PROJECT SKYWARDS
SANPARKS RANGER SERVICES – SANPARKS AIRWING

ADOPT-α-CHOPPER

A SANParks Anti-Poaching Success Story

SUBJECT:

PROJECT SKYWARDS is a funding initiative for the South African National Parks Airwing with emphasis on the Aircraft Capability and Logistical and Fuel requirements for Wildlife Management and Conservation Activities and in specific the recent demand for dedicated Anti-Poaching Support and Response Aerial Support.

PURPOSE:

To provide an in depth background and understanding of the challenges, diverse operations, services provided and logistic and financial challenges faced by the SANParks Air Services.

BACKGROUND / SUMMARY:

The Management of Wildlife, Conservation Services and more specifically Anti-Poaching Support and Response Services within SANParks requires extensive use of the SANParks Airwing Helicopters and Fixed Wing Fleet. The SANParks Airwing comprises of a fleet of Airbus Helicopters AS350B3 / H125 (Écureuil) helicopters, Cessna Fixed wing aircraft and Bantam/Bathawk Light Sport Utility Aircraft. The main focus of this document would be the aircraft in the SANParks Airwing fleet, their capabilities, employment within the SANParks Special Services and their logistical and financial requirements.

SANPARKS HELICOPTERS:

SANParks employs a fleet of 4 Airbus Helicopters AS350B3+/H125 Turbine Helicopters. 2x AS350B3+ aircraft and 2x AS350B3e/H125 aircraft. Both of these models are single turbine, 6 seat high performance versions of the AS350 range with the AS350B3e/H125 being the newest addition and model in the AS350 fleet. Both versions are powered by the TurboMecca Arriel Turbine engines, with the B3+ powered by the 2B1 engine and the B3e by the 2D engine. These power plants deliver 847 shp and 950 shp respectively.
The Airbus AS350B3/H125 Helicopters have proven themselves worldwide as the leader in its class. These powerful, high-performance aircraft are designed to carry out the most demanding missions in the most extreme weather and geographical conditions. Its exceptional lifting capability, high endurance, extended range and fast cruise speed make these aircraft a vital and indispensable asset in the SANParks Airwing fleet.

In the past the SANParks helicopters were employed in specialized Wildlife Management Operations and Conservation Services such as Game Capture, Chemical Immobilization of Animals, Wildlife Census and Telemetry Tracking and Veterinary Support. The current escalating rhino poaching situation has forced a major shift in the SANParks Airwing operations.

The SANParks Airwing in conjunction with the various other Anti-Poaching teams, Special Rangers, the SANDF and the SAPS have evolved into a focused and dedicated Anti-Poaching Support and Anti-Poaching Response role in the Kruger National Park.

This shift in operations and increased demand for Dedicated Aerial Support presents a major strain and unique logistical and financial challenges to the SANParks Airwing team.

The Helicopter fleet have doubled in size from 2 aircraft to 4 aircraft. Annual flight hours for the SANParks fleet have increased substantially per aircraft with an associated increase in fuel costs, maintenance costs, flight crew, ground support and logistical support.

**SANPARKS HELICOPTERS IN ANTI-POACHING SUPPORT AND RESPONSE:**

The SANParks Helicopters plays a pivotal role in the prevention, suppression and pursuit of poachers in the Kruger National Park.

Firstly these aircraft and crew provides a first defensive barrier and an invaluable support role for preventative surveillance, patrols, reconnaissance, resupply and logistical support for ground forces out in remote and inaccessible areas.

Secondly these aircraft are always available and on standby in a response role to respond to areas of suspected poaching activity, infiltration and exfiltration routes and to provide a fast support vehicle for ground forces and the Special Rangers force.

Thirdly the aircraft are employed in a fast dedicated response role in conjunction with the Special Rangers, K9 support, Task Force and SANParks Rangers corps. Where poaching activities occurs and more specifically where the pursuit of suspected poachers are required the aircraft can be employed as a means to get the ground corps and specialized canine tracking units on site fast in virtually any terrain to pursue and apprehend suspected poachers.

Over the past years the Airwing unit and the Anti-Poaching units have had major successes, thousands of hours have been flown on Anti-Poaching missions and numerous poachers have been apprehended – all a tangible testament to the efficiency of the Aerial Assets and the vital role the SANParks Airwing play in supporting the war against Rhino Poaching.

_Rhino Cow and Calf – photo courtesy of Pro Track Anti-Poaching Unit, RSA._
THE SANPARKS AIRWING ARE DEPLOYED DAILY IN VARIOUS SUPPORTING ROLES, SPECIALIZED OPERATIONS AND AERIAL SUPPORT. These include but are not limited to:

ANTI-POACHING AERIAL SUPPORT & ANTI-POACHING AERIAL REACTION:
The SANParks helicopters are deployed daily in support of the Fight Against Rhino Poaching. Over 1200 flight hours were flown in support of Anti-Poaching Operations during the last year. This equates to more than 3 flight hours per day. These support and reaction missions provide much needed Close Air Support to forces on the ground, provides for an Eye-In-The-Sky during operations and adds a level of safety and security. Often these operations culminates in contact with armed suspects and leads to the successful arrest of suspects.

DISASTER / FLOOD RELIEF ASSISTANCE:
The SANParks Airwing provides aerial support during flood relief, fires and natural disasters that threaten the National Parks periodically. These aircraft have provided support and relief to countless visitors, staff and support personnel over the years.

CONSERVATION & RESEARCH PROJECTS:
The Helicopter fleet are used extensively by resident and visiting scientists, ecologists, veterinarians and researchers for the collection of data and on surveillance missions. Annual game counts, population and demography census operations and river line surveys all form part of the annual utilization of these aircraft.

GAME CAPTURE OPERATIONS:
Ongoing Game Capture Operations for the relocation of wildlife, endangered species and surplus animals are conducted throughout the year. Due to the recent increase in rhino poaching numerous animals have been relocated to safe zones and areas where the survival of these magnificent animals can be improved.

VETERINARY WILDLIFE OPERATIONS:
The aircraft forms an integral part in the location, immobilization and treatment of injured animals and more specifically the treatment of wounded rhinos as well as the capture and relocation of rhino calves orphaned by poaching.

EMERGENCY CASUALTY EVACUATIONS.
The SANParks Aircraft are frequently deployed to assist with medical casualty evacuations when the EMS helicopter are not available or where human lives are at risk due to the vast distances in the Kruger National Park and surrounding areas.
SANPARKS HELICOPTER FLEET – LOGISTICAL AND FINANCIAL CHALLENGES.

The main financial challenges faced by the SANParks Airwing unit are the acquisition costs of aircraft, fuel and fuel logistics and maintenance support costs.

Aircraft acquisition costs for the AS350B3 / H125 helicopter, basic version amounts to approximately €2,200,000.00 (ZAR 33,000,000.00) per aircraft. A fully equipped aircraft for special operations, i.e. Night Vision Equipment Compatibility, External Sling Load Provisions etc. amounts to approximately ZAR 45,000,000.00 per aircraft.

Based on an average of 500 flight hours per annum each aircraft will require an average Operating Budget of ZAR 4,750,000.00 to ensure the aircraft serviceability, operational availability and safety.

Based on 500 flight hours per annum each aircraft will require 90,000 liters of Jet A1 Aviation fuel. A total fuel expense of ZAR 1,800,000.00 per aircraft per annum (this fuel cost is included in the above Operational Cost).

SANParks Fleet Financial breakdown:

Maintenance Costs, and more specifically direct maintenance and operating costs for aircraft are very difficult to estimate due to the variables involved. These variable are mainly categorized as and differentiated between preventative maintenance / scheduled maintenance, repairs, oils and fuels, crew requirements, component costs (linked to exchange rate fluctuations) and insurance.

Due to the unique but harsh operating environment for the SANParks fleet, periodic and sustained pro-active maintenance is an absolute necessity. Without this we would drastically reduce aircraft serviceability, availability and service-life.

Many of the component replacement, overhaul and repair costs are US Dollar / Euro based due to the manufacture and overhaul of components abroad.

Operating Cost is not a stand-alone variable. It forms part of an inseparable trilogy: cost – hours – operations.

The fixed operating cost per hour can be coupled to fuel, oil, scheduled maintenance and component overhaul costs.

Variable cost per hour depends on the amount of hours flown i.e. insurance per month vs. hours flown.

Cost Estimates below are based on International Averages for Components, Parts and Labour Estimates and Local Prices for Consumables, Lubricants and Insurance. Hourly costs based on current average aircraft utilization per year.

Operating costs below excludes crew, fixed costs and operating overheads.

The sky is not the limit … it is where we work, live, protect and serve ....
OPERATING COSTS – SANPARKS HELICOPTER FLEET.

<table>
<thead>
<tr>
<th></th>
<th>Cost per Hour</th>
<th>Annual estimated Cost per Aircraft</th>
<th>Average fleet hours per year</th>
<th>Fleet Cost per annum</th>
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<tbody>
<tr>
<td>Fuel and Lubricants</td>
<td>R 3,650.00</td>
<td>R 1,825,000.00</td>
<td>2000</td>
<td>R 7,300,000.00</td>
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<tr>
<td>Maintenance, Periodic Inspections</td>
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<td>R 1,575,000.00</td>
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<td>Components Life Time Overhaul and Replacement</td>
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<td>R 1,350,000.00</td>
<td>2000</td>
<td>R 5,400,000.00</td>
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</tbody>
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TOTAL SANPARKS HELICOPTER FLEET OPERATING COST  
R 19,000,000.00 *

- These costings excludes Crew, Insurance and fixed overhead costs.

SKYWARDS ADOPT-a-CHOPPER INITIATIVE:

The ADOPT-a-CHOPPER initiative will give companies, private individuals or organisations the opportunity to “adopt” one of the SANParks Airwing helicopters for a year. The funds raised through this initiative will be applied to the direct operating costs of these aircraft. This will ensure operating capital for fuel, lubricants and maintenance to ensure the aircraft remains available and active for critical SANParks operations.

As part of the initiative each individual, company or organization will have the opportunity to have their logo / company name / slogan displayed on their adopted aircraft for the duration of the adoption.

The individual, company or organization will be presented with a scale replica of the adopted aircraft and will be allowed access to the aircraft for photographs and should operations allow to join the aircraft on an operational sortie. These sorties will be limited to non-critical flights i.e. game capture or similar operations. Aircraft utilization, success stories and events will be communicated to the “Parent” organization periodically throughout the adoption period.

Adoption Options: (per aircraft)

Option 1 - Fuel and Lubricants: R 1,800,000.00 per annum
Option 2 - Fuel, Lubricants & Mandatory Maintenance: R 3,400,000.00 per annum
Full Adoption - Full Aircraft Adoption: R 4,750,000.00 per annum
SUMMARY:

The SANPARKS Airwing Unit forms an integral part of the forces and assets employed in the WAR Against Rhino Poaching and the continuous conservation efforts of our natural heritage.

The unit deals with unique financial, logistical and resource challenges, while performing their duties in a high risk and specialized environment.

Without continued support and adequate resources the unit will be unable to provide a dedicated, safe and professional service.

While the financial implications of maintaining a fleet of aircraft might seem daunting, the value these aircraft and crews brings to the “Battle Field” and the Conservation arena as a whole cannot be measured with a financial yard stick.

The Adopt-a-Chopper initiative will ensure the continued airworthiness and safety of the SANParks aircraft.