International Civil Aviation Organization

ICAO Asia/Pacific Wildlife Hazard Management Workshop and Seventh Meeting of the Asia/Pacific Wildlife Hazard Management Working Group (AP–WHM/WG/7)

Pokhara, Nepal, 5 to 9 May 2025

Agenda Item 5: **State's Action Plan for Establishment and Implementation of Wildlife Hazard Management Programme – State's Update**

BEYOND BOUNDARIES – STRENGTHENING WHMP's THROUGH INTERAGENCY COLLABORATION TO SUPPORT AVIATION SAFETY

(Presented by World Birdstrike Association)

SUMMARY

This paper presents that Wildlife Hazard Management Plans (WHMPs) must evolve to include collaboration beyond aerodrome operators, recognising that wildlife hazards often originate beyond the boundaries of aerodromes. Civil Aviation Authorities (CAAs) must transition to active partners, while municipalities, land planners, and waste management also play crucial roles. This interagency collaboration closes gaps in hazard management, maximises resources, and enhances communication. A framework is proposed, including Wildlife Hazard Working Groups, CAA coordination, and data-sharing mechanisms. Challenges like urbanisation and limited data sharing must be addressed. CAAs are urged to lead by mandating WHMP contributions from external agencies and providing specialised training and centralised data platforms for wildlife incidents.

1. INTRODUCTION

1.1   Wildlife strikes pose a persistent and growing threat to aviation safety worldwide. While aerodrome operators have long been tasked with developing and maintaining Wildlife Hazard Management Plans (WHMPs), a siloed approach is no longer sufficient. The increasing encroachment of urban, industrial, and infrastructure development around aerodromes now requires a shared responsibility, one where external agencies, including local governments, urban planners, environmental authorities, and infrastructure ministries, also establish their own WHMPs and integrate them with aerodrome plans.

1.2   Critically, the Civil Aviation Authority (CAA) must now transition from being solely a regulatory body to an active strategic partner. The CAA can guide, support, and implement frameworks for customised WHMPs across all stakeholders, stepping into a more involved role alongside aerodrome operators to embed wildlife hazard management into broader land-use and safer ecosystems. This working paper outlines the rationale for this strategic shift and shared responsibility and the operational benefits of a whole-of-community approach led by regulatory collaboration.

2.   CURRENT STATE OF WHMP RESPONSIBILITY

2.1   Traditionally, Wildlife Hazard Management Plans (WHMPs) have been the responsibility of aerodrome operators, guided by adopting ICAO Annex 14. This approach seems less effective in the current environment, failing to address wildlife hazards that often originate beyond aerodrome boundaries. A shift toward interagency collaboration is essential for effective risk mitigation. Civil Aviation Authorities (CAAs) must transition from regulatory oversight to active partnership, while municipalities, land planners, and waste management agencies must recognize their role in wildlife hazard management. Collaboration closes gaps, maximises resources, and enhances communication, with CAAs leading by mandating contributions from external agencies and centralising data for improved risk assessment.

2.2   Despite being offsite, some examples of these attractants listed below contribute significantly to wildlife presence and movements within the airspace, directly influencing wildlife strike risk within aerodromes.

- Open landfills or waste management facilities.
- Wetlands and water bodies.
- Agriculture zones and livestock farms.
- Urban green spaces and poorly planned drainage.
- Construction zones, urbanisation, infrastructure developments.

2.3   While the CAA traditionally focuses on enforcing WHMP standards at aerodromes, this fragmented boundary of responsibility highlights the urgent need for regulatory bodies to actively enable, monitor, and support WHMPs across multiple jurisdictions.

3.   EMERGING CHALLENGES

3.1   Urbanisation and Land Use Conflicts

With rapid urbanisation and growing infrastructure demands, land use planning near aerodromes often overlooks aviation safety. Uncoordinated town planning can inadvertently increase wildlife presence near aerodromes, especially when:

- Greenfield projects are approved without wildlife risk assessments.
- Infrastructure projects include surface water or food sources.
- Land conversion disrupts ecological balances, displacing wildlife toward aerodromes.

3.2   Lack of Interagency Communication

Currently, no formal mechanism exists for many non-aerodrome agencies to contribute to or align with WHMPs. This disconnects results in:

- Redundant or conflicting wildlife control efforts.
- Incomplete data sharing and risk assessments.
- Missed opportunities for proactive, preventive action.

The CAA's expanded role is essential, by not only enforcing standards but proactively coordinating and facilitating inter agency engagement, the CAA can bridge these communication gaps and drive integrated risk management.

3.3   *The Need for External Agency WHMPs*

The development and sharing of WHMPs by non-aerodrome stakeholders are critical for the following reasons:

3.3.1. Shared Responsibility for Risk Mitigation

Wildlife hazards are not bound by aerodrome fences. They are the product of broader ecological and urban dynamics. Recognising that responsibility is shared, external agencies must now:

- Assess their own projects and land uses for wildlife attraction risks.
- Implement mitigation strategies independently and in collaboration with aerodromes.
- Share relevant data and monitor reports.
- Through CAA-issued guidance tailored to external agencies, these shared responsibilities can be better understood, implemented, and audited.

4.   SEAMLESS AND WHOLISTIC WHMP IMPLEMENTATION

An aerodrome's WHMP can only be fully effective if aligned with the wildlife management practices of surrounding landholders. By submitting their own WHMPs and participating in joint planning, agencies can:

- Reduce attractants proactively.
- Improve consistency in control measures.
- Enable more accurate and comprehensive risk mapping.
- The CAA can oversee a national WHMP repository, ensure wholistic alignment checks, and facilitate conflict resolution between agencies, when required.

4.1   *Compliance with ICAO Recommendations*

ICAO encourages states to adopt a systems-based approach to hazard management. This includes engagement with:

- Land use by authorities.
- Environmental regulators.
- Ministry of Aviation, Ministries of Natural resources, Agriculture, Fisheries and relevant environmental agencies and stakeholder ministries.
- Infrastructure and civil works departments.

By stepping into a leadership and facilitation role, the CAA not only ensures compliance but actively strengthens aviation safety frameworks through a unified WHMP ecosystem.

4.2   *Implementation Framework.*

4.2.1. Policy Development.

The CAA, in partnership with the National Wildlife Hazard Management Committee, external associations and other relevant authorities, should:

- Mandate WHMP contributions from relevant external agencies.
- Develop WHMP guidance material and risk assessment templates.
- Define interagency roles, responsibilities, and response protocols.
- Establish performance standards for WHMP integration beyond aerodrome boundaries.

4.2.2. Interagency Coordination Mechanisms.

Under CAA and National Wildlife Hazard Management Committee oversight, establish:

- Annual multi-agency WHMP review and update meetings.
- Centralised data platforms for wildlife incidents, risk factors, and mitigation measures.
- Training and customise Capacity Building.

The CAA and National Wildlife Hazard Management Committee should:

- Provide wildlife risk assessment training for external agency staff.
- Develop aviation-specific safety modules focused on urban planning and land use.
- Showcase examples of compatible development and deterrent strategies.
- Issue best practice advisories and conduct periodic audits.

4.3   Conclusion

Aviation safety is a shared obligation and responsibility for the community. As urban, industrial, and ecological systems become increasingly interlinked, so too, must wildlife hazard management efforts. The Civil Aviation Authority must move beyond traditional oversight to champion a new, collaborative model, one which not only regulates but empowers all stakeholders from local councils to infrastructure developers to understand, implement, and align Wildlife Hazard Management Plans.

Through customised WHMP guidance, coordinated oversight, and capacity building, the CAA can drive a future-proof, whole-of-community approach to minimise wildlife strike risks and protect aviation safety.

4.4   Recommendations

- National Wildlife Hazard Management Committees and CAAs to develop regulations mandating WHMPs for key non-aerodrome agencies.
- CAAs to issue tailored WHMP guidance for different external sectors and land uses.
- Establish formal WHMP sharing protocols, centralised databases, and interagency review panels led by the CAA.
- CAA-led capacity building programs to train non-aerodrome stakeholders in aviation wildlife risk management.
- Develop a central wildlife hazard risk mapping tool accessible to all stakeholders.
- Promote joint training programs and workshops.
- Monitor and review outcomes annually for continuous improvement.

5.   ACTION BY THE MEETING

5.1   The meeting is invited to:

a)   note the information contained in this paper;

b)   encourage States/Administrations to follow recommendations stipulated in paragraph 4.4; and

c)   discuss any relevant matters as appropriate.

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