

**CONSERVATION & INDUSTRY STRATEGIC PARTNERSHIPS - A MODEL APPROACH FOR THE EFFECTIVE IMPLEMENTATION OF AN AIRPORT AUTHORITY BIRD HAZARD MANAGEMENT PROGRAM.**

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**Abstract**

It is common knowledge that in many instances modern industry has a negative impact on the environment. Environmental and conservation organisations therefore criticise industry and in association with government departments they endeavour to enforce stricter control measures on how to curb and better police those negative effects industries are having on the environment.

What is however often neglected is the realisation that wildlife often also pose a threat to industry. Certain industries, particularly the aviation sector, are faced with potential catastrophic negative effects on their activities as a result of wildlife hazards. Conservation and environmental organisations should therefore not only pass judgment on industry but continuously seek opportunities to work together with industry to both address the negative effects that a particular industry might have on the environment but also seek to assist the industry where wildlife might pose a threat. Conservation organisations are often best positions to provide effective solutions to such problems.

In South Africa the Endangered Wildlife Trust pioneered the establishment of two key industry partnership programs with the Aviation and Electricity sectors. Worldwide both these industries are negatively effected by wildlife - in particular birds. These industries could also have a negative impact on bird populations if destructive mitigation measures were to be implemented in an uninformed manner. It therefore made sense for the Endangered Wildlife Trust (EWT), a non-governmental conservation organisation, to engage with these industries in order to assist them in better understanding and mitigating the negative effects that wildlife are having on their operations in an environmentally sensitive manner.

The EWT's Strategic Partnership with the aviation industry in South Africa was established during 1999. It has since been instrumental in forging a working model acting as intermediary between aviation industry stakeholders in South Africa to ultimately address the bird hazard risk experienced on South African airports. The programme is funded primarily by ACSA (Airports Company South Africa) who operates the 10 larger airports across South Africa.

The partnership program has been instrumental in addressing bird hazards at ACSA airports. This paper outlines the structure and working model of the industry partnership program of the EWT with a specific focus on the ACSA – EWT Strategic Partnership and its achievements over the past five years. Further more the model of integrating conservation related organisations with corporate / industry is proposed for establishing long term sustainable wildlife hazard management programmes at airports.

**Key words:** Conservation; Bird Hazard Prevention programs; Industry Partnerships; Aviation Industry Stakeholders.

# CONSERVATION & INDUSTRY STRATEGIC PARTNERSHIPS

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## A MODEL APPROACH FOR THE EFFECTIVE IMPLEMENTATION OF AN AIRPORT AUTHORITY BIRD HAZARD MANAGEMENT PROGRAM

### Presentation outline

- Industry and the environment
- Industrial environmental management
- Environmental impact on industry
- Industry Partnerships
- The ACSA – EWT Partnership





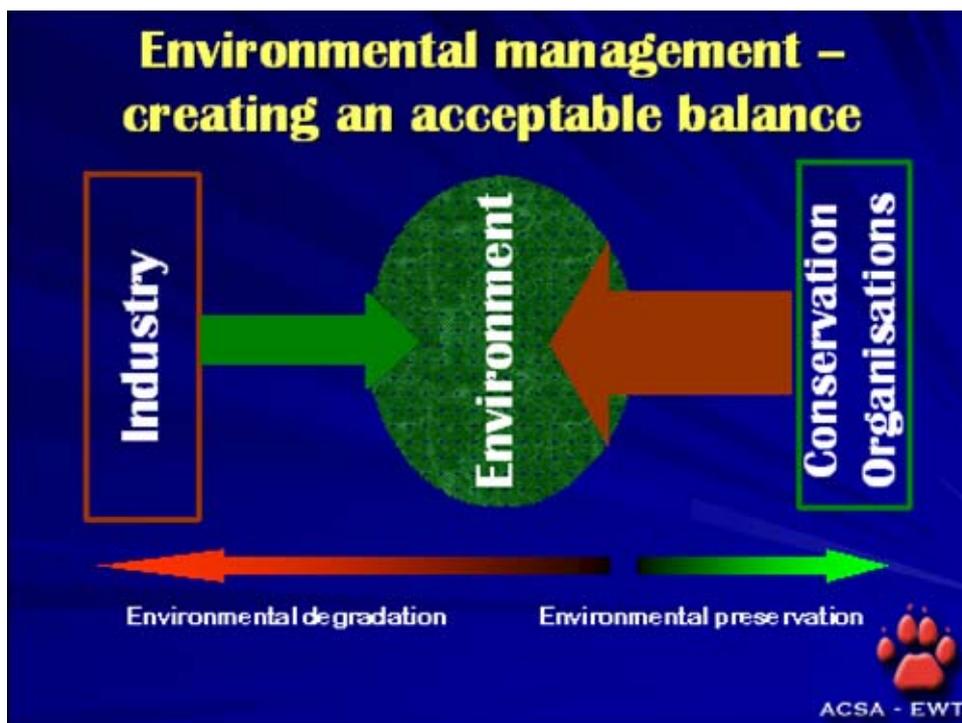
A Marabou Stork (*Leptoptilos crumeniferus*). In Africa the aviation industry is faced with numerous threats from birds and wildlife and quite often the species are large in size and abundant on airfields.

## Industry and the environment

- **Industry**
  - Negative impact on environment
  - Direct effects – species decline
  - Secondary effects – environmental degradation, pollution etc
  - Sustainable development
- **Environmental organisations**
  - Negative towards industry
  - Criticise industry
  - Lobby for stricter legislative controls

  
 ACSA - EWT

It is common knowledge that in many instances the day to day activities of modern industry has a negative impact on the environment. This could often result in direct effects on specific species resulting in their numbers declining etc. In addition the effects of industry could also lead to more general environmental degradation through for example pollution. Environmental and conservation organisations therefore often criticise industry and in association with government departments they try to enforce stricter control measures on how to curb and better police those negative effects industries are having on the environment. Ultimately a sustainable balance is required between industrial activities and the impact it has on finite environmental resources.



Sustainable development:

Such a 'required' balance between industry and the environment is depicted in the above diagram where the strong force and requirement of industry on finite environmental resources leads to environmental degradation and loss of finite resources. On the other hand conservation and environmental protection agencies strive to enforce a sustainable balance between the needs of industry and the availability of resources.



Industrial environmental management practises aims to ensure that companies comply to environmental legislation relevant to the particular industry and country concerned. There are however international guidelines such as ISO 14001 accreditation which governs companies according to an international audited benchmark in terms of their compliance to such environmental policies / procedures in line with legislation. Having more industries comply to such guidelines and be ISO 14001 accredited will aid in achieving more sustainable development. Such initiatives if agreed to and undertaken by more companies will aid in achieving the millennium development goals targets

agreed to at the World Summit on Sustainable Development in 2002. It is recommended that organisations report on a triple bottom line and not on financial performance only. The triple bottom line refers to social, economic and environmental aspects including the effect that the product or services produced by the industry / company have on the environment.



**Impact of the environment on industry**

- The problem
- Supply & demand
  - Quality of supply
  - Negative impact created by environmental factors i.e. wildlife
- Industry requires knowledge from conservation organisations
- Wildlife management expertise – the solution

ACSA - EWT

On the contrary the environment can also place certain constraints or have a direct impact on industry. This is most evident in scenarios where the quality or supply of a service by industry is negatively impacted upon or where losses in terms of life or finances are at stake.

What is however often neglected is the realisation that wildlife often also pose a threat to industry. Certain industries, particularly the aviation sector, are faced with potential catastrophic negative effects on their activities as a result of wildlife hazards. Conservation and environmental organisations should therefore not only pass judgment on industry but continuously seek opportunities to work together with industry to both address the negative effects that a particular industry might have on the environment but also seek to assist the industry where wildlife might pose a threat. Conservation organisations are often best positioned to provide effective solutions to such problems.



The EWT's Strategic Partnership with the electricity industry in South Africa ESKOM was established during 1997 and has made significant advances in addressing the effect power lines are having on bird populations and vice versa.

It is imperative that wildlife biologists provide effective solutions financially sustainable solutions to industry which will aid in addressing the negative impact which the wildlife are having.

In South Africa the approach taken by the EWT an environmental NGO has been advantage as it allows for a more positive unbiased approach to the problem and often services rendered are more cost effective than what normal environmental consultants would have charged.



## Aviation industry partnership

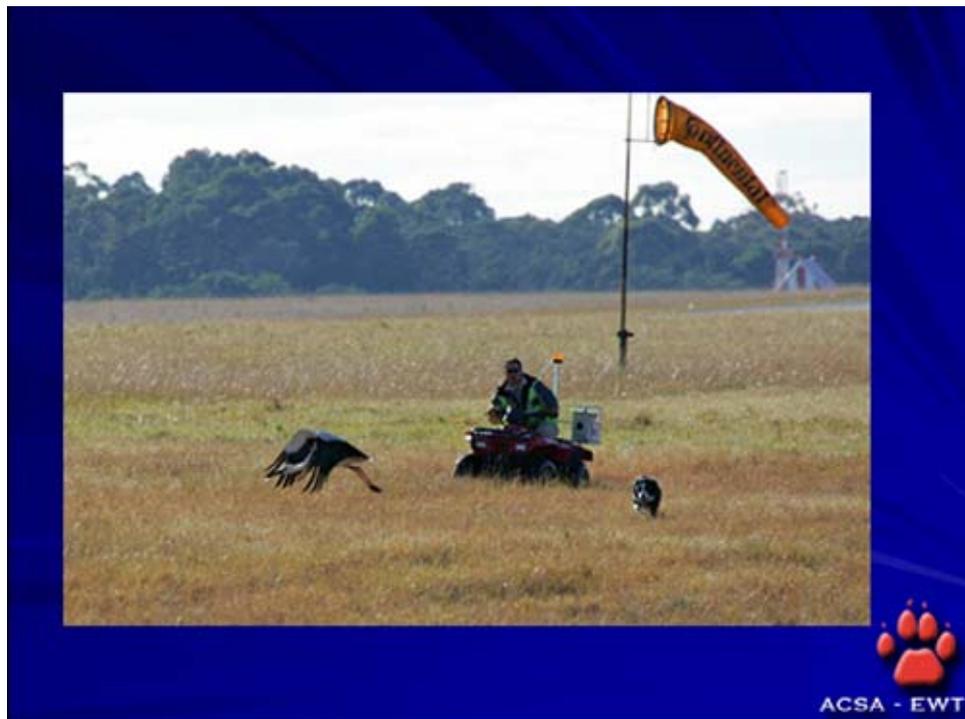
- Airport Wildlife Hazard Management Programme
- Airports Company South Africa – EWT Strategic Partnership
- 6 years ongoing
- Successes & achievements



ACSA - EWT

The Airport Wildlife Hazard Management programme in South Africa has been in existence for 6 years now. The program is a strategic partnership between the Endangered Wildlife Trust and the Airports

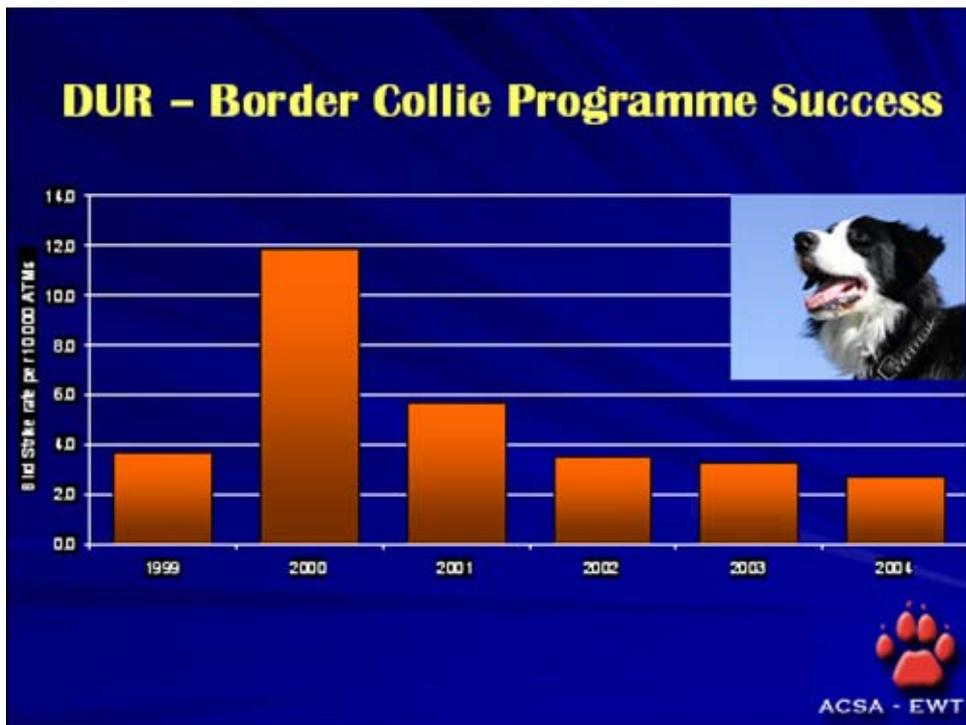
Company South Africa. The program has been highly successful in addressing the bird hazard risk at the larger airports in South Africa and as a result the frequency of bird strike occurrences has been reduced dramatically.



## ACSA – EWT Achievements

- Implementation of integrated bird / wildlife control programs at all ACSA airports
- Appointment of wildlife control officers
- Border Collie Bird Scaring Programs
- Stakeholder support & participation
- Improved reporting of incidents
- Awareness and advocacy





The Border Collie Bird Scaring Programme implemented at Durban International Airport has been a huge success for the ACSA – EWT partnership and as is evident from the above graph the bird strike rate has decreased year on year since the implementation of the programme.



George airport is a relatively small airfield situated along the southern Cape coast and relatively few bird strike occurrences have been reported there during the past few years. The following slides provides an overview of a serious bird strike which occurred at George Airport on the 10th of September 2004.

## George Airport Bird Strike Details

■ Aircraft Make:	Metroliner metro 3
■ Souls on board:	2 Crew, 0 Passengers
■ Fatalities:	Zero
■ Injuries:	Minor injuries to 2 crew
■ Date / Time:	10 Sept 2004 05:40
■ Bird Species:	Spotted Thick-knee
■ Phase of ops:	Final Approach
■ Part struck:	Engine #2
■ Part damaged:	Engine #2
■ GRJ Airport closed – incident occurred before operational hours	

ACSA - EWT

The accident occurred during the early hours of the morning shortly before the airport opened for normal published operational hours.



The aircraft crash site.



The remains (wing) of the Spotted Thick-knee collected from the threshold of the runway.



The airport staff indicated that the aircraft apparently struck the bird at a height of approximately 100 feet.

Considering the terrestrial nature of the bird species concerned a Spotted Thick-knee (*Burhinus capensis*) it is probable that the bird was over flying the airfield at the time from a feeding site on adjacent farmlands to a roosting site. It is highly unlikely and improbable that the approaching aircraft could have resulted in the bird being flushed from the airport grounds and then raising to a height of 100 feet to be ingested by the aircraft engine.





The turbobfan blades visible through the engine turbo air intake shows some damage and bird debris is visible all throughout the air intake cowling and inner surface.

**Factors – determining the success of an industry partnership**

- What is the need?
- Industry buy-in and participation
- Effective solutions
- Legislative framework & requirements
- Success is dependent on implementation of recommendations
- Committed people driving the process

ACSA - EWT

Due to the negative impact that wildlife so often have on industry as is the case with the aviation industry it is necessary and an ideal opportunity for wildlife biologists to assist and provide effective solutions for the problems experienced. It is however important that the particular industry buys in to the process and implements and follows the recommendations made for such solutions to be effective and sustainable over the longer term. It also assist industry to ensure that that their operations are compliant in terms of legislative frameworks and requirements. Overall the success of such initiatives depends largely on committed individuals from both industry and environmental organisations.