Southern African Workshop on Preventing Poisoning of Migratory Birds

24 August 2015, Cape Town, South Africa

PREVENTING POISONING OF MIGRATORY BIRDS; PRIORITY ACTIONS FOR SOUTHERN AFRICAN COUNTRIES FOR 2015-2017

INTRODUCTION

The Eleventh Meeting of the Conference of the Parties to the Convention on the Conservation of Migratory Species (CMS COP11, 4 – 9 November 2014, Quito, Ecuador) adopted Resolution 11.15 which endorsed the Guidelines on preventing the risk of migratory bird poisoning and requested the establishment of task groups, in the context of the CMS Preventing Poisoning Working Group, addressing either thematic issues (e.g. for different poison types) and/or geographical regions to progress its work. The Resolution also requested to organize regional workshops in high risk areas/flyways to promote the implementation of the Guidelines.

In the above-mentioned guidelines, the following categories of toxins have been identified as those most likely to affect migratory bird populations:

1. Insecticides used to protect crops;
2. Rodenticides used to protect crops;
3. Poison-baits used for predator control and harvesting;
4. Veterinary pharmaceuticals used to treat livestock;
5. Lead ammunition and fishing weights.

Migratory bird species covered by the guidelines are those where a significant proportion of the population "*cyclically and predictably cross one or more national jurisdictional boundaries*" specifically those species listed on the Appendices of CMS, the African Eurasian Waterbird Agreement (AEWA) and the CMS Memorandum of Understanding on the Conservation of Birds of Prey (Raptors MOU).

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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PART I - DESCRIPTION OF TOXINS

Insecticides

Bird species that inhabit farmland or use farmland during migration are at risk of exposure to insecticides. Waterfowl and some gamebirds which feed on agricultural foliage are at potential risk. Granivorous passerines are attracted to pesticide-treated seeds. Birds that feed on agricultural pests, such as grasshoppers and earthworms, are at risk if.

The likelihood of exposure to insecticides is influenced by a number of factors, including cultivation practices, pest types, crop types, pesticide form, and migratory bird ecology (diet and habitat preferences). Exposure may be reduced by using particular forms of pesticides, e.g., liquid forms over granular forms, and changing application periods for when migratory birds are not likely to be present (which can be effective given the low persistence of many of the second generation pesticides). If a migratory bird is likely to be exposed, the toxicity of the pesticide is significant. The broad spectrum nature of organophosphates and carbamates (the most common insecticides) makes any bird at risk of lethal or sub-lethal effects if they happen to be in the vicinity at the time of application, or shortly thereafter, or if they come into contact with exposed prey.

Many of the highly toxic insecticides to birds, such as carbofuran, have been removed from the market in developed countries as a result of population declines in some bird species. Much of the effects, both sub-lethal and lethal, recorded in the literature are related to the use of these now highly regulated compounds. This could indicate that the situation has improved in areas where these highly toxic compounds are no longer used or that other substances have not yet been studied.

The implications of sub-lethal effects from exposure to second generation agricultural insecticides are little understood and are difficult to study in the field. Migratory birds may be particularly susceptible to sub-lethal effects from insecticides, which may cause reduced movement and affect migratory orientation. Further research should focus on assessing these effects on populations. Neonicotinoids have become a main replacement for the carbamates and organophosphates in many countries. Further research is needed to understand their impacts on birds.

Rodenticides

Rodenticides are most commonly used for agricultural purposes, such as the protection of crops and grain storage from rodent pests. Anticoagulant rodenticides (ARs) are the most widely used rodenticide to control rodent pests worldwide. They are also an integral component of modern agriculture for the control of rodent populations.

Migratory birds are exposed to ARs through the consumption of contaminated baits (primary) or by the consumption of contaminated prey (secondary). Birds that forage in agricultural landscapes are most likely to be exposed to anticoagulant rodenticides, as use of these products is primarily in agricultural areas. However, some species' ecology will make them more likely to be exposed than others within these areas. Many raptor species are especially likely to be exposed to rodenticides due to a regular diet of rodents. Scavenging species may be especially at risk because they feed on carcasses that could be contaminated with rodenticides. The red kite, for example, may be particularly susceptible to secondary poisoning because of the high proportion of carrion in its diet, including rat carcasses.

If exposure to anticoagulant rodenticides is likely to occur, the toxicity level of the AR will greatly influence the corresponding effect – whether lethal or sub-lethal. The effects, particularly sub-lethal effects, of exposure to ARs on species at both the individual and population level remain poorly understood. Sub-lethal exposure to second generation ARs (which are more commonly used and more toxic to birds than first generation ARs) may hinder the recovery of birds from non-fatal collisions or accidents. They may also impair hunting ability through behavioural changes, such as lethargy, thus increasing the probability of starvation. However, there is limited evidence of these effects occurring in the field.

There is wide-spread exposure of raptors to rodenticides where second-generation anticoagulant rodenticides are used in agriculture, but the ecologically-significant effects (both lethal and sub-lethal) from exposure are largely unknown. Additionally, it is unknown whether there are any population level effects from exposure.

In addition to research needed to determine whether there are population effects resulting from widespread exposure in some species, further research is also needed to identify the exposure rate of rodenticides in species other than raptors as some evidence indicates that grain-based baits could result in exposure of granivorous bird species.

Poison-baits

Predator control using poison-baits occurs particularly in areas with game management and livestock farming. Predator and scavenger bird species are at risk of poisoning from poison-baits targeting them directly, and also from baits targeting mammalian species (with birds becoming by-catch through secondary poisoning). The effects on species, other than birds of prey, is largely unknown and further research is needed to understand this.

The risk of poisoning from harvesting for human consumption and traditional medicine is practiced in Africa.

Due to the indiscriminate nature of many of the substances used in poison-baits, any birds are at risk of poisoning if they come into contact with poison-baits. The most common substances are rodenticides and insecticides, usually those that are known to farmers in the area as highly toxic. Carbofuran appears to be used in poison-baits in many areas around the world. Many birds of prey populations are in decline as a result of illegal poison-baits, particularly vultures. This suggests that further work needs to be developed to understand why poison-baits continue to be used and create effective solutions.

Veterinary pharmaceuticals (NSAIDs)

Non-steroidal anti-inflammatories (NSAIDs) are used to treat domestic livestock for inflammation and pain relief. Diclofenac, a previously popular NSAID for veterinary care of cattle in India, Pakistan, Bangladesh, and Nepal, is toxic to a number of vulture species and Aquila eagles. Before its ban, its use resulted in the poisoning of scavenging vultures throughout India, Pakistan, Bangladesh and Nepal by contaminating domestic livestock carcasses traditionally fed on by vultures. The promotion of diclofenac on the African continent could pose a risk to vultures in this region, including the African white-backed vulture (*Gyps africanus*) and the endangered Cape Griffon vulture (*Gyps coprotheres*) due to these species' sensitivity to diclofenac. Although, exposure levels may be different, through, for example, the removal of cattle carcasses from open areas and variation in vulture diet. The next steps are to (1) evaluate the effects of other NSAIDs on birds of prey/scavenging birds; (2) identify vulture-safe alternatives (so far only meloxicam has been shown to have low toxicity to Gyps vultures); (3) determine whether diclofenac/NSAIDs are toxic to other vultures and birds of prey; and (4) assess the effects of diclofenac/NSAIDs on vultures, especially in areas where domestic ungulate carcasses are likely to be available for scavenging.

Lead ammunition/shot and fishing weights

Lead is highly toxic to birds causing, at higher concentrations mortality and at lower concentrations a range of sub-lethal impacts. Wherever there is anthropogenic use of lead which is available to migratory birds, poisoning can potentially occur. Lead poisoning in migratory birds, whether primary or secondary, through ingestion of shot and bullets can be expected to occur wherever lead ammunition is used for hunting. It follows that wherever lead shot is used, it will accumulate within the environment and the degree of contamination will be directly proportional to the intensity of use. Certain taxa, namely wildfowl and raptors, including threatened species, are more greatly affected than other groups of birds and losses can be high. Population effects are difficult to quantify for a number of reasons, including, lack of robust surveillance and gaps in knowledge of ingestion rates and subsequent survival. Sub-lethal impacts are particularly difficult to quantify. In most countries there are also gaps in knowledge of the efficacy of restrictive regulations.

The effects of lead poisoning from fishing weights on migratory birds are restricted to certain susceptible species and to certain geographical areas where discarded and lost weights are available. A number of migratory species are known to suffer from lead poisoning following the ingestion of discarded or lost lead fishing weights. In principle, most birds feeding in currently or historically fished water bodies or near-shore soils and sediments are at risk of being exposed to and ingesting lead. Species likely to feed in areas exposed to lead fishing weights and that have physiological mechanisms that assist lead absorption, are therefore, most at risk of suffering from lead ingestion.

PART II - KEY RECOMMENDATIONS FROM THE GUIDELINES

i. Substitute (remove and replace) **insecticides** with a high risk to birds with safe alternatives, and inclusion of criteria in the Rotterdam Convention to reduce risks of imports toxic to birds, promotion of Integrated Pest Management, and identification of areas of significant risk of poisoning of migratory birds and mitigation of impacts through working with stakeholders;

ii. Restrict/ban the use of second-generation anticoagulant **rodenticides** in open field agriculture (excluding best practice use for invasive species management); use best practice for the treatment of rodent irruptions minimising use of second-generation anticoagulants; and stop permanent baiting, with preventive rodent measures used instead;

iii. Prohibit the use of **poison-baits** for predator control for livestock protection and game management (excluding best practice use for invasive species management) and creation or improvement of enforcement legislation, through deterrent mechanisms and infringement penalties, and restriction of access to highly toxic substances, with human-wildlife conflict resolved via multi-stakeholder forums;

iv. Prohibit the use of **veterinary diclofenac** for the treatment of livestock and substitute with readily available safe alternatives, such as meloxicam, with mandatory safety-testing of all new veterinary pharmaceuticals for risks to scavenging birds before market authorization is granted;

v. Phase-out the use of **lead ammunition** across all habitats (wetland and terrestrial) with non-toxic alternatives within the next three years with Parties reporting to Conference of the Parties (CoP12) in 2017, working with stakeholders on implementation; promotion of leadership from ammunition-users on safe alternatives, and remediation of lead-polluted sites where appropriate; and

vi. Phase-out the use of lead **fishing weights** in areas where migratory birds have been shown to be particularly at risk i.e. freshwater habitats, (excluding fishing weights used in coastal areas where there are significant knowledge gaps and further research needed) with non-toxic alternatives, within the next three years with Parties reporting to the Conference of the Parties (CoP12) in 2017, working with all stakeholders on implementation; and promotion of leadership from fishers on safe alternatives.

PART III – SPECIFIC RECOMMENDATIONS FROM THE GUIDELINES

Insecticides used to protect crops

Non-legislative recommendations

— Identify local risk hot spots and work with local stakeholders to reduce risk;

Legislative recommendations

— Include migratory bird criteria in Rotterdam Convention to reduce risk of imports of products highly toxic to birds;

— Substitute (remove from the market and replace with environmentally safe with alternatives) substances of high risk to birds and incentivise alternatives; introduce mandatory evaluation mechanisms for existing and new products;

— Adopt integrated pest management at national level and provide incentives for farmers, such as certification schemes and public support.

Rodenticides used to protect crops

Non-legislative recommendations

— Use best practice to prevent and manage rodent irruptions;

Legislative recommendations

— Restrict/ban SGAR use in open field agriculture;

— Stop permanent baiting.

Poison-baits used for predator control and harvesting

Non-legislative recommendations

Step 1: Identify drivers of the problem and publish regular reports on poisoning incidents;

Step 2: Resolve human-wildlife conflict using multi-stakeholder forums;

Step 3: Develop and disseminate good practice for predator control and enforcement;

Legislative recommendations

Step 4: Create enforcement legislation with effective deterrent mechanisms and penalties;

— Enhance enforcement and deterrence mechanisms relating to the use of poison-baits;

— Restrict access to highly toxic substances through stronger enforcement of supply chain: ways poisons are acquired and why the established control mechanisms do not prevent their illegal use.

Veterinary pharmaceuticals used to treat livestock

Non-legislative recommendations

— Enhance surveillance of ungulate carcasses in high risk areas for diclofenac use and develop vulture safe zones;

— Raise stakeholder awareness on alternatives to diclofenac; promote product stewardship;

Legislative recommendations

— Prohibit the use of veterinary diclofenac for the treatment of livestock and substitute with readily available safe alternatives, such as meloxicam;

— Introduce mandatory safety-testing of NSAIDs; VICH/OECD to evaluate and provide guidance on wider risks;

— Reduce likelihood of illegal use of human pharmaceuticals.

Lead ammunition and fishing weights and other sources of lead poisoning

Lead ammunition

— Raise awareness of lead poisoning; promote leadership from ammunition users;

— Phase-out the use of lead ammunition across all habitats (wetland and terrestrial) with non-toxic alternatives within the next three years;

— Remediate lead ammunition-contaminated environments.

Lead fishing weights

— Raise awareness of the issue of lead poisoning from fishing weights;

— Encourage leadership from angling organisations and manufacturers for non-toxics;

— Promote anglers' codes of practice;

— Phase-out the use of lead fishing weights in areas where migratory birds are shown to be particularly at risk i.e. freshwater habitats, (excluding fishing weights used in coastal areas where there are significant knowledge gaps and further research needed) with non-toxic alternatives, within the next three years.

Industrial pollution from lead mining and smelting processes

— Ban release of lead into the wider environment where migratory birds may be exposed directly or indirectly via bio-accumulated lead in invertebrates and small vertebrates.

Leaded paint

— Remove the toxic source and/or limiting access to lead painted structures.

Other sources of discarded lead

— Raise awareness of the hazards posed by discarded lead products to migratory birds;

— Encourage enforcement of regulatory processes where migratory birds are exposed to lead risks from legal and illegal waste disposal.

PART IV – IMPLEMENTATION PLAN

INSECTICIDES

COUNTRY	PRIORITIZED ACTIVITIES *(Describe what is needed to address the risk of bird poisoning associated to the use of this toxin at national level)*	MEANS OF IMPLEMENTATION (*Describe ways and tools to be put in place to implement the activity*)	RESPONSIBLE FOR IMPLEMENTATION (*Indicate which authority or institution is responsible for implementing the activity)*	PRIORITY (*Define the priority of the activity (High, Medium or Low)*	TIMELINE DEADLINE (*Indicate date and/or steps for completion of the activity)*
ANGOLA	- *- Update the list of pesticides prohibited in Angola;* - *- Identify pesticides banned ofcialmente but which continue to be used;* - - *- Encouraging farmers just utilizer allowable pesticides* *- Updating of legislation in force;*	- *Perform workshop with companies that market and use the insecticides;* *- Interviews with farmers*	*Ministry of Environment, Ministry of Agriculture*	*High*	*2017*
BOTSWANA	*For Botswana this is national in scope* *Regulator (Agrochemicals Committee) to restrict access of carbofuran, and also substitute the insecticide with those less harmful to migrating birds* *Revise the Agro-chemicals Act and ensure it articulates the conservation of migratory and resident birds* *Other activities:* 1. *Educate farmers and the public on the proper uses of agrochemicals.* 2. *Create and maintain a comprehensive vulture monitoring programme.* 3. *Create and maintain a poisoning incident database, to be updated regularly and made publically available.* 4. *Develop a poisoning incident response protocol at the inter-*	*Need to insert re agrochemicals committee* *Through an FAO/GEF funded project (demonstration project for decontamination of POPs insert project title), Dept of Crops, working with FAO and a local law firm, are already engaged* *The phase 1 objective is to "Update, as appropriate, the report on the current status of the national legislation on pesticides management and waste management and identify the necessary actions to bring the current legislation in compliance with the International Code of Conduct on Pesticides Management and other relevant international legal instruments and practices", then during phase*	*Dept of Crops*	*High*	*Phase 1 (by end end), subsequent steps 2016/2017*

	ministerial level. *Motivation for IPM to be mainstreamed/incorporated into existing agricultural extension programmes (e.g. ISPAAD).*	*2, the project will support Draft any new or amendment recommended legislation in relation to pesticides management and pesticides waste management and define a nomenclature of subsidiary instruments* *Need to insert re IPM*			
LESOTHO					
MADAGASCAR	*-Identify Important Birds Migratory Areas (NIBMA) and Inventory and update (Rapid Assessment) the species list of Migratory birds,* *-Use other form of insecticide and change application period,* *-Assess the effect of the new insecticides on populations* *-No use of insecticides for the arrival of birds* *-Use Public awareness on the risks of pesticide use* *-Send the national position of the Rotterdam Convention on the use of highly toxic products* *-Raising Committee approval on the replacement of highly toxic products*	*- Collecting data from the field* *-Training of farmers* *-Awareness of peasants (radio, posters, meetings)* *-Stakeholder meeting to the Rotterdam Convention)* *-Approval of the Lobbying Committee*	*-National Focal Point of CMS and Raptors Mou* *-DPV-Ministry of Agriculture/CMS Ministry in charge of Environment* *-DPV-Minagri/CMS* *-National Focal Point and National Authority Designated (AND) of Rotterdam Convention* *-National Focal Point of CMS and Raptors Mou*	*All activities are classified as High and Medium*	*1- July-August 2016,* *-Sept-mey 2016* *-Sept-mey 2017* *-Sept-mey 2016* *-Sept-mey 2017* *Jan-Dec (All years)*
MAURITIUS	• *In Mauritius, there is one bird sanctuary, a Ramsar Site of International Importance, the 'Rivulet Terre Rouge Estuary Bird Sanctuary' harbouring around 19 migrant bird species. This sanctuary is a coastal area of an extent of 26 hectares and is protected by our authorities and under the Ramsar Convention that protects wetlands*	• *Imports of new pesticides are regulated by the Dangerous Chemical Control Board (DCCB). The degree of their toxicity to beneficial organisms, rats and aquatic organisms are considered prior to importation for testing.*	• *Dangerous Chemical Board* • *Food and Agricultural Research Institute(FAREI)* • *Mauritius Standards Bureau* • *Mauritius Sugar Industry Research Institute*	*High*	*2015-2020* *(This covers the period of the Government Programme)*

	worldwide. The wetland, in Mauritius, has been declared as a reserve under the Wildlife and Natural Park Acts 1993. Migration of birds is during the period October-April. • *Farmers are involved in crop production in Terre Rouge and adjoining regions.* • *Products of high toxicity have been banned by DCCB. These include organophosphates and carbamates. Furthermore, there is consideration for removal of other products such as neonicotinoids that are highly toxic to bees.* • *Evaluation of new products is mandatory. New plant protection products are evaluated by FAREI. Consideration is given to environmentally safe products and bio-products.* • *FAREI is implementing an integrated pest management programme at regional level and needs to be extended island wide.* *A national campaign is being undertaken to shift towards smart agriculture/bio farming Members of 5 cooperatives have been trained in natural farming (Zero Budget farming) and will undertake crop production in Terre Rouge* *Incentives are being given to farmers to undertake bio farming*	• *The migratory bird criteria in Rotterdam Convention need to be included as well.* • *A new Wetlands Bill will be introduced to give legal protection to all wetlands and Ramsar Sites* • *Integrated Pest Management is adopted* • *Good Agricultural Practices are adopted* • *Bio farming is promoted* • *Green Agricultural Certification scheme is introduced*			
MOZAMBIQUE	*Gaza and Tete Provinces (First Fase) To organize meetings with local farmers and villagers for sensitisation on the risk associated with birds pesticide spraying* *Training local espoused farmers and agriculture extension in use of alternative*	*Will be undertaken Meetings near breeding and colonies areas where are at risk of bird* *Practical trainings on use of nets to cash birds (Quelea)*	*National Directorate of Agriculture and Forestry - Plant Protection Department; Provincial Agrarian Extension Services* *National Directorate of Agriculture and Forestry -*	*High* *High*	*This activity can be done during Quelea breeding and colony location (January to Abril)*

	technics using specific nets for Quelea birds control		*Plant Protection Department; Provincial Agrarian Extension Services*		
NAMIBIA					
SEYCHELLES					
SOUTH AFRICA					
SWAZILAND	• *Focus on all agricultural areas especially sugar cane plantations, citrus production incl. maize* • *Undertake survey to identify the hotspots* • *Enactment of the Pesticide Bill* *Enactment of overarching Chemicals Legislation*	• *conformance to the Rotterdam Convention* • *Soliciting of funds to undertake the inventories,* • *Enforcement of the Act.*	• *Ministry of Agriculture* • *Swaziland Environment Authority (SEA)* • *Swaziland National Trust Commission (SNTC)* • *Ministry of Agriculture (MoA)- Enactment of the Pesticides Bill* • *SEA - Enactment of overarching Chemicals Legislation* • *SNTC*	• *MEDIUM* • *MEDIUM*	• *December 2020* • *December 2016- Enactment of the Pesticide Bill* • *December 2017Enactment of overarching Chemicals Legislation*
ZAMBIA					
ZIMBABWE	*Awareness raising*	*Stakeholder engagement*	*MEWC/ Min of Agric.*	*High*	*Apr 2016*

	Policy review *Development of Statutory Instrument* *Awareness raising* *Establishment of an inter-ministerial committee, including relevant stakeholders*	*Mainstreaming MEAs* *Monitor compliance* *Stakeholder engagement* *Institutional coordination and stakeholder engagement*	*MEWC* *MEWC/ Min. of Agric* *MEWC*	*High* *Medium* *High*	*Apr 2016* *Aug 2016* *Apr 2016*

COMMON ISSUES AND ACTIVITIES / INSECTICIDES:

Countries indicating Insecticides as a problem are **Angola; Botswana; Madagascar; Mauritius; Mozambique; Swaziland; Zimbabwe** (all of the countries where inputs are received from).

Enact legal steps / Policy review: **Angola** (Updating of legislation); **Botswana** (Revise the Agro-chemicals Act; develop poisoning incident response protocol at the inter-ministerial level; Vulture monitoring system, Poisoning incident database); **Madagascar** (Rotterdam Convention)**; Mauritius; Swaziland** (Enactment of the pesticide bill and enactment of overarching chemicals legislation; Rotterdam Convention); **Zimbabwe** (Mainstreaming MEAs, Establishment of an inter-ministerial committee, including relevant stakeholders)

Awareness Raising Activities: Angola (farmers); **Botswana** (farmers and public)**; Madagascar** (training of farmers and informing the public by radio, posters, meetings); **Mauritius** (promote organic farming among farmers etc.); **Mozambique** (organize meetings with local farmers and villagers; training of farmers on alternatives); **Zimbabwe**

Find substitutes, restrict access, change application periods: **Botswana; Madagascar; Mauritius**

Undertake surveys: **Angola** (update on insecticides used, also on banned ones still used); **Madagascar** (Identify Important Birds Migratory Areas); **Swaziland** (identify the hotspots)

RODENTICIDES

COUNTRY	PRIORITIZED ACTIVITIES *(Describe what is needed to address the risk of bird poisoning associated to the use of this toxin at national level)*	MEANS OF IMPLEMENTATION *(Describe ways and tools to be put in place to implement the activity)*	RESPONSIBLE FOR IMPLEMENTATION *(Indicate which authority or institution is responsible for implementing the activity)*	PRIORITY *(Define the priority of the activity (High, Medium or Low)*	TIMELINE DEADLINE *(Indicate date and/or steps for completion of the activity)*
ANGOLA	- *Make an inventory of all rodenticides used in Angola;* - *- Identify the frequency of use;* *- Adjust the rodenticides Sales in Angola*	*Contact the Ministry of Commerce and the importers of these products;*	*Ministry of Environment, Ministry of Agriculture and Ministry of Commerce*	*High*	*2017*
BOTSWANA	*This is not a significant threat in Botswana due to minimal efforts (by individual farmers, and by government), to control rodents.*			*Low*	
LESOTHO					
MADAGASCAR	*-Identify Important Birds Migratory Areas (IBMA) and Inventory and update (Rapid Assessment) the species list of Migratory birds,* *-No use of Rodenticides for the arrival of birds* *-Use Public awareness on the risks of pesticide use* *-Raising Committee approval on the replacement of highly toxic products*	*- Collecting data from the field* *-Training of farmers* *-Awareness of peasants (radio, posters, meetings)* *-Stakeholder meeting to the Rotterdam Convention)* *-Approval of the Lobbying Committee*	*-National Focal Point of CMS and Raptors Mou* *-DPV-Ministry of Agriculture/CMS Ministry in charge of Environment* *-DPV-Minagri/CMS* *-National Focal Point and National Authority Designated (AND) of Rotterdam Convention* *-National Focal Point of CMS and Raptors Mou* *- NGO or Association working on Birds Conservation*	*All activities are classified as High and Medium*	*1- July-August 2016,* *-Sept-mey 2016* *-Sept-mey 2017* *-All years (Jan-Dec)*
MAURITIUS	• *So far, there has not been any rodent irruptions in field crops.* • *Anticoagulant rodenticides are commercially available. These are being used wherever there is a rat problem.* • *There is no permanent baiting being*				

	practiced in Mauritius.				
MOZAMBIQUE	*Gaza, Manica en Cabo Delgado Provinces* *Use of local traps made by local material as Clay pots or plastics drums of 20 liters, bury it, rounded with roasted corn to attract rats to the holes* *It is going to be banned the import and use of Difethilone 0,025 g/Kg for Rats control*	*At the beginning will be made demonstration in endemic of rats to Sensitise the farmers in mass implementing this local technic which one of this pots can capture more than 100 rats during one night.* *This will immediately implemented National Regulatory of Pesticide already created*	*National Directorate of Agriculture and Forestry - Plant Protection Department; Provincial Agrarian Extension Services* *National Directorate of Agriculture and Forestry - Plant Protection Department*	*High* *High*	*This local improvement will be done mostly during breeding season (February to May)*
NAMIBIA					
SEYCHELLES					
SOUTH AFRICA					
SWAZILAND	• *Advise Farmers To Use And Adopt Best Practice To manage Rodents As Informed By The UNISWA-Swaziland Eco-Rat Project* • *Enactment of the Pesticide Bill* • *Enactment of overarching Chemicals Legislation*	• *Outputs/Recommendations of the Eco-Rat Project.* • *Adoption of best practices by the project* • *Enforcement of the Act.* • *Revise and include rodenticides provision in the legislation*	• *MoA* • *SEA* • *SNTC* • *MoA* • *SEA* • *SNTC*	• *Medium* • *Medium*	• *March 2017* • *September 2017*

ZAMBIA					
ZIMBABWE	*Awareness raising* *Develop Statutory Instrument*	*Stakeholder engagement* *Ensure compliance*	*MEWC/ Min. of Agric.* *MEWC/ Min. of Agric*	*High* *Medium*	*Apr 2016* *Aug 2016*

COMMON ISSUES AND ACTIVITIES / RODENTICIDES:

Countries indicating Rodenticides as a problem are **Angola; Madagascar; Mozambique; Swaziland; Zimbabwe**.

Awareness Raising Activities: **Madagascar** (training of farmers and informing the public by radio, posters, meetings); **Swaziland** (Advise farmers based on UNISWA-Swaziland Eco-Rat Project); **Zimbabwe**

Enact legal steps / Policy review: **Swaziland** (Enactment of the pesticide bill and enactment of overarching chemicals legislation); **Zimbabwe** (Develop Statutory Instrument); **Madagascar** (Rotterdam Convention)

Undertake surveys: **Angola** (Inventory of rodenticides used and on period of usage); **Madagascar** (Identify Important areas for migratory birds)

Find substitutes, restrict access, change application periods: **Mozambique** (ban the use and import of Difethilone, use alternative rat-trapping methods)

POISON-BAITS

COUNTRY	PRIORITIZED ACTIVITIES *(Describe what is needed to address the risk of bird poisoning associated to the use of this toxin at national level)*	MEANS OF IMPLEMENTATION (*Describe ways and tools to be put in place to implement the activity*)	RESPONSIBLE FOR IMPLEMENTATION (*Indicate which authority or institution is responsible for implementing the activity)*	PRIORITY (*Define the priority of the activity (High, Medium or Low)*	TIMELINE DEADLINE (*Indicate date and/or steps for completion of the activity)*
ANGOLA	*- Awareness of the population;* *- Disclosure in the communities of poisoning risks of natural environments* *Updating legislation*	- *Realização de workshop e "ateliers" de formação;* *Criar adendas sobre o envenenamento do meio natural*	*Ministry of Agriculture, Ministry of Environment*	*High*	*2017*
BOTSWANA	*Main cited drivers: Farmers retaliating against mammalian carnivores, and poaching for meat and lacing carcasses with poisons; but country needs to commission a study and quantify the problem, then step 2 and 3 would follow* *But could cite some already ongoing initiatives e.g. livestock guarding dogs and building better kraals.* *But going forward, need to finalise and seek formal approval and endorsement of the National Predator Management Strategy, within which should be articulated all of the steps 1 to 3. NB: there is an ongoing UNODC project helping DWNP to implement the Wildlife and forest crime analytic toolkit[1], which has elements of wildlife poisoning; but this needs to be up-scaled, but also helps with the enforcement mechanisms*	*Finalise and seek formal approval and endorsement of the National Predator Management Strategy, plus resource mobilisation for implementation and M&E* *Speed up the review of the Wildlife Act, drafting by AGs and tabling in parliament*	*DWNP*	*High*	*End of 2015*

[1] The toolkit, and has 5 parts: (i1) legislation, (2) enforcement, (3) judiciary and prosecution; (4) drivers and prevention and (5) data and analysis. DWNP has only recently (January 2015) started implementing the toolkit, as part of a 3-year project. This UNODC-led project aims to address the disparity between arrests and convictions in the prosecution of IWT-related crimes in the eight African target countries through the establishment of a wildlife forensic network. This project will support the development of a laboratory network, whereby countries with core DNA forensic laboratories will service satellite units in neighbouring countries.

	<u>Regarding legislation</u> *The Wildlife Act is presently being revised, and there are several identified priorities, including on the deterrence mechanisms:* *1) The penalty for illegally killing wildlife, including use of poison, in the current WCNP Act is inadequate, as it does not reflect the destructive effect of even one poisoning incident (need to be made more strict)* *2) Waive governmental farm subsidies for those farmers who are convicted of hunting with poison.* *3) Seek compensation for the poisoned animal(s) and the costs incurred to investigate the poisoning incident.* *4) Pass legislation imposing vicarious liability on farmers who knew or should have known that employees were poisoning wildlife.* *DWNP also hasn't got adequate forensic capacity required to prove crimes (including misuse of poisons, chemicals used, that animal was indeed poisoned etc.). So, need capacity improved of DWNP in this regard (including for the Police and other investigating agencies)* *Regarding restricting access to highly toxic substances through stronger enforcement of supply chain, this will be articulated and achieved through the Agrochemicals Act (see response to Insecticides)*				
LESOTHO					
MADAGASCAR	*-Identify Important Birds Migratory Areas (IBMA) and Inventory and update (Rapid Assessment) the species list of Migratory*		*-National Focal Point of CMS and Raptors Mou* *-DPV-Ministry of*	*All activities are classified as High and Medium*	*1- July-August 2016,* *-Sept-mey 2016*

	birds, *Use Public awareness on the risks of poison-baits* *Implementation of national regulation on wild fauna*		*Agriculture/CMS Ministry in charge of Environment* *-DPV-Minagri/CMS* *-National Focal Point and National Authority Designated (AND) of Rotterdam Convention* *-National Focal Point of CMS and Raptors Mou* *- NGO or Association working on Birds Conservation*		*-Sept-mey 2017* *- Jan-Dec (all years)*
MAURITIUS	*There has not been any case of poisoning incidents in Mauritius*				
MOZAMBIQUE					
NAMIBIA					
SEYCHELLES					
SOUTH AFRICA					
SWAZILAND	• *Undertake Inventories and take corrective actions;* • *Review and revise legislation to cover enforcement mechanism*	• *Continuous monitoring of poisoning incidents and keeping records* • *Reports and corrective action* • *Domesticate the Rotterdam Convention.* • *Enforcement of chemical related legislation*	• *Big Game Parks (BGP),* • *SNTC,* • *MoA,* • *SEA* • *BGP,* • *SNTC,* • *MOA,* • *SEA*	• *Low* • *Medium*	• *2017 - 2020* • *2017 - 2020*

ZAMBIA					
ZIMBABWE	*Carry out surveys and assessments*	*Stakeholder engagement and information dissemination*	*MEWC/ Min of Agric.*	*High*	*Apr 2016*
	Awareness raising	*Stakeholder engagement*	*MEWC*	*High*	*Apr 2016*
	Develop strategy	*Stakeholder engagement*	*MEWC/ Min of Agric.*	*Medium*	*Aug 2016*
	Regulatory framework review and development of Statutory Instrument	*Ensure compliance*	*MEWC/ Min of Agric.*	*Medium*	*Aug 2016*

COMMON ISSUES AND ACTIVITIES / POISON BAITS:

Countries indicating Poison Baits as a problem are **Angola; Botswana; Madagascar; Swaziland; Zimbabwe**.

Enact legal steps / Policy review: **Angola** ('update' legislation); **Botswana** (National Predator Management Strategy;) Speed up the review of the Wildlife Act, drafting by AGs and tabling in parliament; need capacity improved of DWNP in this regard (including for the Police and other investigating agencies; stronger enforcement through Agrochemicals Act); **Madagascar** (Implementation of national regulation on wild fauna); **Swaziland** (Review and revise legislation to cover enforcement mechanism); **Zimbabwe** (Develop strategy; Regulatory framework review and development of Statutory Instrument)

Undertake surveys: **Botswana** (needs to commission a study and quantify the problem); **Madagascar** (Identify Important Birds Migratory Areas (IBMA) and Inventory and update (Rapid Assessment) the species list of Migratory bird); **Swaziland** (Monitoring of poisoning incidents and keeping records); **Zimbabwe**

Awareness Raising Activities: **Angola** (public, workshops); **Madagascar** (public); **Zimbabwe** (public)

VETERINARY PHARMACEUTICALS

COUNTRY	PRIORITIZED ACTIVITIES *(Describe what is needed to address the risk of bird poisoning associated to the use of this toxin at national level)*	MEANS OF IMPLEMENTATION (*Describe ways and tools to be put in place to implement the activity*)	RESPONSIBLE FOR IMPLEMENTATION (*Indicate which authority or institution is responsible for implementing the activity)*	PRIORITY (*Define the priority of the activity (High, Medium or Low)*	TIMELINE DEADLINE (*Indicate date and/or steps for completion of the activity)*
ANGOLA	*Target population's awareness of the risks of using Diclofenac for the wild bird population;* *- Identify the veterinary clinics that use Diclofenac at national level:* *- Encourage veterinary clinics the adopter alternative treatments;* *- Identify the different actors and stakeholders: (waste treatment companies, companies selling agro-toxic and hygiene products);* *- Update legislation*	- *Development of a national workshop to reflect on the importance and risks of the use of agro-toxic;* - *- Post all veterinary clinics using diclofenac at national level;* - *- Elaboration of addenda;*	*Ministério da Agricultura e Ministério do Ambiente*	*High*	*2016*
BOTSWANA	*In Botswana, diclofenac is not a significant threat. Interactions with various government and non-state actors has resulted in a situation where diclofenac from Asia will not be imported into Botswana, as it would need to come in with a permit which will not be issued, as only drugs which are listed in the Index of Veterinary Specialities for South Africa will be allowed to be imported. Additionally Phenylbutazone has been banned from the EU for use in cattle, and as Botswana provide beef to the EU this product is banned. The cattle rancher in Botswana therefore has available Meloxicam (metacam) and Flunixin meglamide (pyroflam or flunixin) both of which are more easily tolerated by vultures, as well as aspirin, which are all considerably less kidney toxic to vultures. So threats as far as veterinary drugs are not significant to vulture populations in Botswana anymore.*				

LESOTHO					
MADAGASCAR	*-Identify Important Birds Migratory Areas (IBMA) and Inventory and update (Rapid Assessment) the species list of Migratory birds,* *-No use of Veterinary pharmaceuticals for the arrival of birds* *-Use Public awareness on the risks of Veterinary Pharmaceuticals*		*-National Focal Point of CMS and Raptors Mou* *-DPV-Ministry of Agriculture/CMS Ministry in charge of Environment* *-DPV-Minagri/CMS* *-National Focal Point and National Authority Designated (AND) of Rotterdam Convention* *-National Focal Point of CMS and Raptors Mou* *- NGO or Association working on Birds Conservation*	*All activities are classified as High and Medium*	*1- July-August 2016,* *-Sept-mey 2016* *-Sept-mey 2017* *Jan- Dec (all years)*
MAURITIUS	*The bird migratory site is a protected zone*				
MOZAMBIQUE					
NAMIBIA					
SEYCHELLES					
SOUTH AFRICA					
SWAZILAND	• *Undertake inventory of chemicals used in the sector.* • *Enforcement of Pesticide*	• *surveillance of ungulate carcasses in high risk areas for diclofenac use and develop vulture safe zones;* • *Raise stakeholder awareness on alternatives to diclofenac; promote product stewardship;*	• *MOA,* • *SEA* • *BGP,* • *SNTC,*	• *HIGH*	• *December 2016*

	Legislation/include veterinary chemicals in Chemicals Legislation	• *Enforcement of Pesticide Legislation*	• *MOA,* • *SEA* • *BGP,* • *SNTC,*	*HIGH*	*August 2016*
ZAMBIA					
ZIMBABWE	*Scoping study including spatial mapping*	*Field surveys*	*MEWC/ Min of Agric.*	*Medium*	*Aug 2016*
	Awareness raising	*Stakeholder engagement*	*MEWC/ Min of Agric.*	*High*	*Apr 2016*
	Develop Statutory Instrument *Awareness raising*	*Ensure compliance*	*MEWC/ Min of Agric.*	*Medium*	*Aug 2016*
	Develop statutory instrument	*Ensure compliance*	*Min of Agric.*	*Medium*	*Aug 2016*
	Surveillance on abuse	*Enforcement*	*MEWC/ Min of Agric.*	*High*	*Apr 2015*

COMMON ISSUES AND ACTIVITIES / VETERINARY PHARMACEUTICALS:

Countries indicating Veterinary Pharmaceuticals as a problem are **Angola; Madagascar; Swaziland; Zimbabwe.**

Awareness Raising Activities: **Angola** (to the public on Diclofenac; national workshop on risks); **Madagascar** (to the public on risks); **Swaziland** (Raise stakeholder awareness on alternatives to diclofenac; promote product stewardship); **Zimbabwe**

Undertake surveys: **Angola** (promote substitutes for Diclofenac in Vet. Clinics); **Madagascar** (Identify Important Birds Migratory Areas (IBMA) and Inventory and update (Rapid Assessment) the species list of Migratory birds); **Swaziland** (Undertake inventory of chemicals used in the sector); **Zimbabwe** (Scoping study including spatial mapping)

Enact legal steps / Policy review: Angola ('update' legislation); **Swaziland** (Enforcement of Pesticide Legislation/include veterinary chemicals in Chemicals Legislation); **Zimbabwe** (Development of Statutory Instrument; surveillance on abuse)

Find substitutes, restrict access, change application periods: **Angola** (Identify clinics that use Diclofenac, Identify different actors/stakeholders); **Madagascar** (No use of Veterinary pharmaceuticals at certain periods ("Birds' arrival")

LEAD AMMUNITION AND FISHING WEIGHTS

COUNTRY	PRIORITIZED ACTIVITIES *(Describe what is needed to address the risk of bird poisoning associated to the use of this toxin at national level)*	MEANS OF IMPLEMENTATION *(Describe ways and tools to be put in place to implement the activity)*	RESPONSIBLE FOR IMPLEMENTATION *(Indicate which authority or institution is responsible for implementing the activity)*	PRIORITY *(Define the priority of the activity (High, Medium or Low)*	TIMELINE DEADLINE *(Indicate date and/or steps for completion of the activity)*
ANGOLA	*-Fishermen Awareness about the risks of use of lead and aluminium in their networks;* *- Strengthen the enforcement measures of the law;* *Remove the obsolete networks wetlands* *Identify companies that use lead in their production processes;* *Raise awareness among companies*	- *Workshop e ateliers;* - *Criar medidas de incentivo para os pescadores;* - *Workshop e ateliers*	*Ministry of environment, Ministry of Fishing* *Ministry of Environment, Ministry of Commerce, Ministry of Industry, and National Policy*	*High*	*2017*
BOTSWANA	*Three main users in Botswana are the military, hunters and people killing livestock for domestic purposes.* • *Military is aware of environmental threats posed by lead, and have commissioned studies to assess lead levels at their training grounds, and then instigate actions to remediate lead ammunition contaminated environments.* • *Hunting (of trophy animals) is currently prohibited, but permissible in private ranches and for gamebirds, and awareness on lead bullets needs to be raised, and then actions set in place to phase-out lead ammunition for these user groups* *Lead fishing weights are still currently in use in Botswana; but the Fishing Regulations gazetted in 2008 are being revised (now at stakeholder comments stage). This offers opportunities to:*	*For the military, they have already instigated the process towards lead-free bullets, and no external support required.* *Public awareness campaign and lobbying of hunter association to take leadership in moving towards lead-free bullets* *Drafting and publication of policy briefs to Botswana Bureau of Standards, justifying why the country should set standards that prohibit leaded paints*	*DWNP (fisheries division)* *DWNP*	*Medium* *Medium*	*All completed by end of 2016* *End of 2016*

	• *Raise awareness of the issue of lead poisoning from fishing weights;* • *Encourage leadership from angling organisations and manufacturers for non-toxics;* • *Promote anglers' codes of practice;* • *Phase-out the use of lead fishing weights in areas where migratory birds are shown to be particularly at risk i.e. freshwater habitats.* *No lead in mining.* *Some paints may have lead, Botswana Bureau of Standards to be lobbied to promote lead-free paints.*				
LESOTHO					
MADAGASCAR	*1-Identify Important Birds Migratory Areas (IBMA) and Inventory and update (Rapid Assessment) the species list of Migratory birds,* *2- Observe, assess and monitor populations during their passage Madagascar to establish reliable population trends.* *3- Conduct research to assess the threats and impacts and to identify the measures needed to reduce them.* *4-Sensitize all stakeholders with regard to these birds, their current situation, the threats they face, and conservation measures.*	*1.1- Collect data from the field* *2.1-Undertake a census in different locations across the Island during stay of the birds migratory in Madagascar ;* *2.2-Establish and implement a population monitoring program during the migration time in different ecoregion Madagascar , and the following consecutive years* *3.1- Establish a program to monitor the threats and impacts as factors in the decline of population at each migration*	*-National Focal Point of CMS and Raptors Mou* *-DPV-Ministry of Agriculture/CMS Ministry in charge of Environment* *-DPV-Minagri/CMS* *-National Focal Point and National Authority Designated (AND) of Rotterdam Convention -* *National Focal Point of CMS and Raptors Mou* *- NGO or Association working on Birds Conservation*	*All activities are classified as High and Medium*	*1- July-August 2016,* *-Sept-mey 2016* *-Sept-mey 2017* *2- July-August 2016,* *-Sept-Mey 2016* *-Sept-mey 2017*

	5-Building capacity for conservation actors on the knowledge and the implementation of monitoring of birds migratory. *6-Protect birds migratory from illegal logging, including poisoning , hunting*	*season ;* *3.2- Identify measures necessary to maintain a favorable conservation status* *4.1- Develop a communication program, education and public awareness.* *4.2- Encourage the full involvement of local communities in the implementation of this action plan.* *4.3- Develop a communication and awareness program to policymakers different levels such as local authorities (mayor), sectors agriculture, trade, tourisms, agricultural, commercial, on the current state of birds of prey, threats against them and sectoral actions that can be taken to conserve them.* *4.4- Invite other sectors (agricultural, commercial, specialized agencies and NGOs) to participate in actions necessary for the implementation of this action plan.* *4.5- Develop a school educational program to inform students at the secondary level on migration carried out by birds migratory, their current status, the threats they face and the actions that can be taken to preserve* *5.1- Develop and implement approaches that combine conservation and sustainable use of biodiversity , including migratory birds and their habitats*			*3-- July-August 2016,* *-Sept-mey 2016* *-Sept-mey 2017* *-Jan 2017,* *- Jan 2018* *4- July-August 2016,* *-Jan-Dec(all years)* *5- All years*

		; *5.2- Create an exchange network (institutions or individuals) to strengthen the species conservation actions.* *6.1- Strengthen the enforcement of regulations on the protection of migratory birds ;* *6.2- Identify the causes of actual or potential occasional mortality from humans;* *6.3- Reduce and / or eliminate all forms of hunting and capture of individuals.*			*6- All years* *-Sept-Avril* *-All years*
MAURITIUS	*The site is a protected zone and no fishing activity is allowed* *The site is a protected zone and no activity is allowed and access is controlled on a permanent basis.* *No waste disposal is allowed.*				
MOZAMBIQUE					
NAMIBIA					
SEYCHELLES					
SOUTH AFRICA					
SWAZILAND	• *Create/ Raise awareness of armed/ security Forces on lead poisoning; promote leadership from ammunition users;* • *Prepare a phase-out plan on the use of*	• *Adoption of alternative/ use of lead free ammunition.*	• *Armed forces* • *Security forces* • *Public*	• *LOW*	• *April 2022*

	lead ammunition across all habitats (wetland and terrestrial) with non-toxic alternatives • *Create awareness and phase out plan on lead in paints.* • *Raise awareness of the hazards posed by discarded lead products to migratory birds;* • *Encourage enforcement of regulatory processes where migratory birds are exposed to lead risks from legal and illegal waste disposal.*	• *Implement Phase Out Plan* • *Reduction in the use of lead based paint* • *Promote the use of lead free paint*	• *Construction Industry Council (CIC)* • *SEA* *Swaziland Standards Authority (SWASA) – introduce Standards on Lead based commodities*	• *Medium*	• *August 2018*
ZAMBIA					
ZIMBABWE	*Awareness raising* *Develop Statutory Instrument* *Scoping study* *Scoping study to determine use and impacts of Lead fishing weights* *Awareness raising* *Develop code of practice*	*Stakeholder engagement* *Ensure compliance* *Field assessments* *Field study and stakeholder engagement* *Stakeholder engagement* *Stakeholder engagement*	*MEWC/ Min of Home Affairs* *MEWC* *MEWC* *MEWC* *MEWC* *MEWC*	*Low* *Low* *Medium* *High* *Medium* *Medium*	*Dec 2017* *Dec 2017* *Dec 2016* *Apr 2016* *Aug 2016* *Dec 2016*

	Develop strategy and regulations	*Ensure compliance*	*MEWC*	*Low*	*Dec 2017*
	Identify pollution hotspots and major polluters	*Ensure compliance/ enforcement*	*MEWC*	*High*	*Apr 2016*
	Identify risk areas	*Stakeholder engagement*	*MEWC*	*Low*	*June 2017*
	Awareness raising	*Stakeholder engagement*	*MEWC*	*High*	*Apr 2016*
	Identify risk areas	*Law enforcement*	*MEWC*	*Medium*	*Dec 2016*

COMMON ISSUES AND ACTIVITIES / LEAD AMMUNITION AND FISHING WEIGHTS:

Countries indicating Lead Ammunition and Fishing Weights as a problem are **Angola; Botswana; Madagascar; Swaziland; Zimbabwe**.

Enact legal steps / Policy review: Angola (strengthen enforcement, "Remove the obsolete networks wetlands") **Botswana** (Drafting and publication of policy briefs to Botswana Bureau of Standards, justifying why the country should set standards that prohibit leaded paints); **Madagascar** (establish bird monitoring programme, as well as a communication and awareness programme; Create an exchange network; strengthen legislation enforcement); **Swaziland** (Implement Phase Out Plan on lead poisoning and lead paint); **Zimbabwe** (Develop statutory instrument; Develop code of practice, strategy and regulations)

Awareness Raising Activities (among farmers and the public): Angola (among Fishermen, workshops, among companies); **Botswana** (Public awareness campaign and lobbying of hunter association to take leadership in moving towards lead-free bullets); **Madagascar** (Among stakeholders; raising awareness in schools); **Swaziland** (among armed/ security Forces on lead poisoning and lead paint); **Zimbabwe**

Undertake surveys: Angola (Identify companies using lead in production process); **Madagascar** (Identify Important Birds Migratory Areas (IBMA) and Inventory and update (Rapid Assessment) the species list of Migratory bird; monitor populations); **Zimbabwe** (Scoping study; Identify pollution hotspots, major polluters and risk areas)

COMMON ISSUES AND ACTIVITIES ACROSS TOXINS

Enact legal steps / Policy review: All toxins

Awareness Raising Activities: All toxins

Undertake surveys: All toxins

Find substitutes, restrict access, change application periods: Insecticides, Veterinary Pharmaceuticals

Focus on all agricultural areas / Rotterdam Convention: Rodenticides, Insecticides

ADDITIONAL COMMENTS

COUNTRY	ADDITIONAL COMMENTS	OTHER COMMENTS
ANGOLA	/	/
BOTSWANA	/	/
LESOTHO	/	/
MADAGASCAR	*'Note that the two last tables have the same information. This is because, in Madagascar, this is the first time to examine the impacts of those things on migratory birds'* ***Amyot Kofoky***	/
MAURITIUS	*'I am forwarding to you the filled in Questionnaire for the parts which are relevant for Mauritius. As such we do have one important migratory bird site in Mauritius which has a protected status and all activities and development are monitored by the relevant bodies. So far no incident of poisoning has been reported from any toxins currently in use in Mauritius. The import and use of all toxins is also controlled by the various authorities. Farmers are being sensitised on the use of alternative agricultural practices and the Government has recently come up with a budget measure to encourage farmers to shift to bio farming and reduce use of pesticides and chemical fertilisers'.* ***Mrs C. Jhowry***	/
MOZAMBIQUE	/	/
NAMIBIA	*'I do not have any information on most of the topics and it will require contacting many different agencies to fill in the gaps. We have, however, addressed the issue in Namibia extensively and I have several relevant documents which I can send to you. One major issue that is missing in your document is the deliberate*	*'Holger reinforces an issue which I submitted. We've identified this as an action step at a workshop I conducted in February, towards building a community of practice to address poisoning.'* ***Tim Snow***

	poisoning of carcases of poached animals to avoid detection by cicrling vultures and other scavenging birds. This is very much a southern African problem, affecting birds in Botswana, Namibia, Zambia and Zimbabwe (nobody knows what is happening in Angola) and to a lesser extent in South Africa. I'd like to see this issue addressed by the workshop.' ***Holger Kolberg***	*'Thanks to both for raising the issue of intentional poisoning by poachers aimed squarely at vultures and other scavenging birds and driven by a wish to avoid their illegal activities being detected by park wardens etc. This seems to be a relatively recent phenomena but one which has spread rapidly and has caused some significant and potentially devastating mortality events. At the last meeting of the Technical Advisory Group to the Raptors MoU, the issue was considered a significant and apparently increasing threat to African vultures so it surely deserves consideration during the forthcoming CMS Preventing Poisoning Workshop in Cape Town later this month.'* ***Nick Williams***
SEYCHELLES	/	/
SOUTH AFRICA	/	*, I must bring to your attention the fact that in Southern Africa, considerable abuse of pesticide/insecticide/rodenticide toxins occurs, primarily for the following reasons which we believe to be the drivers of the problem:* 1. *Illegal hunting/poaching – where carcasses of rhino, elephant or other are poisoned to prevent vulture take-off, and hence indicate the presence of a crime scene to rangers* 2. *Witchcraft and traditional beliefs – the vultures are sometimes collected for heads, feet and parts for use in this industry.* 3. *Illegal poisoning of predators as damage causing animals* *"My" small Non-government, public benefit organisation, has for the past three years been attempting through training to develop a community of practice, of enforcers, volunteers and others who may assist to address this problem. I would welcome thoughts, ideas and discussion on possibilities to address and more particularly how to fund this initiative via UNEP/ CMS or the Minimising Poisoning Working Group? Please consider this as we approach this important meeting.'* ***Tim Snow***
SWAZILAND	/	/

ZAMBIA	/	/
ZIMBABWE	/	/