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DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT

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NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT, 2004 (ACT NO. 10 OF 2004)

NORMS AND STANDARDS RELATING TO THE MANAGEMENT OF SEABIRDS IN CAPTIVITY

I, David Maynier, Minister of Forestry, Fisheries and the Environment, hereby publish the Norms and Standards relating to the management of Seabirds in Captivity in terms of section 9(1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), as set out in the Schedule to this notice.

MR DAVID MAYNIER
MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT

SCHEDULE

NORMS AND STANDARDS RELATING TO THE MANAGEMENT OF SEABIRDS IN CAPTIVITY

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CHAPTER 1: INTERPRETATION, PURPOSE AND APPLICATION

(This chapter not only includes these three items but also includes empowering provisions, general and compliance).

1.1 EMPOWERING PROVISIONS

These Norms and Standards are issued in terms of section 9 of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) ("NEMBA").

1.2 GENERAL

These Norms and Standards relating to the Management of Seabirds in Captivity ("**Norms and Standards**") have been prepared by the Department of Forestry, Fisheries and the Environment to set appropriate standards for the quality of care in facilities housing seabirds, be it rehabilitation centres and/or permanent captive institutions, and thereby contribute to the conservation and management of seabird species. The development of the Norms and Standards has been a cooperative effort that represents the most current knowledge, expertise and techniques in the field of seabird rehabilitation. These Norms and Standards reflect what participating organisations have learned collectively and successfully applied. It sets a benchmark of quality against which new and existing facilities can be measured and monitored.

The Norms and Standards are neither a complete manual on animal husbandry nor a static document. It will undergo regular revision to take into account new knowledge of animal physiology and behaviour, technological advances, developments in standards of animal care, and changing community attitudes and expectations about the humane treatment of animals. The Department will consult with permit holders regarding potential changes to the document and provide written notice when it is to be superseded. The collaborative effort to formulate the document is something to be proud of. All carers are encouraged to use this document to help improve the care and treatment of sea and shorebirds, and their successful release from rehabilitation facilities.

In this document, any reference to seabird(s) includes the term shorebird(s) and *vice versa*.

1.3 DEFINITIONS

For this document, the following definitions apply.

"**DNA sample**" means a blood or tissue sample that has been taken so that genotyping can be determined.

"Enclosures" refers to crates, cages, pens and aviaries.

"**Exhibition facility**" refers to permanently sited legal establishments, primarily open to and administered for the visiting public which, in accordance with animal welfare and scientific management principles, living organisms are maintained in ethical conditions and under predominantly *ex-situ* circumstances for the foremost and demonstrable purpose of conservation through exhibition, education and research and where the principal business rationale is not the commercial trade in living organisms or their products.

"**Feed**" means to supply food which will be perceived as food by a specimen of seabird.

"**Genotyping**" means the process of determining or analysing the DNA profile of a seabird specimen.

"**Habitus**" means general appearance and/or behaviour.

"**Mark**" means an indelible imprint, microchip or any other recognised or prescribed means of uniquely identifying a specimen.

"**Rehabilitation facility**" means a facility equipped for the temporary holding of specimens with the overall intent to release such specimens but excludes a veterinarian's practice or a veterinary academic hospital. These include:

a) a sick or injured specimen to provide treatment and care of such specimen or

b) a young orphan specimen for rearing purposes.

"Safe Holding Area" refers to a temporary area where animals have no chance of escape or injury.

"SANS" means the South African National Standards.

"**Seabird**" means birds that are adapted to live within the marine environment.

"Threatened or Protected Marine Species Regulations" means regulations published under Section 56 of NEM:BA.

"**Zoonotic**" means pertaining to a zoonosis: diseases are caused by infections and transmitted between animals and humans, or, more specifically, a disease that normally exists in animals but can infect humans.

1.4 PURPOSE AND APPLICATION

The Norms and Standards are aimed at ensuring cooperative effort and represent the current state of knowledge, expertise and techniques in the field of facilities housing seabirds. These Norms and Standards aim to set the standard for the quality of care in facilities housing seabirds, be it rehabilitation centres and/or permanent captive institutions.

The purpose of these Norms and Standards is:

1. to ensure that seabirds receive the best quality of care through all the stages of rehabilitation and in permanent captivity;
2. to set standards that all facilities need to adhere to;
3. to provide permitting authorities and other regulatory bodies with standards and guidelines to assess those facilities holding seabirds, permanently or temporarily, in captivity;
4. to provide information, recommendations, minimum standards and guidelines to ensure that all parties involved in the holding, care and rehabilitation of seabirds do so in an appropriate manner;
5. to ensure that:
    (a) Animal care meets acceptable standards.
    (b) Conservation benefits are maximised.
    (c) Adverse ecological outcomes are avoided.
    (d) Health risks to wild populations are minimised.

The Norms and Standards emphasise the responsibility of:

(a) all persons and organisations involved in the holding, care and rehabilitation of sick, injured or orphaned seabirds and the release thereof; and

(b) all persons or organisations where seabirds are kept in permanent captivity.

1.5 COMPLIANCE WITH THESE NORMS AND STANDARDS

Compliance with these Norms and Standards is a condition of the permit in accordance with the Threatened or Protected Marine Species Regulations. Failure to comply with a permit condition is an offence under the regulations and NEMBA and may result in:

(a) a Compliance Notice being issued;

(b) the temporary closure of a facility;

(c) and/or the commencement of prosecution.

Compliance with these Norms and Standards does not remove the need to abide by the requirements of any other laws, Acts and regulations that can be applied to the rehabilitation process and the care of seabirds. Compliance with these Norms and Standards does not exempt a person or an entity from compliance with any Act, regulation or other applicable statutory instruments.

CHAPTER 2: GENERAL PROVISIONS FOR REHABILITATION AND CAPTIVE INSTITUTIONS

2.1 FUNDAMENTAL PRINCIPLES

The fundamental principles underpinning these Norms and Standards are:

1. The duty of care: A person in charge of seabirds, whether it be in permanent or temporary captivity, must appropriately provide for the animals' well-being. This includes providing appropriate husbandry and care, pain relief, veterinary treatment and timely euthanasia to prevent suffering.
2. Capacity to care: Organisations must ensure that they have the capacity and resources to provide the essential needs for care for animals in permanent or temporary captivity and maintain acceptable standards of care.
3. When the capacity to care is inadequate, it is unacceptable for bird care standards to be lowered to the extent that they are not consistent with this document.
4. However, when the capacity to care is inadequate, and bird welfare standards are likely to be compromised, there are three acceptable management options, which are, in order of preference:
    a. Transfer birds to another organisation with a current capacity to care for that species;
    b. Increase the capacity to care by increasing or pooling resources; and
    c. Under guidance from the relevant authorities, adjust the euthanasia threshold in combination with early triage of newly rescued seabirds and proper veterinary assessment and prognosis of birds in care.
5. All organisations holding seabirds are required to develop protocols and procedures that define appropriate actions and responses in the event of catastrophic events or other circumstances in which the defined capacity to care may be exceeded. Protocols and procedures on seabirds listed on CITES need to be collaboratively decided.
6. When releasing birds back into the wild, the impact on local ecosystems and wildlife communities must be considered to avoid significant detrimental effects. If birds are to be released into the wild, the Threatened or Protected Marine Species Regulations, as well as the IUCN Guidelines for translocations and reintroductions, should be adhered to.
7. Additional outcomes of the keeping, rescue and rehabilitation of threatened or protected seabirds include:
    a. contribution to the body of knowledge on the ecology, conservation, management, veterinary care, husbandry and behaviour of seabirds; and

b. contribution to the education of the public, business and industry professions on issues related to the conservation and welfare of seabirds.

Adhering to these principles will assist seabird rehabilitators and organisations in complying with the document.

2.2 CODE OF ETHICS

The Code of Ethics **(Appendix 1)** for rehabilitators of seabirds forms part of this document and is based on the principles of honesty, integrity, responsibility and treating others as we would have them treat us. The Code of Ethics provides basic rules of conduct for each facility to incorporate into its practice.

Standard: Ethics

a) Each facility needs to have a Code of Ethics.

b) Evidence that each staff member knows about and complies with the Code of Ethics.

2.3 LEGISLATION – PERMITS / AUTHORISATIONS

The onus rests on those facilities housing and rehabilitating seabirds to ensure that they have all the relevant permits and authorisation for species in their care and all the required business operational licences.

Standard: Permits

a) Ensure that permits required for all activities relevant to the operations at facilities are in place and up to date.

b) All the required reports to permitting authorities have been submitted and that they correspond with what is onsite (this can be verified during an inspection).

c) Resource: National – Department of Environment, Forestry and Fisheries (DEFF), and other relevant Government Departments; Provincial and Local Authorities.

2.4 MARKING OF SEABIRDS

Standards: Marking of Seabirds

a) All released African penguins to be permanently marked using PIT tags and all flying seabirds to be fitted with metal SAFring bands.

b) Seabird identification data must be recorded in the required databases; PIT tag numbers for released African penguins must be recorded in relevant databases.

c) Seabirds banded with metal leg bands must be recorded on the SAFring database (http://safring.adu.org.za).

d) Captive African penguins' PIT tags must be recorded in ZIMS and/or reported during the African Penguin Studbook update.

e) New and improved marking techniques should be applied where appropriate.

2.5 SAMPLE COLLECTION

The following are the minimum samples that must be collected from seabirds. All samples must be labelled (i.e. bird identification number, the area of admission, date of admission) and stored appropriately.

2.5.1 Oiled Feather Sampling

Oiled feather samples must be collected from all oiled seabirds upon admission. These samples may be needed for evidence in the event of an oil spill but can also provide information relating to the effect of chronic oil pollution along the South African coastline. (Appendix 2)

2.5.2 Blood sampling

Evaluating blood samples from seabirds on admission and during rehabilitation is essential to establish evidence of anaemia, the levels of total protein in the serum and the presence of parasites in the blood. It is important to collect a blood sample from each bird on admission, as it is an essential diagnostic tool to evaluate the health status of the animal. It is recommended to collect a follow-up blood sample at an appropriate time from any bird where the results of the first sample raised concern, or where the health of the animal is deteriorating. Collecting a peripheral blood sample from the foot or leg of the bird is preferred. Care should be taken not to cause injury to the bird or humans involved in the process. An effort must be made to minimise stress during this procedure. An adequate amount of blood should be collected to fill a

capillary tube and make a blood smear. The collection of blood needs to be performed by suitably qualified personnel or under veterinary supervision or as stipulated within the relevant legislation (Appendix 3).

2.5.3 Post-mortem evaluations

Seabirds that die at a captive or rehabilitation facility should have a post-mortem conducted to establish the cause of death and potentially detect diseases which may threaten captive and/or wild populations. Personal protective gear must be worn to minimise the risk to the person conducting the post-mortem and to minimise the spread of disease to other specimens. The disposal of carcasses must be done following relevant regulations (refer to the section on Waste Management).

Standard: Sampling

a) Oiled feather samples must be collected from all oiled seabirds and properly stored according to the correct protocol (Appendix 2).
b) The collection of blood must be performed by trained personnel in line with the South African Veterinary Council.
c) Post-mortems must be conducted on seabirds (especially in priority cases), and disposal of carcasses must be in accordance with local regulations.
d) There must be a liaison with the SANBI Biobank curator for the collection of DNA Samples.

2.6 VETERINARY PROTOCOLS

Protocols must be drawn up to rapidly assess the veterinary requirements of sick, injured or orphaned seabirds to provide appropriate relief from distress, pain and suffering.

2.6.1 Legal requirements

The veterinary and para-veterinary profession is regulated by the Veterinary and Para-Veterinary Professions Act (No. 9 of 1982), and no person is allowed to practise as a veterinary or para-veterinary professional unless they are registered to do so. Facilities keeping scheduled drugs must adhere to the relevant legislation.

2.6.2 Drug Protocols

The prescription, maintenance and administration of all drugs kept and used at any facility caring for seabirds remain the responsibility of a veterinarian in terms of the Medicines and Related Substances Control Act, 1965 (No. 101 of 1965).

Standard: Veterinary protocols

a) All seabird facilities must have an attending veterinarian who is registered with the South African Veterinary Council (SAVC) and/or international equivalent, and all treatments given to animals must be under the supervision of a veterinarian.
b) There must be a signed agreement between the facility and the attending veterinarian. This agreement should provide a clear mutual understanding of the division of responsibilities consistent with state laws regarding the practice of veterinary medicine. The legal prescription of medical care for seabird patients is the responsibility of the attending veterinarian.
c) All facilities must adhere to guidelines relating to the prescription, maintenance, administration, purchase and storage of scheduled drugs in terms of the Medicine and Substances Control Act (No.101 of 1965).

The attending veterinarian must:

i. be available to examine animals on a regular schedule and emergency basis;
ii. be available to answer veterinary-related questions on a 24-hour basis;
iii. have seabird experience or be in regular consultation with a veterinarian who has seabird experience;
iv. have access to a list of expert veterinarians to contact for assistance;
v. be available to examine seabirds immediately upon admittance to a facility;
vi. be available to assess seabirds during a catastrophic event.

The veterinarian may delegate a portion of this responsibility to a rehabilitator by means of a mutually agreed, written protocol wherein these responsibilities are defined. The veterinarian should provide appropriate training to the rehabilitator to carry out these responsibilities. Such an arrangement allows the veterinarian to prescribe a specific treatment protocol for a specific type of injury without having to examine the individual patient.

2.7 EUTHANASIA

Euthanasia is defined as the induction of death with minimal pain, stress or anxiety and can only be performed by a veterinarian or a para-veterinary professional under the supervision of a veterinarian. The veterinarian must recommend euthanasia of any seabird which is suffering excessively and, in those cases, where prolonging the life of the animal would cause unnecessary suffering.

Standard: Euthanasia

a) Euthanasia must only be performed by a veterinarian or under veterinary supervision by a para-veterinary professional.
b) The facility needs a Euthanasia Policy in accordance with the International Best Practice.
c) Euthanasia must be carried out humanely and ethically.
d) Carcasses must be disposed of in accordance with local regulations and permit conditions.

2.8 TRANSFER OF SEABIRDS BETWEEN FACILITIES

Seabirds may be transferred between facilities when:

b) the number of seabirds exceeds the capacity of the existing centre;
c) another registered and permitted centre may be more suitable for further treatment and subsequent release of the seabirds;
d) if there is a need for breeding purposes to ensure genetic viability.

2.8.1 Transfer process:

a) Both facilities must agree on the transfer to ensure that the receiving facility is prepared for the arrival of seabirds.
b) Both facilities involved in the transfer must ensure that the relevant permits have been obtained before the transfer.
c) Both the transferring and receiving facilities must indicate the following on their records:
    i. the names of the transferring and receiving facilities;
    ii. the identification numbers of the seabird/s, including relevant tags.
    iii. the date of transfer;
    iv. the reason for the transfer.

d) Seabirds that are transferred between facilities must be accompanied by a detailed medical report, including history and treatments administered to date, management information, as well as reason for admission and the area of origin (if known).

Standard: Transfer of seabirds between facilities

a) Facilities must document their threshold in terms of capacity and have a contingency plan for when this is exceeded.

b) There must be a written record to demonstrate that the criteria to select seabirds for transfer to another centre have been implemented.

c) Both facilities involved in the transfer must ensure that the relevant permits have been obtained before the transfer.

2.9 TRANSPORTATION OF SEABIRDS

Seabirds usually have to be transported between:

a) Colony and beach to rehabilitation facilities;

b) stabilisation and rehabilitation facilities;

c) between different facilities; and

d) to a release site.

2.9.1 Transport of seabirds

Standard: Transport of seabirds

a) Transport by road, rail and boat: When seabirds are transported, the following must be considered:

i. Relevant transport permits must be in place;

ii. Planning of the journey is important, including means of transport, trip duration, contingency planning and biosecurity;

iii. Animal welfare:

(aa) When seabirds are transported, measures to ensure ventilation, climate and temperature control and prevention of injuries should be implemented.

(bb) Boxes or crates must not be stacked or packed tightly together, and it is preferable to leave gaps between boxes and crates to assist with airflow.

(cc) Injury to seabirds must be prevented by selecting the appropriate transport method and securing the boxes and crates.

(dd) Seabirds must be able to move around, but excessive movement should be limited to prevent injury.

(ee) Before seabirds are transported, they must be sorted according to size, age and habitus to prevent injury to smaller or weaker seabirds and overcrowding during transport;

(ff) Hydration intervals;

(gg) Consideration for sick and/or injured seabirds;

(hh) Cleaning and disinfecting of boxes or crates.

iv. Transport by air: transport boxes must comply with the IATA standards. These standards are designed for each species. See https://www.iata.org/.

2.10 DISEASE CONTROL

Effective measures to prevent the spread of disease:

- between seabirds;
- between seabirds and humans (zoonotic); and
- between seabirds and local fauna is crucial.

Prevention of disease transmission is achieved through the implementation of an effective hygiene regime. Initial capture and transportation elevate stress levels, particularly during crises, thus making them more susceptible to disease.

Standard: Disease Control

a) A high level of personal hygiene must be maintained. This includes the use of Personal Protective Equipment (PPE), e.g. overalls, boots, disposable gloves and surgical masks.

b) Handwashing facilities with the appropriate disinfectant soap must be available.

c) Facilities for the washing of clothing and disinfection of shoes and boots must be available.

d) Facilities must have designated areas for eating, drinking and smoking away from animal care or food preparation areas.

e) Provision should be made for separate refrigeration facilities to ensure that human food, bird food, carcasses and other specimens are all kept separately.

f) All personnel must be given basic information on zoonosis and disease control. They should also be advised on tetanus vaccinations and deworming treatments.

g) Enclosures, where seabirds are kept, should:
   i. allow for drainage of dirty water;
   ii. be cleaned and disinfected daily;
   iii. be appropriate for chicks and debilitated seabirds that need more frequent cleaning;
   iv. be cleaned after a group of seabirds is removed and before a new group of seabirds is placed in the enclosure;
   v. ensure minimal contact between wild and local fauna and seabirds in captivity.

h) The correct selection process for detergent and disinfectant effective against viruses, bacteria, fungi and algae must be followed. It is essential to choose chemicals that are non-irritating, non-corrosive and biodegradable.

i) All equipment used (e.g. bowls used for feeding, utensils used for food preparation, medical equipment, tubes, nebulisers, towels and sheets used for bedding) should be cleaned and disinfected daily and between use for/on different seabirds.

j) Newly admitted seabirds may be housed separately (preferably in quarantine) to allow for the detection of any diseases. According to Miller (2012), "*Animals confirmed or suspected of having contagious diseases must be kept isolated in a separate room from all non-infected susceptible animals. Newly acquired animals should be housed separately from in-house animals upon arrival. Animals that are presented together (littermates or nest mates) may be housed together during this period. They should not be added to a group pen until it has been established that they are in good health*".

k) Seabirds confirmed or suspected of having a contagious disease must be kept isolated from all other seabirds; these birds should not be housed with the other seabirds until it is established that they are no longer contagious.

l) Sensitive areas require restricted access to prevent contamination of clean areas, such as quarantine, isolation, surgical and chick areas.

m) Indoor areas should have sufficient ventilation and air movement. If air conditioners are used, recycled or reused air should be avoided. The filters and grids of air conditioners should be cleaned regularly.

n) Seabird dietary items should be stored and prepared hygienically.

o) Discarding organic waste must be in accordance with local and municipal by-laws.

p) Any occurrence of a state-controlled disease needs to be reported to the State Veterinarian and appropriate steps taken to determine the extent of the problem and to minimise spread.

2.11 PEST CONTROL

Direct contact between vectors (e.g. mosquitoes, flies, ticks, fleas, etc.) and carriers of diseases (e.g. seabirds, rodents, etc.) must be prevented.

Standard: Pest control

a) Facilities must have a pest and insect control program.

b) Measures must be in place to avoid contamination of both human and animal food and housing areas with human and seabird-friendly pesticides

2.12 HUMAN RESOURCES

Staff, interns and volunteers who work with seabirds regularly should be trained in all aspects of seabird care, and regular refresher courses are strongly recommended. Volunteers should be supervised by experienced interns, volunteers or staff. Clear instructions and a chain of command, especially in emergencies, will help with the smooth running of operations.

Standard: Human Resources and Training

a) Staff should be trained to perform the required duties and regularly assessed.

b) Facilities need to comply with the Basic Conditions of Employment Act, No 75 of 1997.

2.13 HEALTH AND SAFETY

The Occupational Health and Safety Act (No. 85 of 1993) is the overriding legislation in the workplace. Noteworthy risks specifically related to seabird rehabilitation must be addressed as follows:

a) Physical contact with oil should be avoided as it is a toxic and harmful substance.

b) Fume intoxication by seabirds and personnel should be minimised by ensuring that all working areas are well ventilated

c) The greater fire risk owing to the presence of oil and chemicals in a rehabilitation centre must be recognised and guarded against;

d) Fire extinguishers and other appropriate equipment and training should be provided;

e) Physical injuries caused by wet and slippery surfaces should be minimised through installing non-slip surfaces where possible;

f) Appropriate PPE should be worn at all times to ensure the safety of all personnel;

g) Appropriate first aid must be applied to all injuries;

h) Possible injury from staff exhaustion, fatigue and stress must be prevented through proper team management.

Standard: Health and safety

All Seabird facilities must:

a) comply with the Health and Safety Act, 1993.

b) supply PPE requirements to staff and all those working with seabirds.

c) have a Health & Safety policy.

d) adhere to appropriate measures to minimise the risk of injury to humans.

e) ensure that there is safety signage.

2.14 WASTE MANAGEMENT

Waste in South Africa is currently governed by various legislation, including:

a) Hazardous Substances Act (Act 5 of 1973);

b) Health Act (Act 63 of 1977);

c) Environment Conservation Act (Act 73 of 1989);

d) Occupational Health and Safety Act (Act 85 of 1993);

e) The South African Constitution (Act 108 of 1996);

f) National Water Act (Act 36 of 1998);

g) The National Environmental Management Act (Act 107 of 1998);

h) Municipal Structures Act (Act 117 of 1998);

i) Municipal Systems Act (Act 32 of 2000);

j) Mineral and Petroleum Resources Development Act (Act 28 of 2002);

k) Air Quality Act (Act 39 of 2004);

l) National Environmental Management: Waste Act, 2008 (Act 59 of 2008) (as amended).

The following special waste categories are encountered at facilities caring for seabirds:

2.14.1 Fish waste

Care must be taken to manage fish waste hygienically. Disposal via municipal waste is acceptable. It is advisable to freeze or store waste fish and other food products in airtight containers until removal from the premises.

2.14.2 Bio-hazardous and medical waste

Medical waste is distinct from general waste and comprises:

a) potentially infectious waste materials, which include expired medication;
b) medical rubber gloves;
c) injectable medication bottles;
d) any organic material such as scabs, organs and waste removed during operations or medical procedures.

All medical waste must be placed in a red biohazard bag and disposed of by a professional medical waste company. The nature and volume of the waste in the container will determine how often the bin must be emptied. All sharp medical waste, such as needles, scalpel blades and broken glass, must be discarded in a dedicated sharps container. This container must be replaced once it has reached the level indicated on the container.

2.14.3 Carcasses

Carcasses and organic wastes suspected of disease or oil contamination, or those that have been euthanised using potentially harmful chemical methods, must be incinerated. The discarding of carcasses must be done following local regulations and permit conditions for the disposal of medical waste, e.g. by a professional and accredited cremation service.

Standard: Waste Management

a) Medical waste and pharmaceutical waste must be disposed of in accordance with the relevant legislation.
b) All forms of waste management must comply with all applicable legislation.

2.15 CONTINGENCY PLANNING

Each facility must have a contingency plan that describes how the centre will deal with events that occur outside the range of normal operations, and that may adversely affect the centre's ability to operate "normally". The big variance between facilities necessitates individual and specific plans. The minimum contingency planning that should be in place at centres should account for:

a) Disease outbreak;
b) Oil spill contingency planning, including oiled wildlife preparedness and response;
c) Disasters, e.g. fire and flooding
d) Operational limitation (i.e. Covid 19 pandemic).

Standard: Contingency planning

a) Facilities must have written contingency plans for disease outbreaks, oiled wildlife preparedness and response, natural disasters (e.g. fire and flooding) and operational limitations.
b) These plans should be regularly updated, exercised and reviewed to ensure relevance and efficiency.

CHAPTER 3: MANAGEMENT OF REHABILITATION FACILITIES & PERMANENT CAPTIVITY FOR SEABIRDS

3.1 REHABILITATION

The goal of seabird rehabilitation is to provide humane care and conservation benefits to the species. It is essential to minimise their time in captivity.

Standards: General

a) An organisation conducting seabird rescue and rehabilitation activities in South Africa must be a legal entity and hold a valid rehabilitation permit issued under the relevant legislation.

b) All rehabilitation facilities must have appropriate Standard Operating Procedures (SOPs) and/or husbandry manuals and/or policies providing detailed information about protocols and procedures.

c) A permitted rehabilitation organisation must ensure that:

i. All staff and volunteers engaged in seabird rehabilitation activities comply with relevant documents;

ii. The organisation and its staff and volunteers comply with the conditions of their rehabilitation permit;

iii. The organisation provides new and inexperienced staff and volunteers with appropriate and ongoing training and mentoring;

iv. A process is established for handling alleged breaches of this document, or non-compliance with other rules of the organisation;

v. A procedure is established for responding to complaints either from external or internal parties;

vi. All staff and volunteers are given timely, clear and detailed directions by the organisation concerning the activities that they may carry out under the rehabilitation permit.

3.2 FACILITIES – INFRASTRUCTURE AND DESIGN

A seabird facility must ensure infrastructure to ensure that the seabirds in their care have species-specific and safe holding areas and enclosures. The natural biology and behaviour of any species must be considered in the infrastructure design for seabird facilities. Standards for facilities are based on good judgment and sound practical sense. Boundary, roof and holding areas should be secure. To ensure that seabirds are housed acceptably, the factors listed below need to be taken into consideration.

Hence, the layout and design must:

a) Be practical and reduce stress to captive animals;
b) Prevent injury or escape;
c) Ensure levels of hygiene in accordance with operating procedures;
d) Allow for areas and enclosures for various stages of treatment;
e) Enable natural behaviours;
f) Provide hygienic, insect and rodent-free storage for birds' food, supplements and other nutritional requirements;
g) Ensure freezer space is available for storage of frozen fish.

Standards: Facility Design

a) A facility must be able to provide enclosures or cages or pens:
    i. of an appropriate size;
    ii. suitable for particular proactive and progressive care of the bird
    iii. made from appropriate materials;
    iv. that contain appropriate furnishings for all ages of all species that they commonly care for.
b) A facility must have a designated area for intensive care treatment and quarantine.
c) A facility must provide those birds undergoing rehabilitation with sufficient shelter from overheating, excessive rain and cold temperatures.
d) Each bird must be able to turn about freely, and lie or sit comfortably, unless medically restrained.
e) The construction material must be of sufficient strength and where practicable, be of a nonporous, waterproof finish to facilitate effective cleaning and disinfection.
f) A facility must be made secure against rodents and potential predators by including perimeter control.

g) A facility must be constructed in such a manner as to always ensure the appropriate confinement of birds.

h) The facility must have a continuous water supply. The supply should be of such quality, quantity and pressure as to accommodate filling pools, washing birds, washing down work areas and laundry needs.

i) A facility must have at least one pool. The size and depth of the pool should be appropriate for the species commonly cared for.

j) A facility must have a suitable substrate with drainage to prevent birds from standing on flat, wet and hard surfaces. The substrate should be non-slip. Irregular surfaces may be beneficial as it provides natural exercise of the legs and feet (e.g. pebbles).

k) The surface drainage must allow for quick-drying, and all floors should slope towards a drain. Drainage must be sufficient to ensure there is no permanent standing water

l) The drainage and washing water of the centre must run into a sewer and comply with the requirements of the National Environmental Management: Waste Act (No. 59 of 2008) and local authorities.

m) There must be a reliable supply of electricity, sufficient for all electrical needs within the centre. Backup options such as batteries and generators should be considered for essential equipment in case of power failure.

n) The code on electrical installations for wet areas must be adhered to within the centre. This is not limited to only SANS10142.

3.3 CONSTRUCTION MATERIALS

Standards: Construction Materials

a) All materials should be easy to clean and disinfect, as well as limit the opportunity for the harbouring of diseases.

b) Materials used for walls should provide visual barriers and ventilation, minimise chances of injury, and protect against ingress by predators and domestic animals.

3.4 ENCLOSURES

Assigning pen or enclosure size strictly by species is not always realistic. Enclosures should provide birds with the opportunities necessary for complete recovery from injuries and may include crates, cages, pens and aviaries. Enclosures should be designed to allow easy cleaning and access and minimise handling of birds. They should also ensure that seabirds undergoing rehabilitation are housed in a way that:

a) prevents injury or escape;
b) minimises stress;
c) maintains safe levels of hygiene;
d) allows natural behaviours.

The enclosure and poll sizes recommended in the standards are found in Appendix 4. The size requirements may vary due to the:

a) the function of the area;
b) the species of seabirds.

Standards: Enclosures

a) Enclosures must be constructed and maintained in such a way to prevent injury and escape.
b) Enclosures must be constructed from materials that can be easily cleaned and disinfected.
c) Enclosures must be appropriate for the species, and the types of injuries, stage of development and/or stage of rehabilitation of the animal being housed.
d) Enclosures must maintain habitat elements appropriate to the species and the condition of the animal (e.g. perching, pools, suitable substrate).
e) Enclosures housing birds not subject to critical care must allow for the display of natural behaviour and support rehabilitation and survival in the wild.
f) A double-door entry system to prevent birds from escaping is preferred.

3.5 INTENSIVE CARE ENCLOSURES

Intensive care enclosures aim to reduce activity for a short period to facilitate frequent monitoring, treatment, feeding and rehydration. Birds undergoing intensive care should not be kept in cages with an exposed wire, as it can cause concerns, which may include injury and feather damage.

Standards: Intensive care enclosures

a) Intensive care enclosures must be designed for the customised care of a particular animal's concern and to stretch its body and limbs, but not enough space to run, jump or fly.
b) Intensive care enclosures must provide a regulated temperature appropriate to the species, age and nature of the illness or injury.
c) Birds in intensive care housing must experience a light-dark cycle that replicates outside conditions. If an artificial light source is used, it must be separate from any artificial heating.
d) Intensive care housing must be designed and/or positioned to support recuperation appropriate to a species.

3.5.1 Intermediate care housing

This kind of housing provides mobile birds with enough space to allow some physical activity while enabling them to be readily handled or easily restrained for monitoring or treatment.

Standards: Intermediate care housing

a) Intermediate care housing must provide appropriate space for birds to move about freely and enable caretakers to capture birds quickly.
b) If an artificial heat source is provided, birds must be able to move to a cooler section of the enclosure.
c) Birds in intermediate care housing should experience a light-dark cycle that replicates outside conditions

3.5.2 Preparation for release

Birds must be provided with the opportunity to regain physical condition, acclimatise to current weather conditions, be housed with conspecifics and practise natural behaviour. At this stage of rehabilitation, human contact must be appropriately reduced.

Standard: Preparation for release

a) Sufficient space must be provided for birds to move about freely and express a range of natural behaviours.

b) Must provide areas where birds can gain exposure to prevailing weather conditions and locations where they can shelter.

3.6 POOLS

When designing pools for seabirds, the natural feeding, drinking and bathing behaviour of each species should be considered, along with the depth of water that best accommodates such behaviours. Both freshwater and seawater can be used, depending on the species and availability. Pools must be of the appropriate size and depth for commonly cared for species. Water quality is a critical parameter for appropriate care. Careful research and appropriate filtration and water quality control are required. Suitable manuals can assist in guiding the process. Skimming capacity is essential for the health of the birds. Oils that build up on the water should be removed to maintain healthy feather condition. The number of skimmers should correspond to the pool size and configuration.

Standard: Pools

a) Water must be of good quality and not interfere with feather waterproofing.

b) A Standard Operating Procedure on pool care and water quality must be in place;

c) Water quality must be monitored and records maintained.

3.7 ADMISSIONS:

The Admissions process must be conducted in an organised and prompt manner and must be done by trained rehabilitation and veterinary personnel. The reason for admission must be determined by thorough examination of seabirds whilst ensuring stress to seabirds is minimised and mitigated.

Standard: Admitting seabirds

a) All rehabilitation centres must have a standard admissions procedure included in the Standard Operating Procedure (SOP).

b) Record all information as required in Section 3.9 (Record Keeping) of this document.

c) The veterinarian must prescribe a treatment plan, and seabirds under treatment should be assessed by the veterinarian at an interval determined by the prescribed treatment plan.

d) The Admissions Form, in accordance with these Norms and Standards, must be used for every seabird admission.

e) The following are basic pieces of information that need to be included in the Admissions Form (Appendix 5):

i. Date
ii. Species
iii. Estimated / approximate age
iv. Person who brought the seabird
v. Contact details
vi. Location Found/GPS
vii. History
viii. Treatment before admission
ix. Animal admitted by
x. Clinical condition on admission
xi. Microchip Number
xii. Admission weight
xiii. Hydration status
xiv. Habitus
xv. Treatment

3.8 ROUTINE CARE DURING REHABILITATION

To adequately monitor the progress of seabirds undergoing rehabilitation, and make effective changes to treatment plans, minimum routine evaluations and checks must be carried out on all seabirds in rehabilitation facilities as listed in the box below.

Standard: Routine care during rehabilitation

a) Seabirds receiving veterinary treatment must be assessed at the frequency prescribed in the veterinarian treatment plan.

b) Seabirds that are not receiving veterinary treatment must be assessed at the frequency determined in the SOPs of the facility or as prescribed by the veterinarian and/or an experienced rehabilitator.

3.9 RECORD KEEPING

Standardised record-keeping is essential for facilities to accurately report on all seabirds in care. Records are a valuable source of information and should, as far as possible, be collected and stored electronically in relevant databases. It is advisable that a backup of the physical records be kept off-site. All facilities must provide their records to the relevant studbook keeper twice annually.

3.9.1 Minimum Records Required

The following must be recorded for all seabirds admitted to the centre:

a) date of admission;
b) species;
c) age (e.g. egg, chick, blue, juvenile, adult);
d) area bird was found;
e) name and address of the person/organisation who collected the bird (where possible);
f) detailed reason for admission (RFA);
g) body condition (including weight, habitus and hydration);
h) temporary identification number used during rehabilitation;
i) permanent identification number if applicable (SAFRING number and/or transponder number);
j) outcome (release, transfer, death);
k) date of release, transfer, or death;
l) location of release (if applicable)
m) cause for death, if applicable (natural or euthanasia);
n) Date and reasons for the transfer;
o) Whether or not a post-mortem was performed.

In addition to the above, the following must also be kept:

a) All test results;

b) post-mortem examination results (if available);
c) any welfare indicator measurements taken;
d) veterinary procedures and treatments for each bird.

3.9.2 Medical Records

Records for individual seabirds must be updated with information following medical/veterinary checks, including diagnosis, prescribed treatment (medication provided, dosage, frequency and duration of treatment).

3.9.3 Release records

The following should be recorded for all seabirds that are released:

a) Temporary identification number used during rehabilitation;
b) Permanent identification number if applicable (SAFRING and/or transponder number or other identification methods that may aid in identification);
c) Release date;
d) Release location must be recorded;
e) Method of release must be recorded;
f) Released birds must be marked using the standard agreed-upon method.

3.9.4 Transfer records

The following must be recorded for all seabirds that are transferred to other centres:

a) Temporary identification number used during rehabilitation.
b) Permanent identification number if applicable (safring number and/or transponder number or other identification methods that may aid in identification).
c) Transfer date.
d) Reason for transfer.

3.9.5 Marking Records

Unmarked specimens of marine seabirds must be marked using the method as may be determined by the permit-issuing authority. Records of marked birds admitted into the facility must be kept and data submitted to the relevant organisation. These annual records should balance back to the number of seabirds in the rehabilitation centre.

Standard: Record Keeping

a) Records need to be kept and reported to the relevant authority in the specified period stipulated in the permits.
b) All birds must be temporarily marked upon admission to identify them for the rehabilitation process.
c) Records should be made available as required by the permitting authority.

3.10 RELEASE:

To ensure that only seabirds that possess an appropriate level of physical, cognitive and behavioural fitness are released to the wild.

Standards: Release of Seabirds after Rehabilitation

a) Rehabilitated seabirds must be assessed as physically and behaviourally fit by a veterinarian or an experienced rehabilitator before release.
b) The following are considerations for a bird deemed physically fit for release:
    i. is no longer in need of medical care;
    ii. exhibits no signs of active disease;
    iii. shows normal laboratory values, which must be tested;
    iv. possesses plumage necessary for that species to survive (i.e. waterproof);
    v. possesses vision to find/catch food and manoeuvre in a normal manner;
    vi. exhibits locomotive skills necessary for that species to survive;
    vii. demonstrates proper species behaviour (e.g. not improperly imprinted);
    viii. is of the correct age for independent survival;
    ix. is of the correct weight for that species and age.

3.10.1 Release timing, site and method

This section ensures that the release site and timing for rehabilitated seabirds are chosen to maximise the chances of survival in the wild; while minimising the negative impact on wild populations. Site selection depends on the species, the number of seabirds to be released and a variety of environmental factors. It is preferred that seabirds are released in periods of favourable weather and early in the day to reduce the stress associated with readjusting to a natural environment.

Standards: Release timing, Site and Method

a) Rehabilitated and/or hand-raised birds must be released near an active breeding colony, except for releases for other approved conservation activities (e.g. creation of new breeding sites) provided that the location is within the bird's normal home range and where such bird is ordinarily found in the wild.
b) Major releases should be done in consultation with local authorities and other relevant stakeholders.
c) Conform to the IUCN Guidelines for Reintroductions and Other Conservation Translocations https://portals.iucn.org/library/efiles/documents/2013-009.pdf

3.11 CRITERIA FOR SELECTION – NON-RELEASABLE BIRDS

Non-releasable seabirds:

From a welfare point of view, if a bird presents with one or more of the following conditions (but not limited to), it could be considered a candidate for permanent captivity:

a) Damaged plumage, including, but not limited to, large bald patches, preen gland trauma (i.e., the bird cannot be waterproof).
b) Injuries that hinder normal swimming or foraging behaviour, e.g., severe flipper injuries.
c) Mild cases of neurological damage.
d) Seabirds imprinted on humans.
e) Mild cases of scoliosis (i.e. Hunch-back seabirds).
f) Damage to barbs on the tongue and/or trauma to the tongue.
g) Seabirds with severe beak deformities, e.g., skew beak, missing part of the beak.
h) The decision to place non-releasable seabirds into permanent human care should be made by a veterinarian. A signed veterinarian report must be available, stating why the bird is not releasable.

Standard: Non-releasable seabirds

a) Demonstrate and document that a selection process for placing seabirds in permanent human care is in place. A signed veterinarian report must be available, stating why the bird is not releasable.
b) Be advised by the process for accepting birds into permanent human care – (studbook, DNA, SANS)

IN ADDITION TO THE ABOVE, THE FOLLOWING SECTION IS EXCLUSIVELY APPLICABLE TO FACILITIES HOUSING SEABIRDS PERMANENTLY

3.12 HOUSING OF SEABIRDS IN PERMANENT CAPTIVITY

The management of seabirds in permanent captivity is regulated under SANS 10379:2005 (South African National Standard: Zoo and aquarium practice), which is the South African national standard for Zoo and Aquarium Practice. This standard includes provisions for management systems, the husbandry and welfare of animals, conservation and research practices and educational and recreational aspects.

3.13 CRITERIA FOR TRANSFER TO PERMANENT CAPTIVITY

To maintain the integrity of a metapopulation, particularly the genetic diversity, all movements of birds into permanent captivity must be advised by the relevant authority responsible for the regional Studbooks. All information as required by the international database must be provided by the Rehabilitation facility to the regional Studbook.

3.14 CRITERIA FOR HOUSING IN PERMANENT CAPTIVITY

The criteria for housing seabirds permanently are:

a) Seabirds kept in permanent captivity must be kept in a facility licensed (permitted) and dedicated to managing captive populations. These birds must be included in the meta-population management protocol as implemented under international directives in conjunction with national legislation.

b) The facility must have a protocol on the carrying capacity of the permanent resident enclosure and must be adhered to it, as guided by international best practice for zoos and aquaria;

c) Seabirds in permanent residence must be recorded in the regional studbook, and this information must be updated quarterly and published annually;

d) Seabirds in permanent residence must be DNA profiled and transpondered (microchipped);

e) Captive populations need to be guided by international conservation strategies, i.e., there needs to be a meta-population management plan advising the captive breeding process;

f) Captive facilities, including rehabilitation centres, need to demonstrate international best practice.

3.14.1 Samples for genotyping & Studbook

a) All facilities must liaise with the South African Biodiversity Institute (SANBI) concerning the collection of DNA samples and relevant information substantiating the sample.
b) All facilities must provide samples required for the Wildlife Biomaterial Bank (Biobank) depository managed by SANBI. This will contribute towards the conservation of the species.
c) All facilities permanently housing seabirds must participate in any regional or national studbook approved by the Department.

All facilities must provide the following information to the relevant studbook keeper:

a) quantities and sex of specimens acquired;
b) Transactions (hatches, deaths, release to the wild, transfers, wild captures);
c) Parentage;
d) Sex;
e) Rearing type;
f) Identifiers (microchip number, house name, tag number);
g) Specify number (linking to DNA passport);
h) Whether such specimens were born in the facility, purchased, received as a donation or a new loan, or a loan returned or a specimen that was deemed as unreleasable by a veterinarian;
i) Quantities and sex of specimens kept;
j) Quantities and sex of specimens disposed of, whether such specimens died, were sold, or given as a donation or a loan.

Standard: Criteria for housing in permanent captivity

a) Updated information must be provided to any regional or national studbook approved by the Department.
b) Information required must be provided to the Studbook Keeper within the requested time;
c) Seabirds in permanent residence must be DNA profiled and transpondered (microchipped);
d) Captive population management needs to be guided by International Conservation strategies, i.e. there needs to be a meta-population management plan advising the captive breeding process;
e) Captive facilities need to demonstrate international best practice.

REFERENCES

- Barongi, R., Fisken, F. A., Parker, M. & Gusset, M. (eds) (2015). *Committing to Conservation: The World Zoo and Aquarium Conservation Strategy*. Gland: WAZA Executive Office, 69 pp
- Mellor, D. J., Hunt, S. & Gusset, M. (eds) (2015) *Caring for Wildlife: The World Zoo and Aquarium Animal Welfare Strategy*. Gland: WAZA Executive Office, 87 pp
- AZA Penguin Taxon Advisory Group. (2014). *Penguin (Spheniscidae) Care Manual.* Silver Spring, MD: Association of Zoos and Aquariums
- Miller, E.A., editor. (2012). Minimum Standards for Wildlife Rehabilitation, 4th edition. *National Wildlife Rehabilitators Association*, St. Cloud, MN. 116 pages.
- IUCN Guidelines for Reintroductions and Other Conservation Translocations https://portals.iucn.org/library/efiles/documents/2013-009.pdf

LIST OF APPENDICES

- Appendix 1 – Code of Ethics
- Appendix 2 – Oiled feather sampling
- Appendix 3 – Blood sampling
- Appendix 4 – Guideline on enclosures and pool sizes
- Appendix 5 – Admission Form

LEGISLATION:

- Animals Protection Act, 1962 (Act No. 71 of 1962);
- National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004);
- Performing Animals Protection Act, 1935 (Act No. 24 of 1935);
- South African National Standards (SANS);
- African Penguin Biodiversity Management Plan, 2013 (Gazette No: 36966);
- Nature Conservation Ordinance, 1974 (Act No.19 of 1974);
- Policy on the Management of Seals, Seabirds & Shorebirds, 2007 (Gazette No: 30437);
- Seabirds & Seals Protection Act (Act No. 46 of 1973);
  Threatened or Protected Marine Species, 2017 (Gazette No: 40876).

STATE INSTITUTIONS

- South African Biodiversity Institute (SANBI)

ORGANISATIONS:

- Dyer Island Conservation Trust (DICT);
- International Wildlife Rehabilitation Council (IWRC);
- Pan-African Association of Zoos and Aquaria (PAAZA);
- South African Association for Marine Biological Research (SAAMBR)
- Southern African Foundation for the Conservation of Coastal Birds (SANCCOB);
- Tenikwa Wildlife Rehabilitation & Awareness Centre
- The African Penguin & Seabird Sanctuary (APSS);
- The National Wildlife Rehabilitators Association;
- The New Zealand Wildlife Health Centre;
- World Association of Zoos and Aquaria (WAZA).

WEBSITES:

- http://safring.adu.org.za
- www.iata.org/