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Ofer Bahat

University of Haifa, ofer@birdsvision-solutions.com

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Tools for Birds' Ecological Carrying Capacity Management at Airports

Dr. Ofer Bahat

Faculty of Natural Sciences, University of Haifa, Israel
Faculty of Biology, Technion Institute of Technology, Haifa, Israel
BirdsVision Ltd.



ofer@birdsvision-solutions.com

Management applications for airports

- Based on previous ecological studies, it is proposed to use active management as a major tool for the reduction of carrying capacity for birds at specific ecological niches.
- The management techniques should include general steps which address a variety of bird species, e.g. removal of debris (used for example as raptor hunting posts) or removal of trees (used as hunting posts, or for nesting and roosting).
- In addition, species specific measures that target the ecological needs of selected species should also be implemented, in order to significantly reduce the availability of their ecological resources (e.g. prevention of perching by owls on lamps and signs along runways).



Management applications for airports (2)

- Decrease of vegetation development using environmentally-friendly methods (such as coverage of open areas to prevent seed development) should be considered at specific areas with very high carrying capacity and thus intensive bird activity.
- Prevention of open water reservoirs use by birds should also be considered. Net coverage is an option when relatively small reservoirs are concerned.
- Similar policy should be implemented concerning any other ecological niche with high carrying capacity or other factors that attract birds.

Prioritization

In view of the limited resources and manpower that is usually available for management activities, it is highly important to prioritize habitats based on their carrying capacity for birds and their proximity to aircraft activity and hence potential hazard.

The proposed approach prioritizes highest risk areas at the airport and its vicinity. These areas should be managed side by side with the use of intensive detection methods (e.g. cameras and radars) along with intensive deterrence activities (e.g. acoustic and visual).

The combination of the management and control activities at high priority areas, may provide a better outcome in the reduction of bird risks at these prioritized areas.

Management steps aimed to reduce bird activity at airports:

- **Analysis of biological, topographical and weather data:** This analysis forms the baseline tool to understand the threats and provide a risk management plan with threats prioritization.
- **Management Planning:** This step should be based on the above analysis, in order to target the highest threats with the management tools.
- **Bird detection and activity monitoring:** Detection should cover all the high priority areas, using radars or cameras, and provide on-line monitoring of birds' activity at the prioritized areas of the airport and the CTR area. The detection data should be distributed to any desired location (e.g. control tower).

Management steps aimed to reduce bird activity at airports (2):

- **Deterrence:** Deterrence of birds at high prioritization areas using harassing and non-lethal methods (e.g. acoustic and visual) should be considered.
- Any method which is based on human labor (e.g. use of guns or trained dogs) suffers from long response time and lack of personnel to cover the entire prioritized areas.
- The deterrence elements should be situated and used according to the birds' major activity areas.

Thank you very much!

