



شركة مطار الخرطوم الدولي
Khartoum International Airport Co. Ltd.



بسم الله الرحمن الرحيم

البيئة والحياة البرية وأثرها على سلامة الطيران بمطار
الخرطوم

Environment and wildlife and its impact on aviation safety at Khartoum Airport

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Definition of environment



- **Language:**

- is to go down and solutions in the place and can be released metaphorically on the place where the man takes a stable for his descent and solutions, i.e. on the home, the habitat and the place where the human being returned to take his home.

قول الله تعالى (وكذلك مكننا ليوسف في الأرض يتبوا منها حيث يشاء) (يوسف الاية 56)

- **Term:**

- This is all that surrounds, influences and directly or indirectly affects the human being, from living and non-living natural factors.

Concept of Environment



Defined as

a set of natural, economical, aesthetic, cultural and social factors and conditions that surround and affect people's lives (lives Quality of Peoples).

Ecology and Ecological

Ecology – specializes in the relationship of organisms with each other and with the medium in which they live.

Environmental Balance



- Changing natural conditions by entering a living organism in a new environment eliminating some useful neighborhoods.
- Passive direct human intervention.

Wildlife and international conventions



Wildlife varies in shapes and species including birds, Creepers, walking on four, mammals and mammals that lay eggs.

لقوله تعالى (والله خلق كل دابة من ماء فمنهم من يمشي على بطنه ومنهم من يمشي على رجلين ومنهم من يمشي على أربع يخلق الله ما يشاء إن الله على كل شيء قدير) (النور 54)

There are international and legislative conventions that prevent the catching and killing of species in order to preserve biodiversity and natural ecological balance.

Sudan signed to international agreements that prohibiting hunting and killing of bird species in the Khartoum forest. Which comes to the Khartoum airport area for many of its attractions.



What is the solution so that we do not fall into accountability or be the reason for breaking international relations with the Sudan or fighting the Sudan in any way?

At the same time, we have to reduce the risk of wildlife to aviation safety.

Sudan and Multilateral conventions



- Sudan is part of the multilateral and universal conventions and biodiversity in 1992.
- Cartagena Protocol on Biosafety 2000
- Convention on African Waterfowl in 1999
- Climate change, biodiversity and combat desertification the Earth Summit in 1992 changed the climate

The new environment could be suitable for new species of fauna and flora not to be taken into account, as well as, **biodiversity, threatened with extinction Species** and the protection of migratory birds. The Khartoum forest is a path and is protected by this international convention, the Earth Summit in 1992.

Legal framework in force in Sudan



- In October 2010, the Civil Aviation authority granted strong authority to establish airport standards by (Sucar part 14) (Article 4b):
- Minimizing the presence of wildlife at airports
- Wildlife risk Assessment
- Reduction of collision between aircraft and wildlife
- Monitoring and tracking wildlife accidents with aircraft
- Setting standards for the airport operating manual to control the risk of wildlife

Environment and Aviation



The environment directly or indirectly affects aviation safety

Environmental influences affect indoor and outdoor arenas, lounges and all adjacent peripheral facilities-**Airside and terminal**





Pollution levels including:

Degree of air pollution and CO₂ emissions.

Noise and noise Noisy.

Contamination of water and soil.

Enviromental Effects ✓



- ✓ Temperature and humidity
- ✓ Lighting and intensity of luminance
- ✓ Obstacles
- ✓ Fossils and ponds
- ✓ Wildlife
- ✓ Waste

Aircraft have a negative impact on the environment **because** of the noise of their engines, gases contributing to climate change and global opacity.

Despite of attempts to reduce vehicle exhaust and attempts to produce less polluting fuels and more efficient engines, but the accelerated growth rate of flights in the years has contributed to increased pollution rates caused by aviation. In the European Union, greenhouse gas emission rates increased by 87% between 1990 and 2006.

Discussions are under way on the possibility of imposing a tax on flights and introducing aviation into the emissions trading scheme, while ensuring that the external costs of aviation are taken into account.

Wildlife and its impact on aviation safety at Khartoum Airport

There are attractions for the airport Wildlife (food, bar, lodging, shelter).

First of all:

- wildlife is dependent on the food chain, exustance of birds and stray dogs pose a threat to flight safety.
- Worms and some of the insects and butterflies that feed on the weeds form a fatty meal for birds, especially falcons.
- Waste attracted factor for wildlife.
- Some commodities such as wheat and cereals are magnet for wildlife and any organics also attract wildlife.

Second Drinking:



Ponds and excavations
Rainfall water

Third Shelter: Residential areas



- 1) languishing Aircraft
(sitting)**
- 2) Engineering(Hangars)**
- 3) The airport is an area in
the migratory path of
birds.**



**A species of long-beak birds that
cause aircraft to crash**



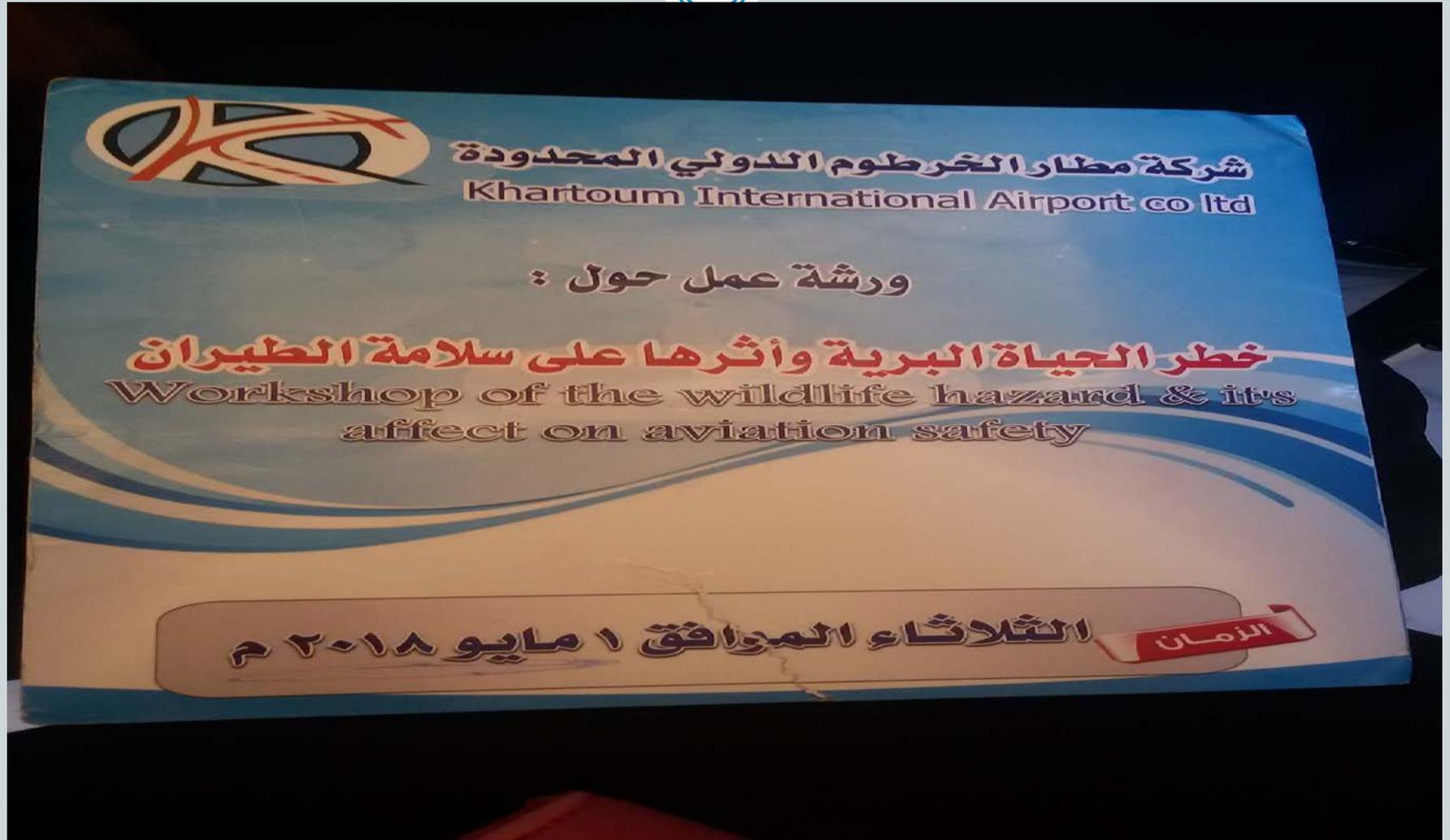
From the birds in Sudan a
marginal Falcon his scientific
name (Falcon)

How to reduce and minimize its presence at the airport



- The need to minimize wildlife existence as an impact of aviation safety through the following:
- Remove the waste/ as the first major attraction.
- Filling ponds, excavations and settling depressions especially in the dirt areas to reduce the water catch and the growth of weeds the provisions of all the ports of the internal services to reduce the incomes of stray dogs and others
- Ensure that the aircraft outlets and all the facilities adjacent to the interior are clean, where they form a wildlife refuge.
- Use the latest devices to remove birds.

Working shop of widelife hazard and affect on aviation safety at khartoum international airport



Recommendations



- **The early warning system** should be used, predicting and developing the natural phenomena and future hazards expected to occur, and developing strategies and plans to promote the reduction or mitigation of accidents and disasters when they occur.
- Access to information on the environment, weather or climate and studies on wildlife behavior patterns, their instinctive methods, wildlife, weeds, rainwater and food chains.

And then:

Analyze the incidents and evaluate them to improve the development of plans and strategies for the prevention and control of aviation disasters resulting from wildlife to a safety aviation environment... Access to safety.



- **Strengthen the role of environment administration at khartoum airport and responsibilities -well training to the staff.**
- **Memorandum of understanding between SCAA and all legislations concerned with the (environment & wildlife) protection.**
- **Provision of finance.**

References and resources



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**Thanks for the good listening
and follow up**