

CAR/SAM BIRD STRIKE COMMITTEE MEETING



Lima / 01-03 December 2004

OBJECTIVE

To present the peculiarities of the bird hazard problem in Brazil, and some of the countermeasures being developed under the Brazilian Bird Strike Reduction Program.

TOPICS



- **THE BRAZILIAN SCENE**
 -
- **BIRD STRIKE STATISTICS**
- **SUCCESSFUL ACTIONS**



Brazil

3,319,666 sq mi

5.560 Cities

Second world largest
aircraft fleet

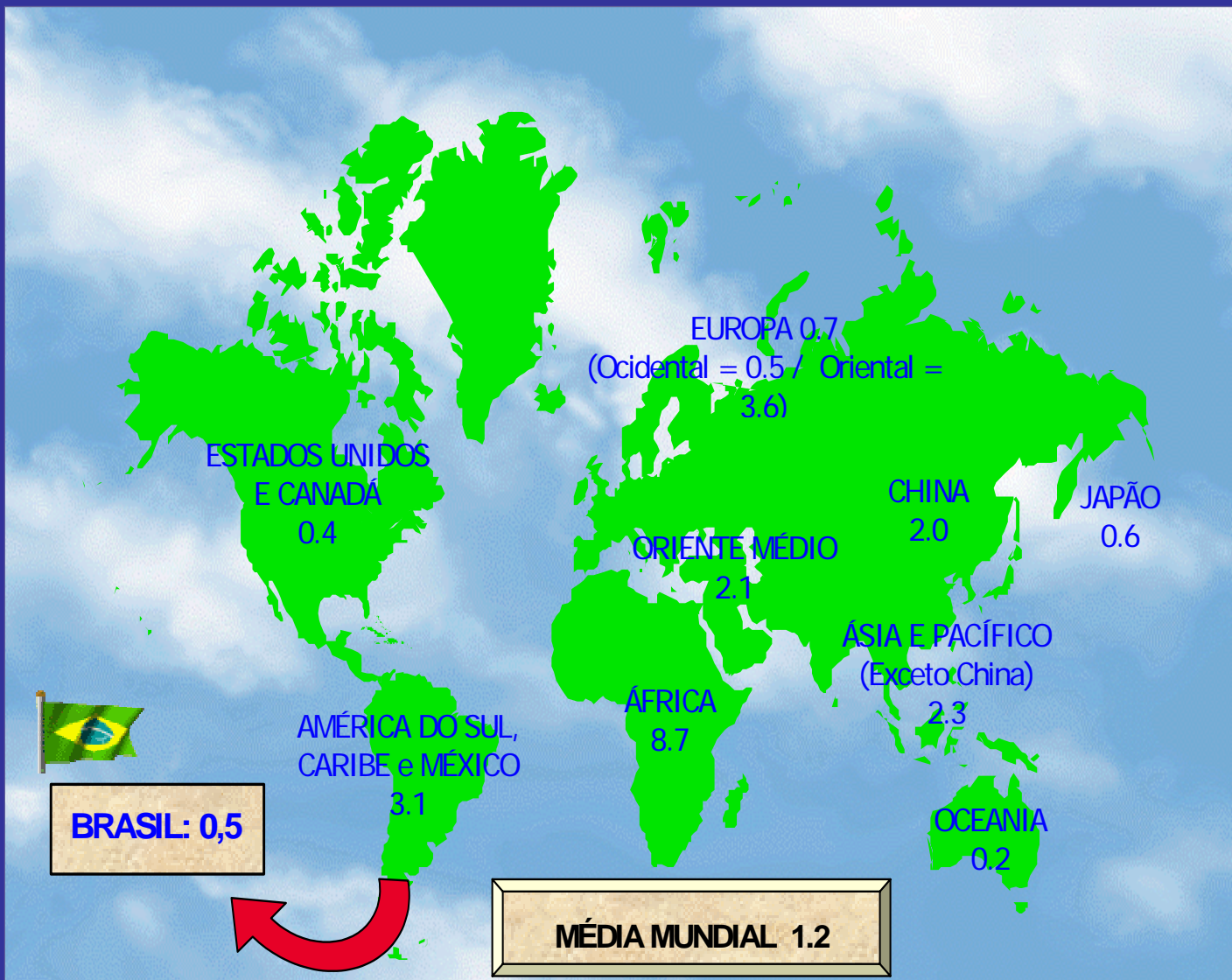
Second world largest
number of bird species



Microsoft Map



Microsoft Map



Fonte: Flight Safety Foundation / Boeing Commercial Group / DAC

RBHA/FAR 121 (1990/2000)



VOE SEGURO, VOE SIPAER!

CIVIL AVIATION



MILITARY



AERONAUTICAL INDUSTRY



AIRPORTS



CNPAA

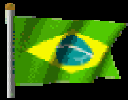


Avian Hazard Control Committee



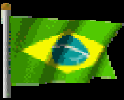
By Clifton





Brazilian Bird Strike Hazard Committee

- YEAR 2001 – ESTABLISHED.
- TO SUPPORT LOCAL INITIATIVES IN ORDER TO CREATE REGIONAL COMMISSIONS.
- LOCAL SEMINARS HELD ALL OVER THE COUNTRY.
- DIFFUSION OF THE AVIAN HAZARD ISSUE IN BRAZIL.
- THE COMMITTEE IS FORMED BY:



BRAZILIAN BIRD STRIKE COMMITTEE



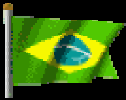
CENIPA - Central Organization
of the Brazilian Flight Safety System.



DAC - Civil Aviation Department
IAC – Civil Aviation Institute



INFRAERO – Airport Administration Company
IBAMA – Brazilian Environmental Institute
CEMAVE – Wild Avian Protection Center



BRAZILIAN BIRD STRIKE COMMITTEE

VARIG LOG 



VARIG – Airlines (Group)

VASP – Airlines

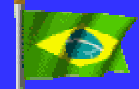
TAM - Airlines

GOL - Airlines

LIDER - Business Executive Jets



MAIN BIRD SPECIES



SUINDARA



MARIA
FACEIRA



QUERO-QUERO



CARACARÁ



CORUJA
BURAQUEIRA



MOCHO
ORELHUDO



SOCOZINHO



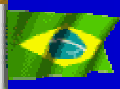
GAVIÃO DE
COLEIRA



CURIANGO



QUIRIQUIRÍ



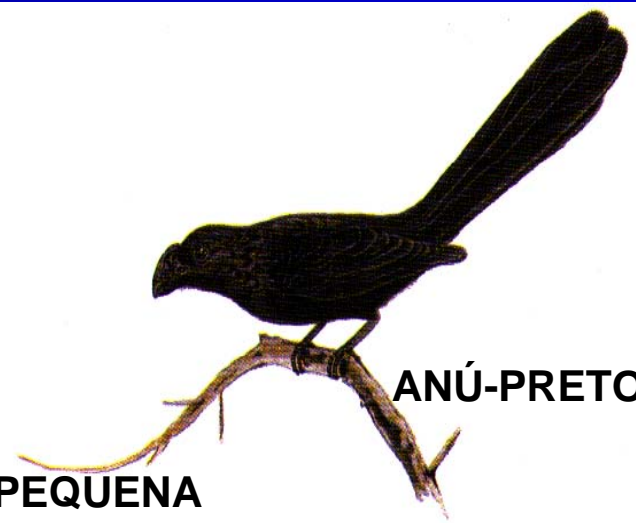
**GARÇA-GRANDE-
BRANCA**



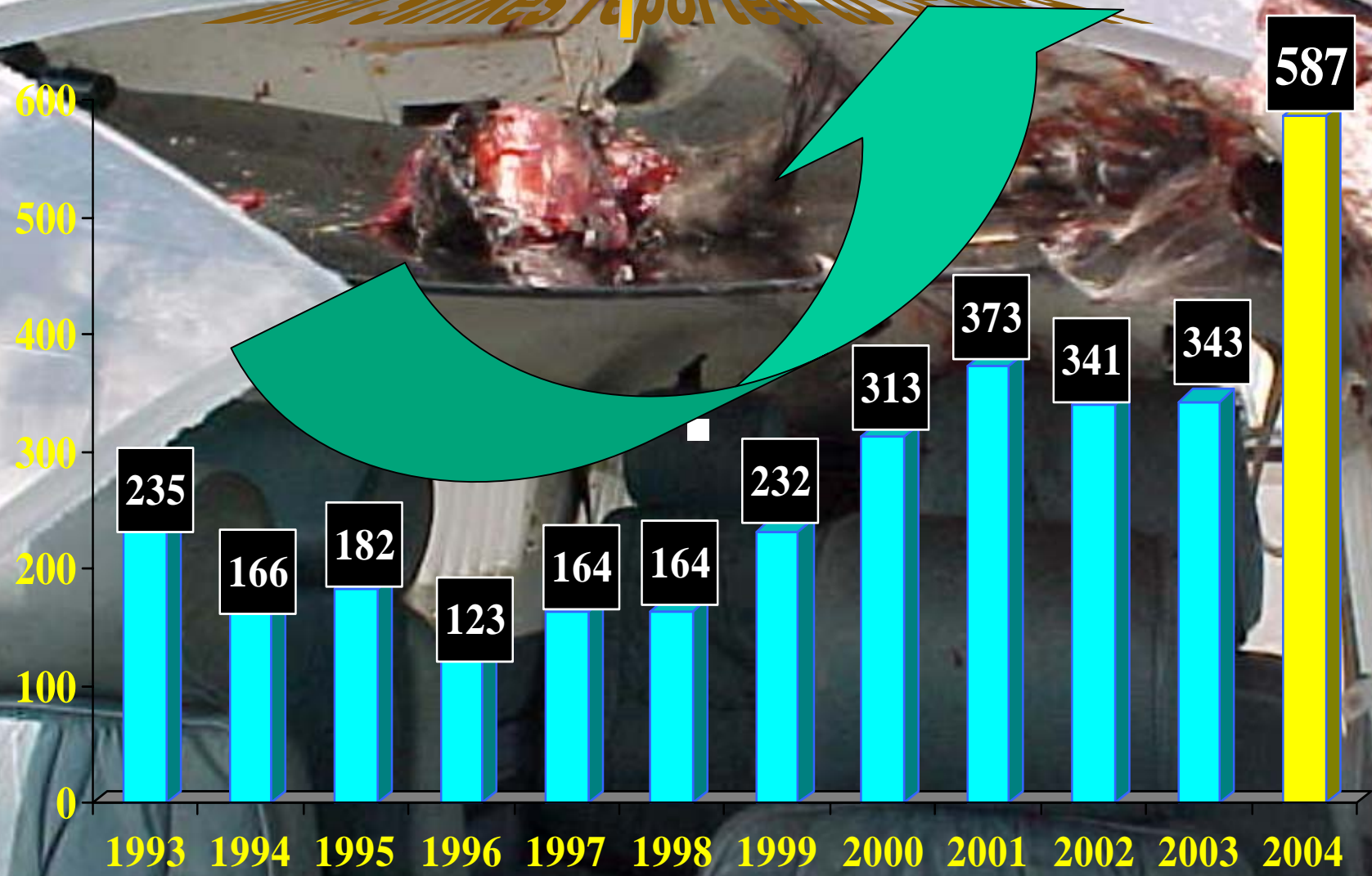
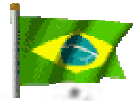
BIGUÁ



**GARÇA-BRANCA-
PEQUENA**



Bird strikes reported to CENIPA

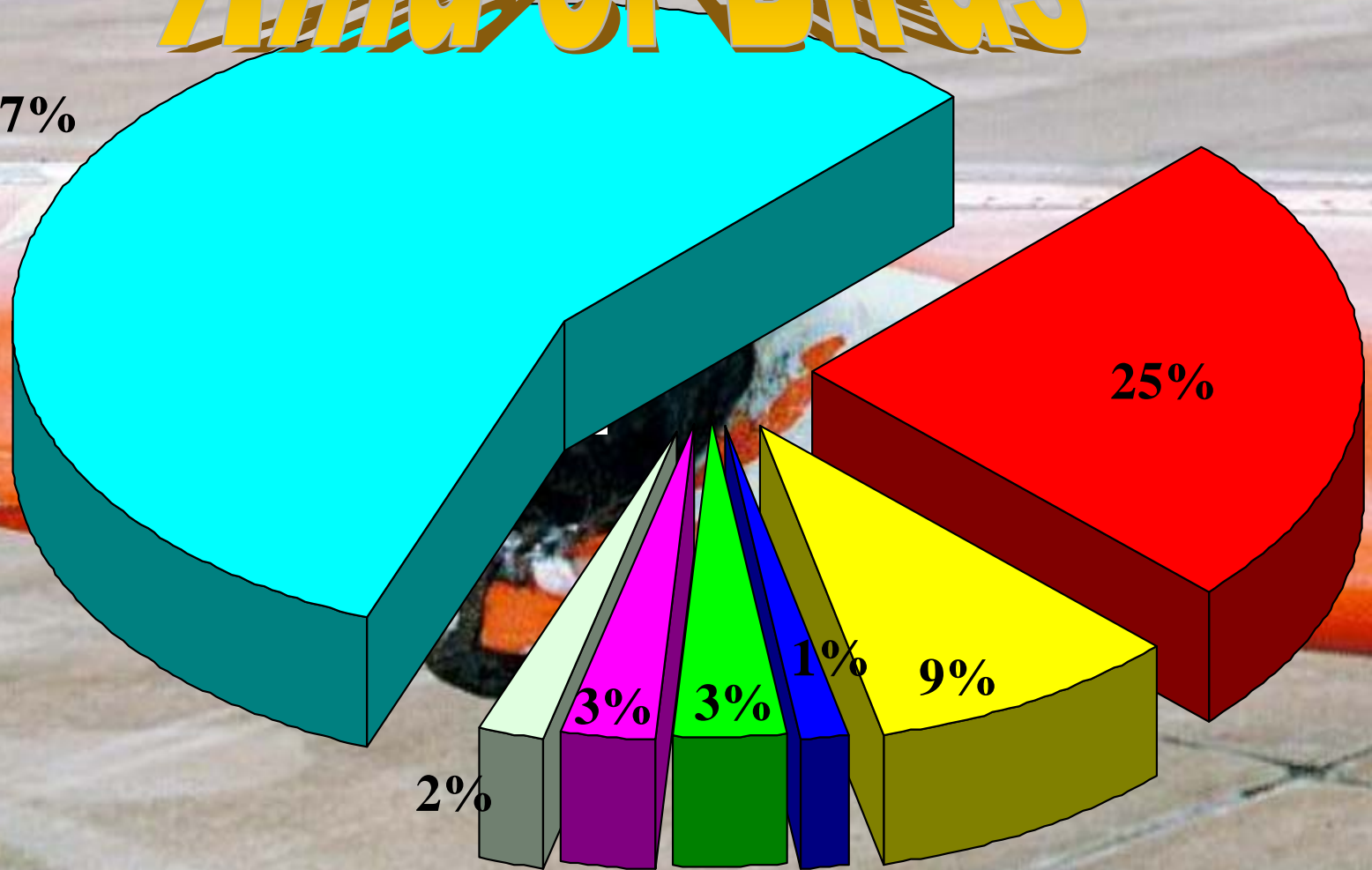


CENIPA manages the most complete bird strike database in Brazil, using its data for orientating the avian hazard control actions.

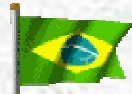
Kind of Birds



57%



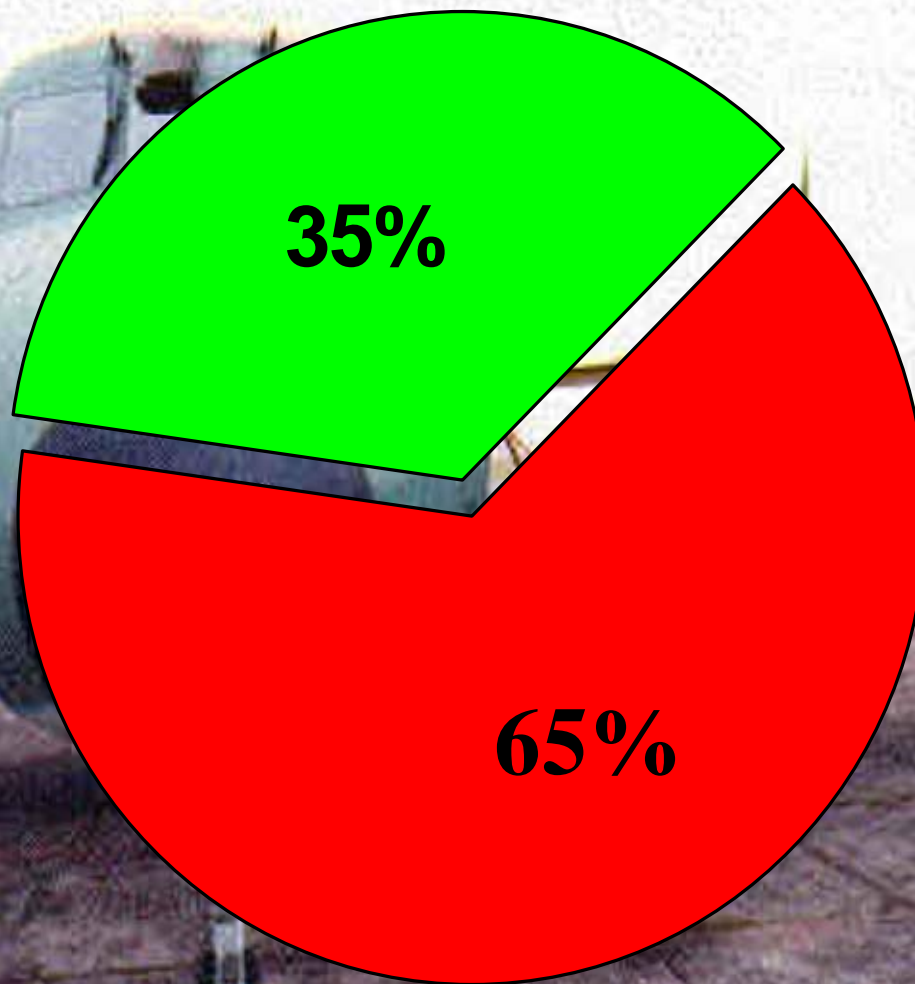
■ Black Vulture ■ Vanellus chillensis ■ Nacunda Nightiar ■ Owl ■ Hawk ■ Heron ■ Others



Armed Forces Aircrafts X Civil Aviation

■ Civil

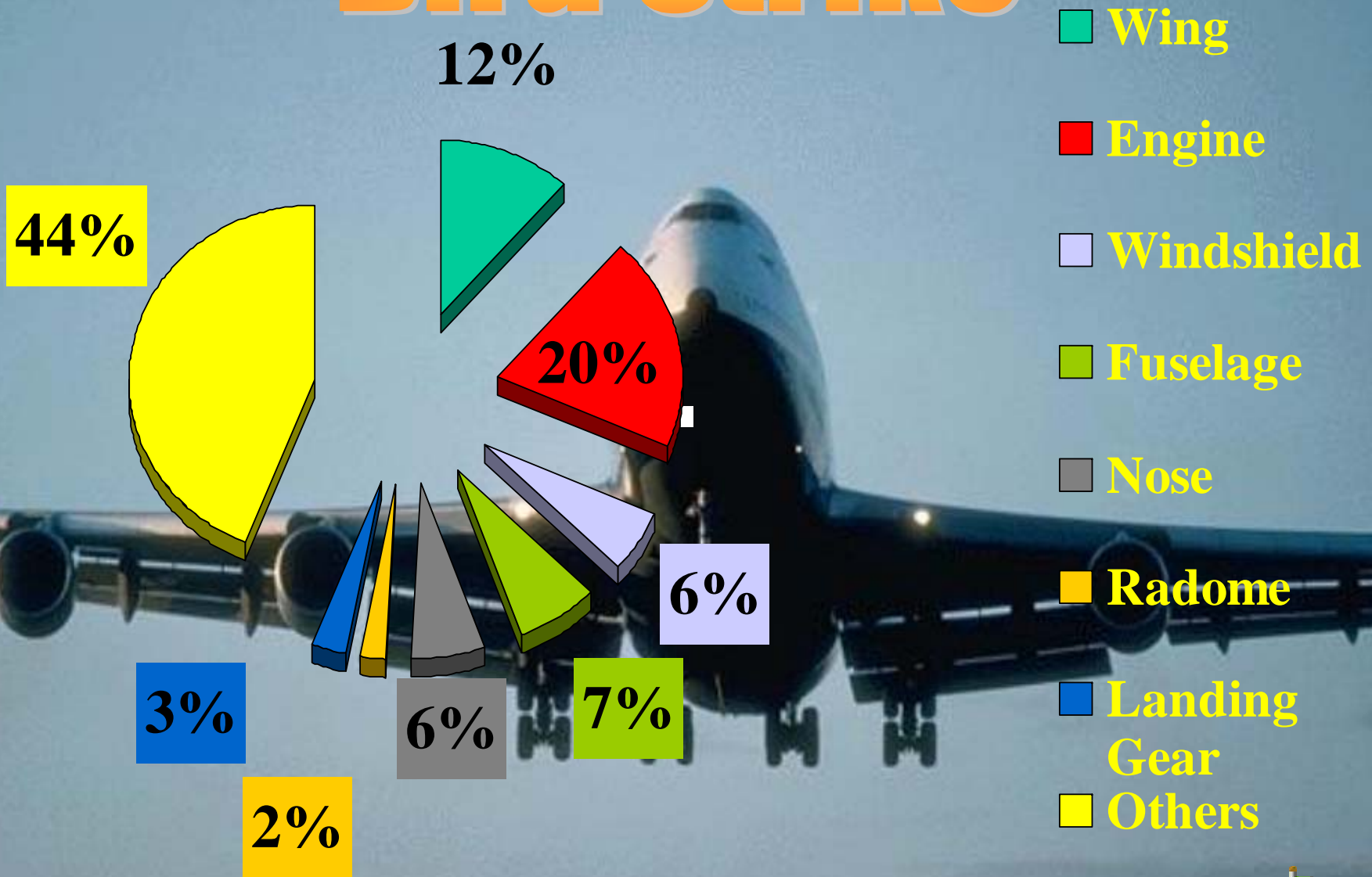
■ Military



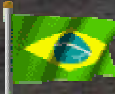
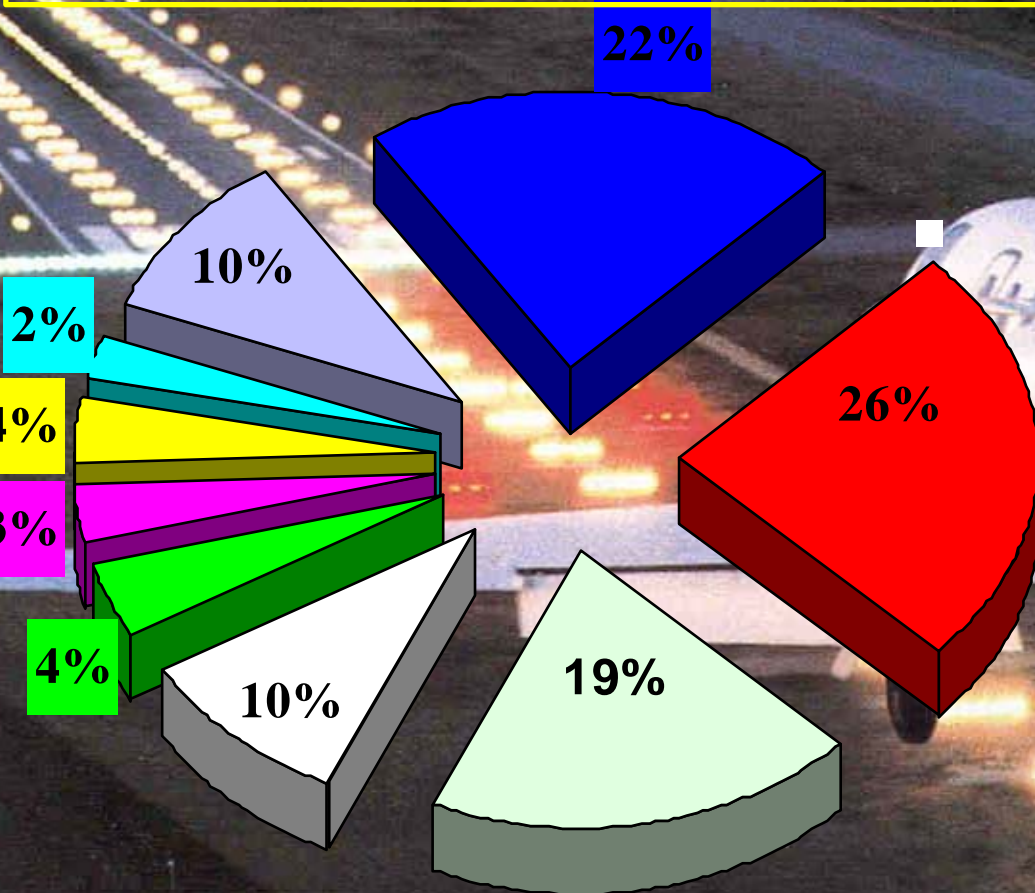
1994/2004

21 6 95

Bird Strike



- Take-off
- Approach
- After Landing
- Low level flight
- Route
- Climb
- Descent
- Landing
- Unknown





VARIG 08/JUL/03





BIRD STRIKE HAZARD CONTROL





BRAZILIAN AVIAN HAZARD CONTROL POLICY

✓ TO PREVENT BIRD ATTRACTANT ACTIVITIES FROM BEING ESTABLISHED NEAR AIRPORTS

✓ TO ELIMINATE BIRD ATTRACTANTS ACTIVITIES ALREADY ESTABLISHED NEAR AIRPORTS





Airport Safety Area - ASA



Resolution # 4

Ministry of Environment

ON GOING ACTIONS

REGULATION

- Federal Law (in progress) started by the Bird Strike Committee Brazil being submitted to the National Congress (year 2004).

- Implementation of responsibilities and penalties for bird attractant activities.





First Brazilian Avian Hazard Control National Meeting

September 2001





CCPAB MEETING



11/JUN/03

Recife Audit





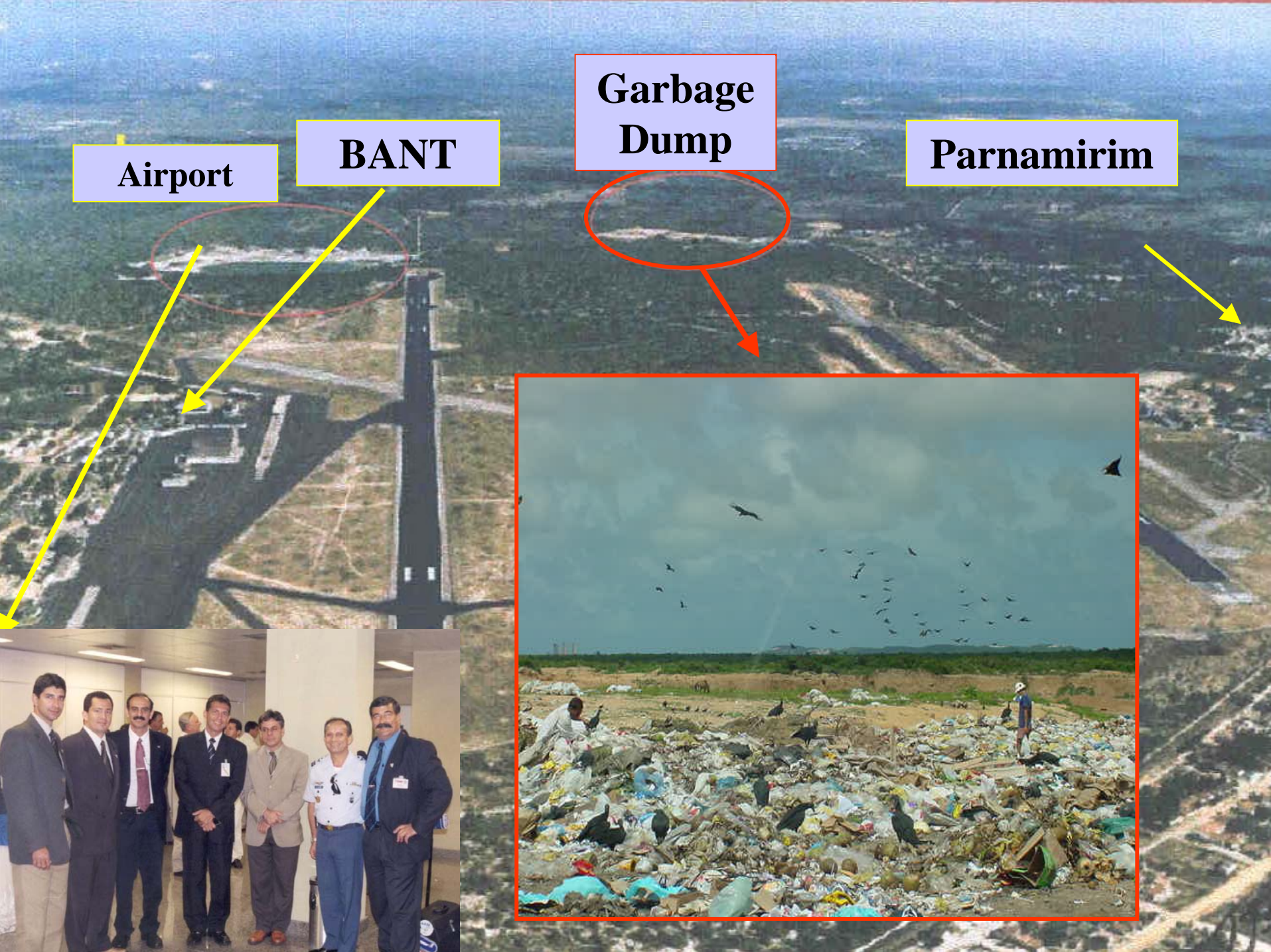


EDUCATIONAL APPROACH

- **Regional Seminars / Congress** were held in various cities all over the country.

OUTDOORS





Airport

BANT

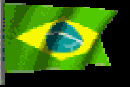
**Garbage
Dump**

Parnamirim



GOL Airline Seminar





Teresina Seminar

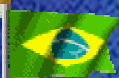
TERESINA

A photograph showing a dirt road in a rural area. In the foreground, a group of black birds, possibly frigatebirds, are gathered on the road. In the background, there are several small, simple houses and some trees under a clear blue sky.

**Nearby Teresina
Airport before
actions**

A photograph showing a dirt road with a wire fence in the foreground. The fence is made of wooden posts and wire. In the background, there are several small, simple houses and some trees under a clear sky.

**Same place,
after actions**



TERESINA

CUIDADO:

PENAS E VÍSCERAS

jogadas próximo ao

AEROPORTO

podem causar,

ACIDENTES AÉREOS



TERESINA
GRANDE TERESINA

SEMSUR
SECRETARIA MUNICIPAL DE SAÚDE

IBAMA
FUNDAÇÃO NACIONAL DO MEIO AMBIENTE

COAVE
COMISSÃO COORDENADORA DE AERONÁUTICA





Coragyps atratus RELOCATION PROGRAM (BY INFRAERO)

- TWO AIRFIELDS (SÃO PAULO AND NATAL)

- PROVED TO BE UNEFFECTIVE AS A SOLE MEASURE.



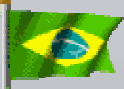
Falconry can be a cost-effective measure for removing birds from airports.



Quero-quero

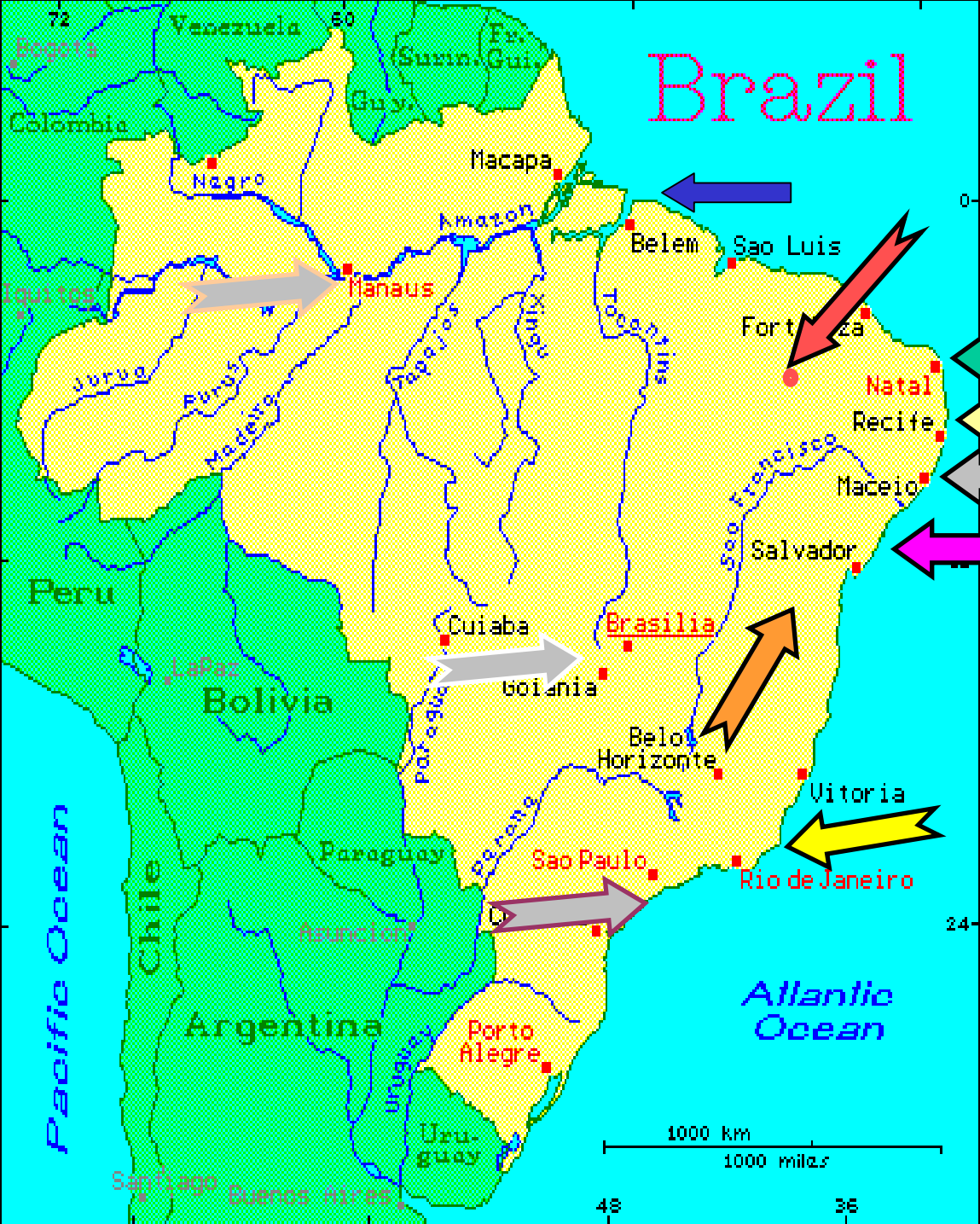
Vanellus chilensis

Species found inside airports' limits and involved in 15% of bird strikes in Brazil



For each landfill set, some open garbage dumps are closed. But landfills, in case of set-backs in their operation, can become a bird attractant site. Therefore, to avoid the establishment of landfills to close of airports, CENIPA has issued written reports agreeing or not with the landfills.

Brazilian Successful Actions for Avian Hazard Control



- **TERESINA**
- **MACEIÓ**
- **SALVADOR**
- **NATAL**
- **RIO DE JANEIRO**
- **BELÉM**
- **ARACAJU**
- **RECIFE**
- **SÃO PAULO**
- **MANAUS**
- **BRASÍLIA**

1000 km
1000 miles

48 36

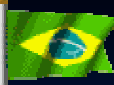


CAR/SAM Committee on Prevention of Bird Hazard

- **October 2003;**
- **South America Coordinator - Brasil;**
- **Exchanging successful experiences with another countries.**



First International Bird Strike Seminar



December - 2003



- YEAR 2004, NOV – 25nd and 26nd - Second International Bird Strike Hazard Seminar RECIFE - Pernambuco
- SPEAKERS INVITED: ICAO / US / UK / National.



SPONSORS

SPONSORS

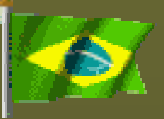


Fill out CENIPA 15

✓ www.cenipa.aer.mil.br

✓ stc3@cenipa.aer.mil.br





MAIN DIFFICULTIES

- Pilots to fill out CENIPA 15;
- Getting authorities to take part in the solution;
- Getting the society to be a part of the solution to the problem.

Natal



Aracajú



Teresina



Vitória da Conquista



Petrolina





Fortaleza

Paulo Afonso





JOÃO PESSOA



Aeroportos Brasileiros



LIMPEZA URBANA

= RISCO





Vitória da Conquista



BELEM

RUI DO PEIXE















BOEING 737-300



5 26 '99









PT-MRC

COLISÃO COM PÁSSARO – 12 JAN 99.







SILEIRA

7056
7

2



6-26-99











11 13:41















WAKE TYPERS WITH
NITROGEN ONLY

4219 7350092
NEW ENGINE OIL
FOR SINGLE ENGINE
IN PART. 2009.1.1













SOLUTION



PARTNERSHIP!



The background of the slide is a photograph of a vast flock of birds, likely terns, flying in a clear, bright blue sky. The birds are scattered throughout the frame, with some in the foreground and others further away, creating a sense of depth and movement. The overall scene is bright and airy.

OBJECTIVE

To present the peculiarities of the bird hazard problem in Brazil, and some of the countermeasures being developed under the Brazilian Bird Strike Reduction Program.

TOPICS

An aerial photograph of a coastal city. In the foreground, a dark breakwater extends into the blue ocean, with white waves crashing against it. To the right, a wide, sandy beach is visible, with many people walking and sunbathing. In the background, a dense skyline of modern high-rise buildings, including hotels and residential towers, stretches along the coast under a clear blue sky.

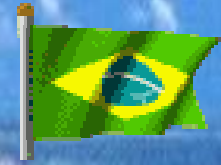
- **THE BRAZILIAN SCENE**
 -
- **BIRD STRIKE STATISTICS**
- **SUCCESSFUL ACTIONS**



“AVIATION IS GLOBAL. YOUR PROBLEMS ARE MY PROBLEMS AND MY PROBLEMS ARE YOUR PROBLEMS. WORKING TOGETHER IS THE MOST POWERFUL MEANS OF OVERCOMING THEM ALL”.

Stuart Matthews





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