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ASSEMBLY — 40TH SESSION

TECHNICAL COMMISSION

Agenda Item 30: Other issues to be considered by the Technical Commission

LOW-COST AIRPORT WILDLIFE CONTROL

(Presented by Iran (Islamic Republic of))

EXECUTIVE SUMMARY

One of the most important challenges currently presented to airports in different regions across the world is the issue of wildlife management. Today, the issue of wildlife management with the aim of maintaining flight safety and also protection of various animal species and their habitat has come into airport managers' attention as a major concern. On the other hand, wildlife management and controlling the hazard associated with it entail high costs for airports, and given the vast area of airports, using modern electronic equipment and facilities to deter wildlife from airport operation areas is practically impossible as such equipment and facilities are extremely costly. Therefore, resolving this problem requires utilizing some techniques that can yield the best results using minimum facilities available and incurring the least cost. The gazelles present at Kish Island Airport have been struck by the aircraft while landing and take-off, which has caused some harm. To protect passengers' life as well as provide flight safety, Kish Airport authorities in cooperation with environmental experts and other institutions based in Kish Island has implemented several different programmes and methods to collect and transfer the gazelle to the outside of the airport. It is worthy of mention that in all programmes implemented, gazelle protection and their health were taken into consideration. To collect and transfer the gazelle to the outside of Kish Airport, some low-cost methods and volunteers were hired simply to reduce costs.

<i>Strategic Objectives:</i>	This information paper relates to Safety Strategic Objectives.
<i>Financial implications:</i>	N/A
<i>References:</i>	Annex 14 — <i>Aerodromes, Volume I — Aerodrome Design and Operations</i> Doc 9137, <i>Airport Services Manual, Part 3 — Bird Control and Reduction</i>

1. INTRODUCTION

1.1 One of the most important challenges currently presented to airports in different regions across the world is the issue of wildlife management. Today, the issue of wildlife management with the aim of maintaining flight safety and also protection of various animal species and their habitat has come into airport managers' attention as a major concern. On the other hand, wildlife management and controlling the hazard associated with it entail high costs for airports, and given the vast area of airports, using electronic equipment and modern facilities to deter wildlife from airport operational regions is practically impossible as such equipment and facilities are extremely costly. Therefore, resolving this problem requires utilizing some techniques to yield the best results using minimum facilities available and incurring the least cost. The gazelles present at Kish Island Airport have been struck by the aircraft while landing and take-off, which has caused some harm. To protect passengers' life as well as provide flight safety, Kish Airport authorities in cooperation with environmental experts and other institutions based in Kish Island has implemented several different programmes and methods to collect and transfer the gazelle to the outside of the airport. It is worthy of mention that in all programmes implemented, gazelle protection and their health were taken into consideration. To collect and transfer the gazelle to the outside of Kish Airport, some low-cost methods and volunteers were hired simply to reduce costs.

2. MEASURES TAKEN ARE AS FOLLOWS:

- 1) Human Chain method;
- 2) Boma Capture method;
- 3) Drop-Net Method; and
- 4) Jirga method using motorcycles.

2.1 Human Chain Method

2.1.1 In this method, labour is used to lead gazelles outside.

Benefits and strengths of this method:

- 1) low cost;
- 2) short time;
- 3) possibility of hiring different segments of society;
- 4) simple basic training for individuals present on the method; and
- 5) simple devices and equipment.

Drawbacks and weaknesses of this method:

- 1) halting flight operations and airport closure;
- 2) the need for large number of individuals (at least 500 people);
- 3) lack of commitment and care on the part of individuals present on the method;
- 4) non-fulfilment of the training provided;
- 5) lack of homogeneity and interaction to do teamwork;
- 6) lack of coordination among individuals; and

- 7) if implemented improperly, the method will cause serious harm to the gazelle (due to fear, anger, attempt to escape, finding no way out, jumping in vain and striking fences, barbed wire etc.)

Important points:

- 1) the targeted area for removal of gazelles must be divided into smaller parts;
- 2) maximum dimensions in each area must be considered 1000 meters;
- 3) individuals' forward movement and stepping pace must be extremely slow;
- 4) machine noises such as horns, sirens etc. must be avoided;
- 5) human clamor and shouting must be avoided;
- 6) colored fabrics and flags must be used;
- 7) the route for individuals' movement must be designed in a cone shape;
- 8) the gazelles' exit way must be at least 100 meters without any obstacles; and
- 9) meetings for coordination, planning, providing necessary equipment and materials, individuals' water and food supply, safety, security and relief issues must be closely studied and considered.

2.2 Boma Capture Method

2.2.1 In this method, a cone-shaped area is designed, and water and food are left for the gazelle.

Benefits and strengths of this method:

- 1) minimizing harm to the gazelle;
- 2) no need for professional and specialized technical tools;
- 3) creating workshop using fabric, net, sack etc.;
- 4) using vegetation and trees to camouflage;
- 5) mass transfer of gazelles to the outside of the airport; and
- 6) the need for small labor (3-5 people would do).

Drawbacks and weaknesses of this method:

- 1) high cost;
- 2) seasonal use only (in months when water and food are scarce like in summer);
- 3) the need for provision of proper forage which agrees with the gazelle's digestive system and does not poison them;
- 4) long period of time needed for the gazelle to grow accustomed to the area;
- 5) the need for creating several areas to leave water and food; and
- 6) opening and closing the exit way for the gazelle.

2.3 Drop-Net Trap Method

2.3.1 In this method, an area of maximum 36 square meters is chosen and designed using a handmade innovative structure, net and trap. Food and water are left for the gazelle in this area; after the gazelle arrives, the net is dropped on the gazelle from the top and then they are captured alive and transferred to the outside of the airport.

Benefits and strength of this method:

- 1) less equipment and facilities required compared to other methods;
- 2) easy transfer of the trap location;
- 3) less injury to the gazelle; and
- 4) the need for small labor (3-5 people would do).

Drawbacks and weaknesses of this method:

- 1) high cost;
- 2) seasonal use only (in months when water and food are scarce like in summer);
- 3) the need for provision proper forage that agrees with the gazelle's digestive system and does not poison them;
- 4) long period of time needed for waiting in ambush;
- 5) the need for creating several areas to leave water and food; and
- 6) the need for opening and closing the exit way for the gazelle

2.4 **The Jirga Method using motorcycles**

2.4.1 In this method, five professional motorcyclists familiar with the gazelle and their behavior lead them to the exit way.

Benefits and strengths of this method:

- 1) high speed in gathering the gazelle and transferring them to the outside of the airport;
- 2) no need for creating a workshop and special equipment for construction;
- 3) viable in all seasons;
- 4) viable in all areas of the airport; and
- 5) it can be carried out with more success compared to other methods.

Drawbacks and weaknesses of this method:

- 1) high cost;
- 2) motorcyclists would be hurt in case of unfamiliarity with the gazelle and the area;
- 3) the gazelle would be hurt in case of running over four minutes;
- 4) the need for backup cars;
- 5) the risk of gazelle's escape towards the runway;

- 6) the need for constant presence of a two-member team to open and close the fence at specified points; and
- 7) the need for constant repair of motorcycles due to riding in areas difficult to pass.

Important points:

- 1) to enhance efficiency and performance, the implementing team must be provided with facilities and welfare provisions as well as necessary support such as water and food etc.);
- 2) there must be at least two spare motorcycles to immediately replace the broken ones;
- 3) a motorcycle repair person with tools and spare parts must be present on the site;
- 4) the site determined for the gazelle exit must be designed in a way that there is a route leading to the exit door, land without any building and installations with an area of at least 1600 meters (preferably square-shaped);
- 5) the way out for the gazelle must be free of natural or artificial barriers; and
- 6) there must be two individuals stationed at a site hidden to gazelles on their way out, so they can be both counted and the gone gazelle would not return to the site during the hours the operation has been held for any reason.

3. CONCLUSION

3.1 The gazelles at Kish Island Airport have been struck by the aircraft while landing and take-off, which has caused some damage. To protect travellers' life as well as provide flight safety, Kish Airport authorities in cooperation with environmental experts and other institutions based in Kish Island has implemented several different programmes and methods to collect and transfer the gazelle to the outside of the airport. It is worthy of mention that in all programmes implemented, gazelle protection and their health were taken into consideration. To collect and transfer the gazelle to the outside of Kish Airport, some low-cost methods and volunteers were hired simply to reduce costs while a considerable number of hazards were reduced, leading to a successful implementation case in this respect.

3.2 The Assembly is invited to update Annex 14, Volume 1 and Doc 9137, Part3.

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