

Wildlife Risk Management in Brazil

SAC Wildlife Risk Management Project: Experience and Key Results

SECRETARIA NACIONAL DE
AVIAÇÃO CIVIL

Raquel Nascimento Rocha | Secretaria Nacional de Aviação Civil do Ministério de
Portos e Aeroportos – SAC/MPOR
PA-RAST/71 | São Paulo | August 17, 2026

MINISTÉRIO DE
**PORTOS E
AEROPORTOS**



Wildlife Risk in Brazilian Aviation



41%

Average species identification
rate
2011-2025

Many wildlife strike events are not identified at species level.

Different species represent different risk levels and require different mitigation strategies.

Effective wildlife risk management starts with knowing which species are involved.

Why the Project Was Created

Brazil needed to turn wildlife-strike data into actionable risk information.

01

Information gap

Many wildlife strikes were not identified at species level.

02

Operational need

Risk assessment and mitigation depend on knowing which species are involved.

03

National response

SAC and UFSC/LabTrans created a national project combining research, collaboration and practical tools.



SAC Wildlife Risk Management Project | 2022–2026

National Secretariat of Civil Aviation (SAC/MPOR) + Federal University of Santa Catarina (UFSC/LabTrans)

SAC Wildlife Risk Management Project

An integrated national approach built around six complementary workstreams.



01 Species identification

DNA-based
methodology



02 Collaborative network

Airports +
universities



03 Education & training

Campaigns, guidance
& capacity building



04 Mitigation measures

Evidence-based
database



05 Digital tools

Monitoring and
decision support



06 Guide for Wildlife Risk Management around Aerodromes

Guidelines for
coordinated action in
aerodrome surroundings

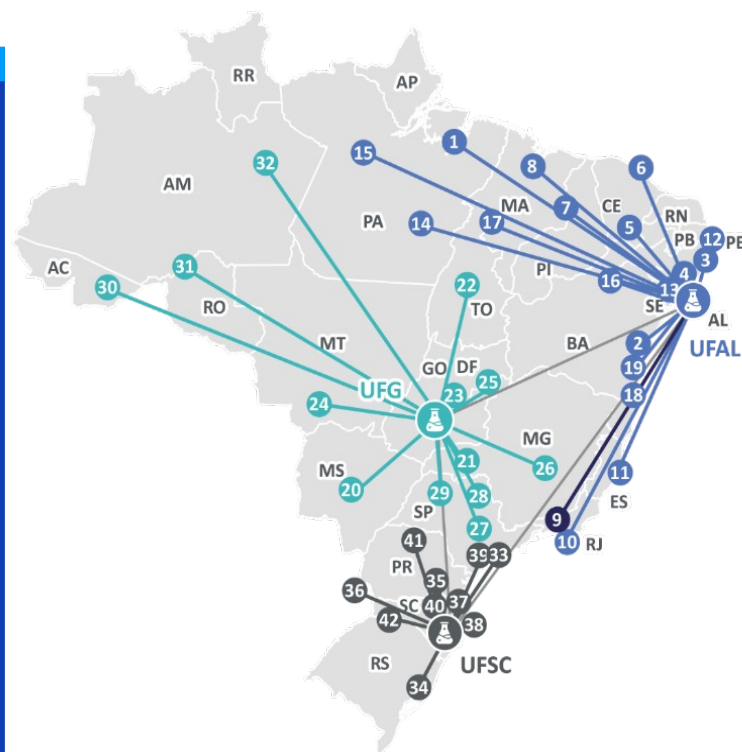
From species identification to coordinated risk management.



PROJETO SAC RISCO DE FAUNA

Collaborative Network

A national network connecting airport operators and university laboratories.



AERÓDROMOS	
NOA	1 - Belém (SBBE)
SALVADOR BAHIA AIRPORT	2 - Salvador (SBSV)
RECIFE	3 - Recife (SBRF)
MACEIÓ	4 - Maceió (SBMO)
JUAZEIRO DO NORTE	5 - Juazeiro do Norte (SBJU)
FORTALEZA	6 - Fortaleza (SBFZ)
MOTIVA	7 - Teresina (SBTE)
MOTIVA	8 - São Luís (SBSL)
GALEÃO	9 - Galeão (SBGL)
SANTOS DUMONT	10 - Santos Dumont (SBRJ)
VITÓRIA	11 - Vitória (SBVT)
JOÃO PESSOA	12 - João Pessoa (SBJP)
ARACAJU	13 - Aracaju (SBAR)
MARABÁ	14 - Marabá (SBMA)
SANTARÉM	15 - Santarém (SBSN)
MOTIVA	16 - Petrolina (SBPL)
MOTIVA	17 - Imperatriz (SBIZ)
ILHÉUS	18 - Ilhéus (SBIL)
PORTO SEGURO	19 - Porto Seguro (SBPS)

Em suspensão de coleta devido à gripe aviária

LABORATÓRIOS



AERÓDROMOS	
aena Brasil	20 - Campo Grande (SBCG)
aena Brasil	21 - Uberlândia (SBUL)
MOTIVA	22 - Palmas (SBPJ)
MOTIVA	23 - Goiânia (SBGO)
COB	24 - Cuiabá (SBCY)
Associação de Brasília	25 - Brasília (SBBR)
BH Airport	26 - Confins (SBCF)
VIRACOPUS	27 - Campinas (SBKP)
VOA	28 - Ribeirão Preto (SBRP)
ASP	29 - São José do Rio Preto (SBSR)
RIO BRANCO AIRPORT	30 - Rio Branco (SBRB)
PORTO VELHO AIRPORT	31 - Porto Velho (SBPV)
MANAUS AIRPORT	32 - Manaus (SBEG)

AERÓDROMOS	
aena	33 - Congonhas (SBSP)
Porto Alegre Airport	34 - Porto Alegre (SBPA)
MOTIVA	35 - São José dos Pinhais (SBCT)
MOTIVA	36 - Foz do Iguaçu (SBFI)
MOTIVA	37 - Navegantes (SBNF)
FLORIPA AIRPORT	38 - Florianópolis (SBFL)
GRU AIRPORT	39 - Guarulhos (SBGR)
MOTIVA	40 - Joinville (SBJV)
MOTIVA	41 - Londrina (SBLO)
Chapécó	42 - Chapecó (SBCH)

42

AIRPORTS

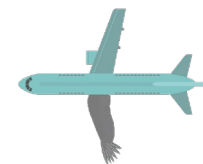
Collaborative data and sample collection network

03

UNIVERSITIES

UFSC • UFAL • UFG

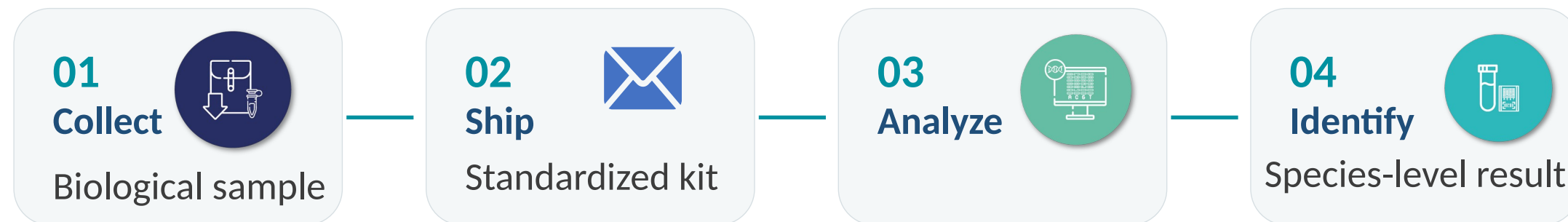
A collaborative model with national coverage.



PROJETO SAC RISCO DE FAUNA

Species Identification through DNA Barcoding

A standardized workflow transformed biological remains from wildlife strikes into species-level information.



584 DNA SAMPLES ANALYZED
84 SPECIES IDENTIFIED



DNA Barcoding

COI gene sequencing → comparison with reference sequences → species identification

Better species identification supports better risk assessment and targeted mitigation.



Project Results and Impact

The project measurably increased Brazil's capacity to identify wildlife species involved in strikes.

362

ADDITIONAL EVENTS

identified at species
level

+4 p.p.

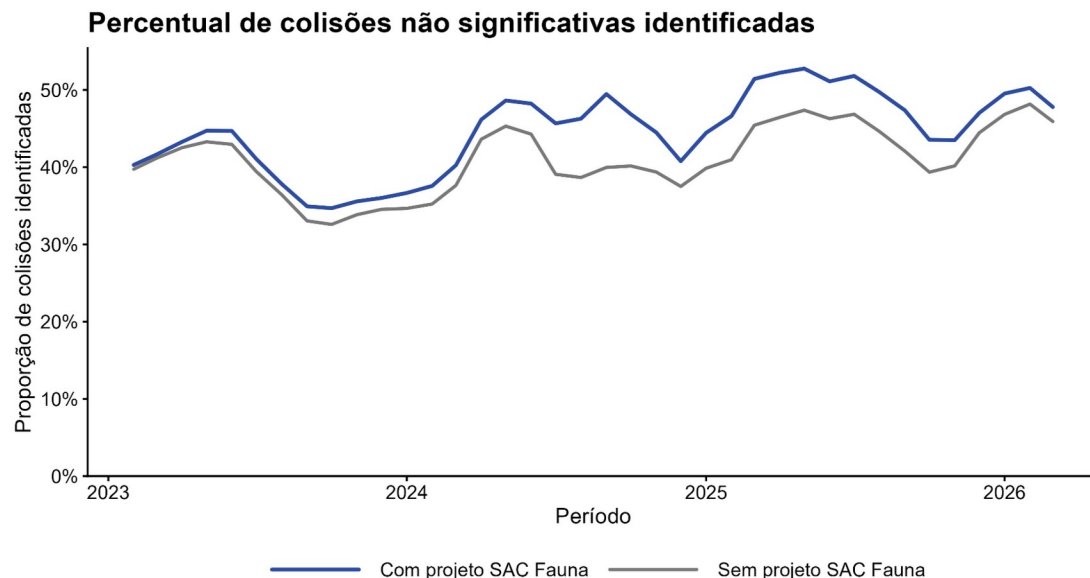
IDENTIFICATION RATE

increase from 41% to
45%

~9%

AVERAGE ANNUAL GROWTH

in species
identification

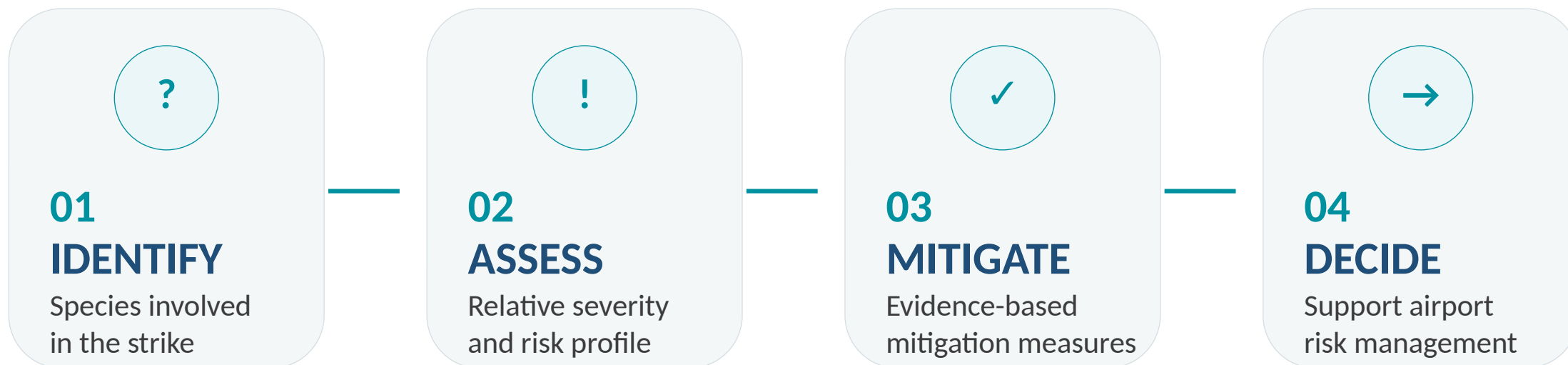


The project helped reverse a historical decline and establish a new level of species identification.



From Data to Risk Management

Species identification becomes operationally useful when it is transformed into risk information and targeted mitigation.



The objective is not only to identify wildlife — it is to turn identification into action.

National Mitigation Measures Database

A searchable evidence base designed to support targeted wildlife risk mitigation at aerodromes.

5,377 MITIGATION
MEASURES

122 DIFFERENT
SPECIES

EVIDENCE BASE

- scientific literature
- technical literature
- aerodrome documents

Search filters and result example from the project database

Filtros da Busca

Espécie Coragyps atratus	Grupo Faunístico	Temática Focos secundários
Categoria Modificação ou exclusão d...	Tipo de Medida Passiva	Prioridade Modificação de ambiente
BUSCAR		Expandir ▼

Resultados

96 resultados encontrados

Espécie Coragyps atratus	Grupo Faunístico Aves	Temática Focos secundários
Categoria Modificação ou exclusão de habitat	Tipo de Medida Passiva	Prioridade Modificação de ambiente
Medida Eliminação de carcaças que funcionavam como foco atrativo para Coragyps atratus (urubu-de-cabeça-preta) e Caracara plancus (carcará). ...		
Mais informações		Expandir ▼



PROJETO SAC RISCO DE FAUNA

Knowledge and Decision-Support Tools

Project data were transformed into practical tools for continuous wildlife risk monitoring and knowledge sharing.



Wildlife Species Guide

Ecology and risk-management information on 30 priority species.



Wildlife Risk Monitor

Monthly national analyses with partial project results.



Wildlife Risk Outlook

Semiannual national analyses consolidating complete project results.

DATA → KNOWLEDGE → ACTION

Together, these tools support evidence-based wildlife risk management across the Brazilian aviation system.

3 educational campaigns • SAC Fauna ID • videos • guidance materials • tools — available on the Hórus Platform



PROJETO SAC RISCO DE FAUNA

Guide for Wildlife Risk Management around Aerodromes

Guidelines to align public authorities, airport operators and other stakeholders in managing wildlife risk beyond airport boundaries.



Identify, classify and prioritize wildlife-attracting sites according to their risk to air operations.

01 INTEGRATED ACTION

Public authorities • airport operators • airlines
• other stakeholders

02 PILOT PROJECT

Campinas / Viracopos Airport (SBKP)

03 PRACTICAL TOOLKIT

7 procedures • 2 processes • 6 templates

Wildlife risk management requires coordinated action beyond the airport perimeter.



PROJETO SAC RISCO DE FAUNA

Project Legacy and Possible Next Steps

The project ran from May 2022 to April 2026 and established lasting national capabilities.

01

PROJECT PERIOD

May 2022 – April 2026

02

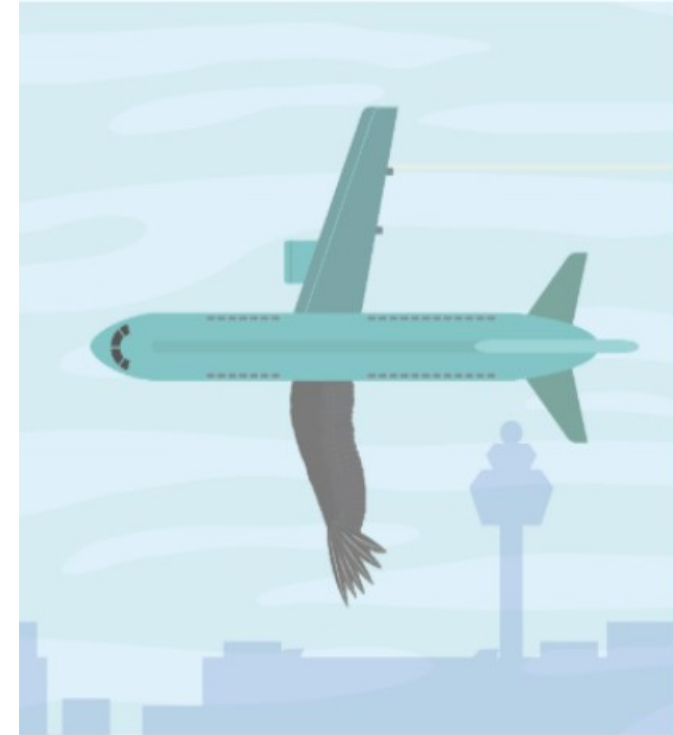
LASTING ACCESS

All project products will remain available on the Hórus Platform.

03

CONTINUITY ASSESSMENT UNDER

Lessons learned will inform a possible new format, subject to 2027 funding.



The project's knowledge base remains available beyond its formal completion.

A possible new phase will depend on lessons learned, an improved format and available funding.

Key Takeaways

Brazil's experience shows how identification, collaboration and practical tools can strengthen wildlife risk management.

01

KNOW THE SPECIES

DNA-based identification improves risk information.

02

TURN DATA INTO ACTION

Evidence-based tools support prioritization and mitigation.

03

WORK BEYOND THE AIRPORT

Coordinated action is essential beyond airport boundaries.



Wildlife strikes can have direct operational consequences.



From species identification to coordinated, evidence-based risk management.



PROJETO SAC RISCO DE FAUNA

THANK YOU!
RAQUEL NASCIMENTO
ROCHA
raquel.rocha@mpor.gov.br

MINISTÉRIO DE
PORTOS E
AEROPORTOS

