus Private Land: Jan – 10 Aug 2010

	SANPARKS		PROVINCE		PRIVATE		TOTAL
	BLACK	WHITE	BLACK	WHITE	BLACK	WHITE	
Kruger National Park	1	71	-	-	-	-	72
Gauteng	-	-	-	5	-	10	15
Limpopo	-	-	-	-	1	23	24
Mpumalanga	-	-	-	5	-	4	9
North West	-	-	1	29	-	4	34
Eastern Cape	-	-	-	-	-	2	2
Free State	-	-	-	2	-	1	3
KwaZulu-Natal	-	-	3	7	-	3	13
Western Cape	-	-	-	-	-	-	0
Northern Cape	-	-	-	-	-	1	1
TOTAL	1	71	4	48	1	48	173

(Total Black Rhino= 6 & Total White Rhino = 167)

**Figure 1:** Rhino poaching incidents (per province)

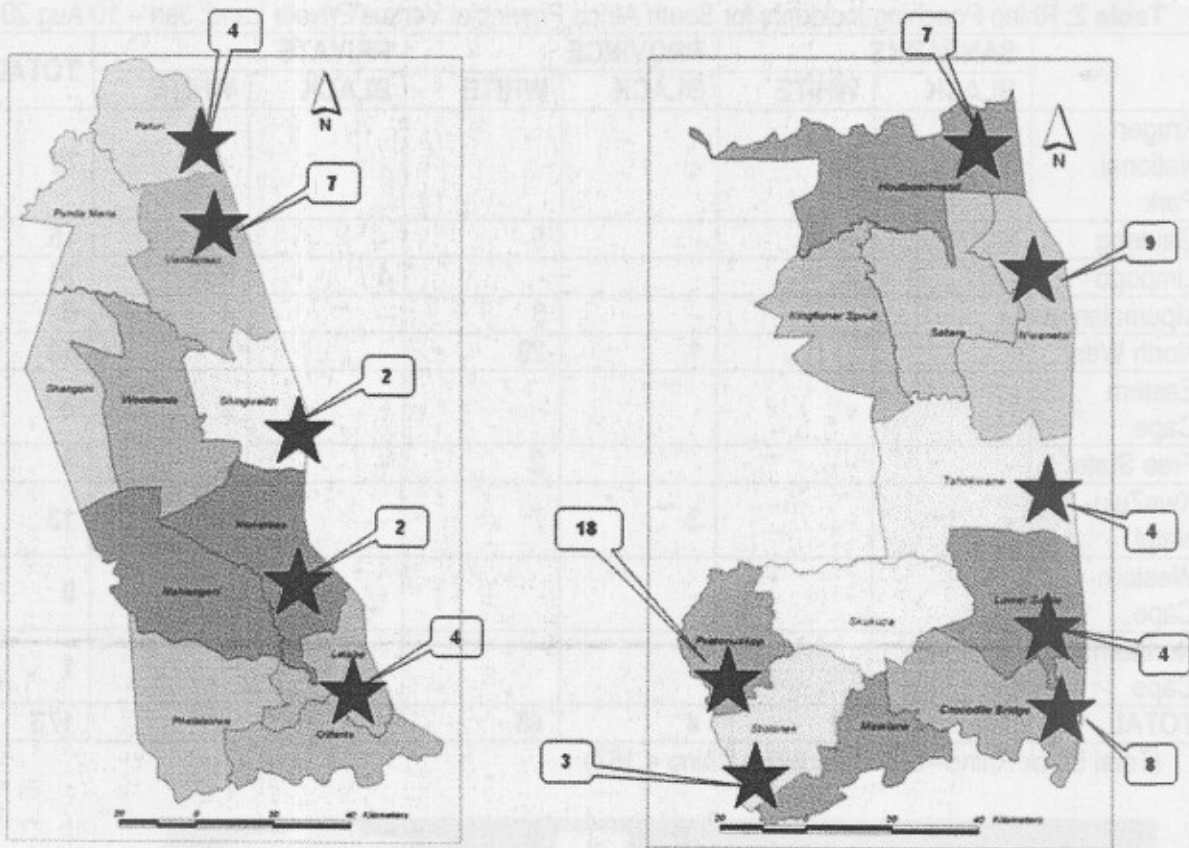


Figure 2: Rhino poaching in Kruger National Park

Table 3: Rhino poaching related arrests

South Africa	Arrests
Kruger National Park	32
Gauteng	8
Mpumalanga	3
Eastern Cape	5
Limpopo	11
North West	0
Free State	0
KwaZulu-Natal	0
Western Cape	0
Northern Cape	0
TOTAL	59

1.2 NATIONAL STRATEGY FOR THE SAFETY AND SECURITY OF RHINOCEROS POPULATIONS IN SOUTH AFRICA (ATTACHED AS ANNEXURE A)

The strategy has been necessitated by a drastic increase in the number of incidents of rhino (rhino) poaching in the country and the continued leakage of certain horn stocks into the international illegal trade. The draft strategy was adopted by MINMEC on 8 July 2010.

South Africa has a proud track record of successful rhino conservation. The figure below shows how numbers of rhinos in the country have steadily been increasing. At the end of 2007 South Africa conserved 35% of Africa's black rhino in the wild and 93% of the continent's white rhino. Figure 3 reflects the rhino numbers in South Africa from 2004 to 2009.

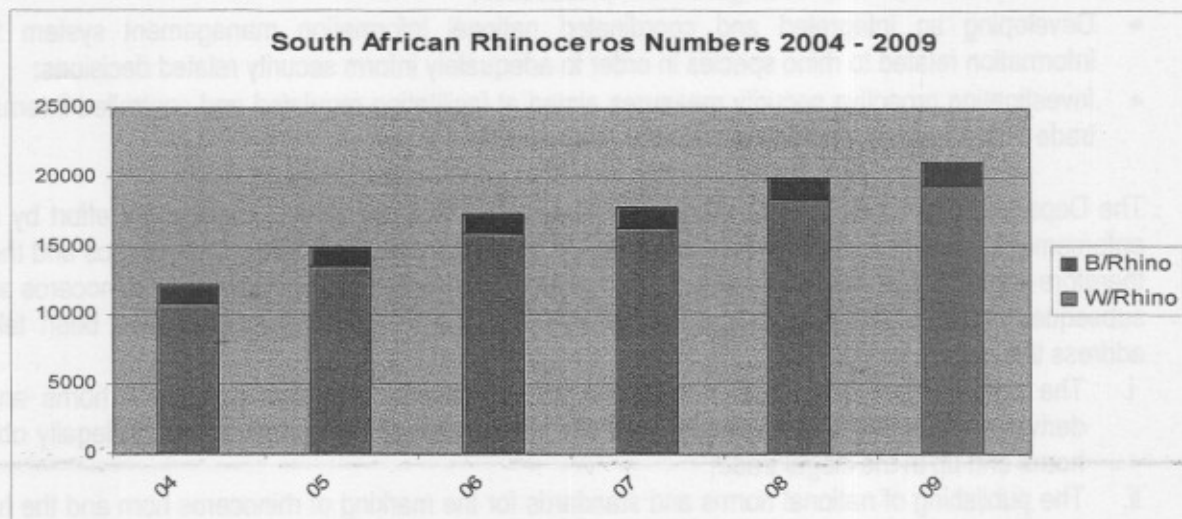


Figure 3: Rhino numbers in South Africa 2004 – 2009 (Based on data from the IUCN Species Specialist Commission's African Rhino Specialist Group M. Knight *in litt.* 2009 M. Knight 2009)

This strategy is in line with the national white rhino strategy titled: *A strategy for the conservation and sustainable use of wild populations of southern white rhino Ceratotherium simum simum in South Africa* which was developed at a stakeholders workshop organised by the Rhino Management Group (RMG) and subsequently approved by Members of the Executive Council (MINMEC) meeting on the 29th February, 2000 (Publication of National Environmental Policies and Strategies No. 874, and approved for publication on the 13th June 2003). It is also in line with the National black rhino conservation plan (a revision version of which is in final stages of revision by the RMG (on which the Department of Environmental Affairs (DEA), SANParks, Provincial Conservation Agencies, and the Private Sector are represented) before being submitted for ratification as a Biodiversity Management Plan under the National Environmental Management: Biodiversity Act (NEM:BA).

The purpose of the strategy is to provide guiding principles to inform decision making processes, strategic planning and operations aimed at reducing the effects of poaching on rhino species and to ensure the successful arrest, conviction and sentencing of poachers, illegal traders and crime syndicates operating locally (at reserve level), nationally, regionally and internationally. The purpose is to also provide better controls and monitoring of rhino horn stockpile management and to promote improved management of the conditions under which rhino may be legally hunted.

The strategy sets out to inform strategic planning and critical intervention strategies aimed at:

- Implementing an immediate action plan aimed at mitigating the current escalation in the poaching of rhino and the illegal trade in rhino horns (Activities include the establishment of an interim National Wildlife Crime Reaction Unit (NWCURU) to respond to the current spate of wildlife crimes and more specifically the upsurge of rhino poaching and smuggling of rhino horn);

- Securing the shared commitment of government (at national and provincial level), private land owners local communities and international stakeholders, as well as the necessary financial and manpower resources and political will to implement this policy;
- Supporting the establishment of a national coordination structure for information management, law-enforcement response, investigation and prosecution;
- Developing an integrated and coordinated national information management system for all information related to rhino species in order to adequately inform security related decisions;
- Investigating proactive security measures aimed at facilitating regulated and controlled international trade in the species, and any associated by-products.

The Department of Environmental Affairs (DEA) is aware that only a well coordinated effort by all law enforcement agencies in South Africa will make an impact on the illegal killing of the rhinos and the DEA therefore implemented various steps to try and reduce the number of illegal killings of rhinoceros and the subsequent trade in illegally obtained rhinoceros horns. The following actions have been taken to address this issue:

- i. The publishing of a national moratorium on the sale of individual rhinoceros horns and any derivatives or products within South Africa on 13 February 2009 to ensure that no legally obtained horns end up in the illegal trade;
- ii. The publishing of national norms and standards for the marking of rhinoceros horn and the hunting of white rhinoceros for trophy hunting purposes on 20 July 2009 to further regulate marking and hunting of rhinoceros (see Annexure B);
- iii. The establishment of a national, multi-departmental biodiversity investigators forum in March 2009. This Forum coordinates and acts as a contact point where all biodiversity related law enforcement information could be collected, accessed, distributed and tasked to specific subgroups of the Forum. Provincial conservation- and South African National Parks investigators and police officers use the Forum to discuss, share and exchange information on wildlife related law enforcement organized crime incidents such as the increased illegal killing of rhinoceros;
- iv. South Africa was nominated to participate in the CITES Rhinoceros Enforcement Task Force at the CITES Standing Committee meeting in 2008, where investigators from all CITES Parties involved in the illegal trade in rhinoceros horn met to discuss problems and solutions to the increase in illegal killing in rhinoceros and the subsequent illegal trade in the horn;
- v. The Department of Environmental Affairs has established the Directorate: Biodiversity Enforcement to coordinate and investigate biodiversity related crimes on a national basis;
- vi. The establishment of an interim National Wildlife Crime Reaction Unit (NWCURU) within the Department of Environmental Affairs has been approved in February 2010 and will start operating soon;
- vii. The publishing of the National CITES regulations in March 2010;
- viii. Approval and implementation of a National Strategy for the Safety and Security of Rhinoceros Populations and Horn Stocks in South Africa by MINMEC on 8 July 2010;
- ix. South Africa continues to play an active role in international forums including Interpol Wildlife Crime meetings, Rhinoceros Task Force of CITES and the regional Rhino and Elephant Security Group and Rhino Management Group and

2. EXPORT OF LION BONES

The African lion, *Panthera leo*, is listed as a Vulnerable Species in terms of the National Environmental Management: Biodiversity Act, 2004 (Act No 10 of 2004) (NEM:BA). In terms of Section 57(1) of

NEM:BA a person may not carry out a restricted activity involving a specimen of a listed threatened or protected species without a permit. The term "Restricted activity" is defined as a number of activities, which includes trade and the definition of "specimen" includes any derivative of any animal, plant or organism, which includes bones. Trade in lion bones are therefore regulated in terms of the Threatened or Protected Species regulations in terms of the NEM:BA.

A number of permits have been issued by North West and the Free State and the information is reflected below:

- North West issued 2 permits in 2008; and 4 permits in 2009
- Free State issued 6 permits in 2008; and 9 permits in 2009

3. CULLING OF ELEPHANTS

In terms of the National Norms and Standards for the management of elephants in South Africa, issued in terms of Section 9 of the National Environmental Management: Biodiversity Act, 2004 (Act No 10 of 2004) (Attached as Annexure C), *"The responsible person in relation to a protected area, registered game farm, private or communal land or in relation to a captive facility in which elephants are kept, is responsible—*

- (a) to prepare a management plan; and*
- (b) to submit the management plan to the issuing authority for approval."*

The management plan must comply with requirements as set out in the norms and standards and include a culling plan, if and when culling is identified as an intervention to control wild elephant population sizes and distribution. The norms and standards furthermore sets out the conditions in terms of which culling may be used to reduce the size of an elephant population.

The Department of Environmental Affairs has received four (4) elephant management plans from KwaZulu-Natal. The elephant management plans were prepared for the following four reserves:

- Ithala Game Reserve
- iSimangaliso Wetland Park
- Thembi Elephant Park
- Mkuze Game Reserve

Unfortunately the above mentioned plans did not adhere to the requirements as specified in the Annexure of the norms and standards. The provincial authority was requested to provide the required information and re-submit the management plans. The management plan for Ithala Game Reserve has been revised and re-submitted for consideration by the Department.

There is therefore no approved elephant management plan that includes a culling plan.

4. PROGRESS IN TERMS OF REVIEW AND AMENDMENT OF ALIEN AND INVASIVE SPECIES REGULATIONS

Alien species that become invasive are considered to be a main direct driver of biodiversity loss across the globe. In addition, alien species have been estimated to cost our economies hundreds of billions of dollars each year.

Increasing travel, trade, and tourism associated with globalization and expansion of the human population have facilitated intentional and unintentional movement of species beyond natural biogeographical barriers, and many of these alien species have become invasive. Invasive alien species (IAS) are considered to be one of the main direct drivers of biodiversity loss at the global level. It is clear that IAS can produce substantial environmental and economic damage, and their negative effects are exacerbated by climate change, pollution, habitat loss and human-induced disturbance. Increasing domination by a few invasive species increases global homogenization of biodiversity, reducing local diversity and distinctiveness.

IAS can change the community structure and species composition of native ecosystems directly by out-competing indigenous species for resources. IAS may also have important indirect effects through changes in nutrient cycling, ecosystem function and ecological relationships between native species. IAS can also cause cascading effects with other organisms when one species affects another via intermediate species, a shared natural enemy or a shared resource. These chain reactions can be difficult to identify and predict. Furthermore, aggregate effects of multiple invasive species can have large and complex impacts in an ecosystem.

Invasive species may also alter the evolutionary pathway of native species by competitive exclusion, niche displacement, hybridization predation, and ultimately extinction. IAS themselves may also evolve due to interactions with native species and with their new environment.

Due to the above threats of invasive species, the Convention on Biological Diversity, to which South Africa is a Party, adopted Article 8(h) which states that "*Each contracting Party shall, as far as possible and as appropriate, prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species*". The White Paper on the Conservation and Sustainable Use of South Africa's Biological Diversity, 1997; developed to provide the national policy framework for the implementation of the CBD, address this in terms of Policy Objective 2.2, which reads as follows: "*Conserve and use sustainably biological resources in terrestrial, aquatic and marine and coastal areas and avoid or minimise adverse impacts on the biodiversity of such areas*".

Based on the afore mentioned internationally agreed policy directives and the White Paper, the National Environmental Management: Biodiversity Act, 2004 (Act No 10 of 2004) (NEM:BA) was developed. Chapter 5 of NEM:BA specifically provides for the regulation of alien and listed invasive species and the purpose of the Chapter is to:

- a. To prevent the unauthorized introduction and spread of alien species and invasive species to ecosystems and habitats where they do not naturally occur;
- b. To manage and control alien species and invasive species to prevent or minimize harm to the environment and to biodiversity in particular; and
- c. To eradicate alien species and invasive species from ecosystems and habitats where they may harm such ecosystems or habitats.

The Department initiated the process to develop regulations relating alien and listed invasive species and the following provides information on the process to date:

- I. In September 2007, the 1st draft set of regulations was published for public comments. Due to the complexity of the matter, diverse comments were received and the Department decided to develop a second set of draft regulations.

- II. In April 2008 a Task Team lead by the South African Biodiversity Institute was established to re-consider the listing of species and a drafting team was established to oversee the drafting of the regulations.
- III. In April 2009, the draft regulations were published for public comments and comments received were reviewed.
- IV. In terms of the draft regulations, maps were required to facilitate the regulation of listed invasive species managed by area. The South African National Biodiversity Institute also finalised their task in terms of the lists and the maps and lists were handed over to the Department in March 2010.
- V. Due to the fact that the maps were not published for public comment, the Department will re-publish the regulations with the maps and provide the public with an opportunity to comment on these specific provisions.

The revised Alien and Invasive Species (AIS) regulations provide for National Framework documents, including the National Strategy for alien and listed invasive species; Species Management Programmes for priority species (Identified in the National Strategy); and Species Monitoring and Control Plans for listed invasive species.

Species are listed based on the following categories:

- (i) Exempted alien species – species that do not require permits, *EXCEPT* for import and subsequent release (general restriction on import)
- (ii) Prohibited alien species – species for which a permit will not be issued (known invasive species – not currently found in South Africa and that should not be introduced)
- (iii) Listed invasive species:
 - a. List of invasive species requiring compulsory control
 - b. List of invasive species controlled by species management programme
 - c. List of invasive species controlled by activity
 - d. List of invasive species controlled by area – Maps have been designed for Freshwater Fish species in terms of this category. The regulations will be re-published for public comment to enable the public to provide comments on these specific provisions.

ISSUES OF CONCERN TO BE ADDRESSED TO FINALISE THE REGULATIONS:

- i. General restriction on import and subsequent release – currently includes all species, which means that all living alien species will require a risk assessment and a permit. Discussions with Department of Agriculture, Forestry and Fisheries (DAFF) required to reach agreement on the regulation. NEM:BA provides for integrated permits and DAFF could be designated as issuing authorities.
- ii. The cost and capacity required to implement the regulations. Concerns were raised by the South African National Biodiversity Institute and provinces relating to the cost and capacity to implement the regulations. An implementation plan will be developed and the cost and capacity required to implement determined.
- iii. Legal opinion requested regarding the mandate provided in the Act and some of the provisions in the current draft set of regulations; i.e. does the Act allow for the exemption and prohibition of listed invasive species and the differentiation between activities.

5. REGULATORY FRAMEWORK FOR GENETICALLY MODIFIED ORGANISMS IN SOUTH AFRICA

Genetically Modified Organisms Act no. 15, 1997 as amended

The regulation of GMOs is principally governed by the Genetically Modified Organisms Act (GMO Act) and its subsequent amendments and their applicable regulations. Specifically the two relevant acts are:

- Genetically Modified Organisms Act 1997 (Act No. 15, 1997)
- Genetically Modified Organisms Amendment (Act No. 23 of 2006)

The act was put in place to regulate the prudent and responsible use of GMOs in South Africa. This encompasses the entire pipeline of GMO development including research and development (contained use and field trial activities), production (general release activities), import and export, transport, use and application of GMOs. Accordingly, the act aims to ensure that any activity with a GMO in South Africa is conducted so as to limit potential risks to the environment and to human and animal health and take socio-economic considerations into account. The GMO Act and its amendment and the relevant regulations monitor all activities with GMOs according to permits issued in terms of this act. A number of types of permits can be applied for relating to the particular GMO activity, including permits for import, commodity clearance, general release, field trials and contained use.

The GMO Act is implemented by the Directorate Biosafety of the Department of Agriculture, Forestry and Fisheries. The Registrar of the GMO Act administers the act. Two regulatory bodies namely the Executive Council and the Advisory Committee evaluate and decide on applications. The Advisory Committee is composed of independent scientists with various scientific backgrounds. This body conducts a safety assessment on individual applications and then advises the Executive Council as to the level of risk associated with the activity and whether the permit for that particular activity can be issued. This may include risk management strategies that may need to be implemented should the permit application be approved. The Executive Council is the final decision making body made up of representatives from a number of government departments. If the Executive Council is satisfied with the findings of the Advisory Committee and if other issues that may be brought up by the Executive Council are resolved, including for example trade issues or consideration of public comments, a permit for that particular activity may be issued by the Registrar. Inspectors ensure compliance to permits approved under the GMO Act.

The National Environmental Management Act

NEMA provides established general principles for decision making with regards to activities that affect the environment and promotes co-operative governance. The Act and relevant amendments include:

- National Environmental Management Act (Act no. 107 of 1998)
- National Environmental Management Act Amendment Act (Act no. 8 of 2004)

The Department of Environmental Affairs (DEA) has provided general guidance with regards to the objectives of EIAs for GMOs, the criteria that may trigger an EIA and the administrative procedure to follow should the trigger requirements be met (This can be found in the document "Environmental Risk Assessment Framework for Genetically Modified Organisms: A Guidance Document" available from DEA). To date an EIA for a GMO has not been required under NEMBA and consequently an EIA under NEMA has not been conducted for a GMO. If an EIA of a GMO is conducted under NEMA and the outcome of the EIA is that the particular activity is deemed acceptable, the EC of the GMO Act nonetheless retains the authority to make a final decision on the granting of the permit. However; if the EIA concluded that the particular activity with a GMO poses an unacceptable level of risk then the EC may not instruct the Registrar to issue the permit (section 78 of NEMBA).

The National Environmental Management Biodiversity Act

The National Environmental Management Biodiversity Act (Act no. 10 of 2004; NEMBA) confers to the South African National Biodiversity Institute (SANBI), as one of its functions the responsibility to monitor and report on the environmental impacts of GMOs released into the environment in South Africa. This function is performed by the GMO Research and Monitoring unit of SANBI. NEMBA also establishes a mechanism whereby the Minister of Water and Environmental Affairs may request an environmental impact assessment (EIA) of the GMO under the National Environmental Management Act (Act no. 107 of 1998; NEMA).

ENVIRONMENTAL RISK ASSESSMENT FRAMEWORK FOR GM PLANTS

The Department developed guidelines for the implementation of section 78 of NEMBA as part of the roll out of the NEMBA. These guidelines have been developed in the format of a guidance document on the Environmental Risk Assessment (ERA) of genetically modified organisms. The draft guideline document for the Environmental Risk Assessment of GMOs aims to ensure an adequate level of protection of the environment from potential negative impacts of GMOs in the context of South African legislation by:

- Ensuring institutional cooperation to deal with the potential risks posed by GMOs;
- Contributing to the development and implementation of effective measures for management and control of potential risks associated with GMOs through a transparent science based process for decision-making;
- Facilitating the sharing of information and providing support to ensure adoption and implementation of highest Biosafety standards

The ERA framework also addresses the key environmental concerns associated with GMOs by providing guidance to applicants on:

- Persistence and invasiveness;
- Gene flow / gene transfer;
- Interaction between GM and target effects;
- Interaction between GMO and non target organisms;
- Effects of biogeochemical processes and;
- Changes in agricultural practices

The Cartagena Protocol

South Africa ratified the Cartagena Protocol on Biosafety in 2003. This protocol is focussed specifically on regulating the transboundary movement of LMOs (living modified organisms), which are GMOs capable of transferring or replicating genetic material, to minimise the potential risks posed by LMOs by ensuring the safe transfer, handling and use of LMOs that may have negative effects on biodiversity or on human health. Included in the revisions made in the GMO Amendment Act of 2006 are changes to ensure compliance with the provisions of this protocol. Among these is the establishment of processes to ensure that the required information to make an informed decision on the import of a LMO is available prior to a decision on the import of a LMO. The Protocol has also established the Biosafety Clearing-House (BCH) as a mechanism to facilitate

the exchange of information on GMOs to enable compliance under the Protocol. This includes information on scientific, technical, environmental and legal aspects on the transboundary movement of GMOs.

MECHANISM FOR DECISION MAKING

The GMO Act Executive Council is the ultimate decision-making body and currently consists of officials from six government departments; the Departments of Agriculture, Forestry and Fisheries, Health, Environmental Affairs, Labour, Trade and Industry, Science and Technology and the chairperson of the Advisory Committee. The objectives of the Council are to advise the Minister of Agriculture, Forestry and Fisheries on all aspects concerning the development, production, use, application and release of GMOs, and to ensure that all activities with regard to GMOs (importation, exportation, transit, development, production, release, distribution, contained use, storage and application) are performed in accordance with the provisions of the GMO Act. If the Council is satisfied that a certain activity with a GMO may be conducted, the Registrar is authorised by the Council to issue the necessary permit. Coherent governance of all activities relating to GMOs in South Africa is regulated and ensured through the Executive Council. This decision-making process also includes public participation through the submission of comments on applications. In addition to its decision-making function, members of this body must also ensure that all activities conducted with GMOs are not in conflict with legislation and policies relevant to their respective departmental mandates.

STATUS OF GMO APPLICATIONS

The South African regulatory system is very active with the Executive Council meeting 6 times a year to take decisions on pending GMO applications.

GM PLANTING STATISTICS

The adoption of GM crops in SA has increased consistently from 197 000 in 2001 to 2.1 million ha in 2009. Of the three GM crops, maize occupies the largest area of 1.87 million ha in 2009 (89 % of all GM crops). White maize which is used for food has increased from 6 000 ha in 2001 to 1.2 million ha in 2009 (78% of the total white maize area).

Crop	Status of plantings	
	GM	Non GM
Cotton 8 100hectares	<ul style="list-style-type: none"> • insect resistance Cotton 10% • herbicide tolerance 10% • Stacked insect resistant and herbicide tolerance 75% 	<ul style="list-style-type: none"> • conventional cotton 2%
Maize • GM Maize 78.3% of national production 1.878million hectares	<ul style="list-style-type: none"> – Insect resistant 70% – Herbicide tolerant 14% – Stack (herbicide/insect) 16% 	<ul style="list-style-type: none"> • Conventional maize 21.7%
Soya beans 230 000 hectares	<ul style="list-style-type: none"> – Herbicide tolerant 85% 	<ul style="list-style-type: none"> – Conventional maize 15%

Other approved activities under the GMO Act include:

- Commodity clearance for food/and or feed for maize, soybean, oilseed Rape
- Field trials (not all active) for sugarcane

- Vaccines for tuberculosis and HIV

There have been number of non-approvals that have occurred:

- Trial release of GM mosquitocide
- Trial release of recombinant measles vaccine
- General release of genetically modified yeasts strain

DEA position on GMOs

The DEA primary position as articulated in the National Biodiversity Strategy and Action Plan (NBSAP) is to view GMOs primarily as a threat to biodiversity. NBSAP sets out a framework and plan of action for conservation and sustainable use of South Africa's biodiversity and equitable sharing of benefits. The DEA response thus far has been to create an enabling environment in line with national policy imperatives that ensures that developments with biotechnology do not pose a significant threat to the environment.

There are other national policies that exist that also deal with biotechnology. Namely the National Biotechnology Strategy under the Department of Science and Technology as well as the Department of Agriculture's own Biosafety policy. The National Biotechnology Strategy sets aside R450 million annually for fostering biotechnology research, most of which is aimed at local solutions and research to address national needs. However, these priorities are often counter to those of the DEA.

