Bird Strikes Against Aircraft – Issues of Liability

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1. INTRODUCTION

A "bird strike" is deemed to have occurred whenever a pilot reports a bird having impacted his aircraft; aircraft maintenance personnel identify some damage to an aircraft which they can attribute to a bird strike; ground personnel report seeing an aircraft hit one or more birds in flight; or bird remains, whether in full or part, are found on an airside pavement area or within 200 feet of a runway, unless another reason for the bird's death is identified. The first fatal aircraft accident involving a bird strike is reported to have occurred in 1912.[1] The Bird Strike Committee of the United States reports that, since 1960, about 400 aircraft have been destroyed and over 370 people killed in the United States as a result of bird or other wildlife strikes.[2] It is also reported that more than half of bird strike accidents occur at less than 100 feet (30 meters) above the ground,

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1. HANS BLOKPOEL, BIRD HAZARDS TO AIRCRAFT xiii (1976).

2. Bird Strike Committee USA, *Understanding and Reducing Bird Hazards to Aircraft* (statistics from the Federal Aviation Administration (FAA) estimate that there were over 33,000

although strikes have been reported as high as 37,000 feet above ground, and the highest recorded bird sighting was at 54,000 feet.[3] The Civil Aviation Administration (CAA) of the United Kingdom has estimated that U. K.-registered aircraft of over 12,500 pounds (5,700 kgs.) strike a bird about once everyone thousand flights.[4] The International Civil Aviation Organization (ICAO), which, through its Bird Strike Information System, provides an analysis of bird strike reports that are received from different countries, has recorded that there were over 25,000 bird strikes reported by civil aircraft from 1988 to 1992.[5]

Bird strikes are therefore by no means rare occurrences in civil aviation. They can cause serious damage to aircraft, as is evidenced by the fact that, since 1975, in the United States alone, five large jet aircraft have encountered major accidents caused by bird strikes[6] which, in one instance, resulted in the death of nearly three dozen people.[7] A popular misconception, that a minor accident caused by a bird strike would not have serious financial implications, has prompted the publication of several informational papers by commentators, focusing on the fact that even minor damage can lead to significant costs. Even if a pair of fan blades have to be replaced as a result of such incidents, the add-on costs, in addition to replacement costs and labor such as costs involving the grounding of the aircraft for repair and redirection of passengers, would be considerable. The Federal Aviation Administration (FAA) has estimated that during the 1990-2001 decade, bird strikes cost civil aviation over $470 million per year in the United States.[8] Additionally, minor damage to aircraft may come within deductible limits of standard aircraft insurance coverage, or may not be covered in the insurance policy, necessitating the airline concerned to absorb the direct and indirect costs of such damage.[9]

Industry experts have issued a serious warning that flocks of birds, particularly migrating flocks of large Canada geese, could be the cause of aircraft accidents and passenger fatalities if preventive measures are not

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bird strike incidents reported to civil aircraft between 1999 and 2000, 15% of which resulted in accidents), *at* http://www.birdstrike.org/risk/threat.htm (last visited Dec. 10, 2002).

3. *Id.*

4. *Id.*

5. Bird Strike Committee USA, *The Top 10 Bird Strike Facts*, *at* http://www.birdstrike.org/commlink/top_tem.htm (last visited Dec. 10, 2002).

6. *Id.* at note 1.

7. *Id.*

8. *Id.* at note 9.

9. BLOKPOEL, *supra* note 1, at 34 (information on aircraft engine and full repair resulting from a bird strike).

taken.[10] Two major U.S. air carriers, Northwest and United, have reported 200 to 300 bird strikes a year on an average.[11] A notable incident presented in this report is the $23 million damage sustained by a Northwest Airlines aircraft when birds were ingested into one of its engines.[12]

The issue of bird strikes takes on an added dimension of affecting social and policy issues which are not strictly linked with air transport. The key area of environmental protection, particularly in the fields of wildlife policy and habitat management, bears on issues of state responsibility for national policy as well as a commitment toward maintaining the bio-diversity of the ecosystem. An example of the dire consequences of a bird strike is the instance of a Boeing 747 aircraft departing Los Angeles Airport in late August, 2000, which had to dump 83 tons of fuel to land safely after a bird strike.[13]

All of this raises the question of accountability: who is responsible for preventing bird strikes against aircraft? The initial answer to the question lies in the element of control exercised in a particular jurisdiction in the vicinity of the site of the accident. The airport is a key player in this equation, as would be an air traffic control authority, although to a lesser extent particularly in instances of failure to warn aircraft of possible bird hazards. The state in whose territory the accident takes place should be called upon to answer whether it had a successful wildlife program in place. However, in the ultimate analysis, the airport authorities should be held liable; they owe aircraft operators the common duty of care of ensuring that the latter's aircraft are afforded basic safety from bird hazards. Therefore, the onus of responsibility to avoid bird strikes depends very much on the airport authorities, as a few significant instances of adjudication show, which focus on exculpation of any airport that shows bird control systems in operation and trained staff to deal with the problem of wildlife hazards.

Issues of liability, which primarily fall within the purview of the airport concerned, can be viewed in two ways. The first is state liability and responsibility when the airport concerned is an instrumentality of state or is government-owned and controlled. The second is the liability of the airport itself when such airport is an autonomous entity, either through the process of privatization (which is increasing in popularity at the present time), or through some other measure that accords independent fi-

10. Dennis Blank, *Rising Geese Numbers Increase Accident Threat*, FLIGHT INT'L, Aug. 15, 2000, at 11, *available at* 2000 WL 25114547.

11. *Id.*

12. *Id.*

13. Bird Strike Committee USA, *The Top 10 Bird Strike Facts*, note 10, *available at* http://www.birdstrike.org/commlink/top_ten.htm (last visited Dec. 10, 2002).

nancial ownership to the airport. This article will address liability issues within those two broad areas of control.

2. Regulatory Initiatives of ICAO

At its Sixth European-Mediterranean Regional Air Navigation Meeting, held in Geneva from the 2nd to 27th of November, 1971, ICAO considered bird hazards to aircraft operations, particularly in the context of possible measures that could be taken to minimize the risk of collision in all phases of flight between aircraft and birds.[14] Consequently, the Air Navigation Commission of ICAO requested the Secretary General of ICAO to examine the issue further and submit recommendations to the Commission.[15] Consequently, in 1973, at the ICAO Asia/Pacific Regional Air Navigation Meeting held in Honolulu, Hawaii the meeting adopted Recommendation 6/5 which requested:

a) that each state organize a national bird strike committee to investigate the measures to be taken at the aerodromes within the state to reduce the bird hazards;

b) that the states within a region join together in the formation of a regional bird strike committee with the objective of providing assistance and guidance to each other in reducing the bird hazard; and,

c) that ICAO lend its support to the formation and activities of the regional bird strike committee.[16]

Although this recommendation was pro-active, it was a bit ahead of its time. It was later found by the Air Navigation Committee, after ICAO had held a workshop for contracting states establishing national bird strike committees, that it did not appear at that time that measures to reduce bird strikes, particularly in the Asia/Pacific region, could be sustained.[17]

ICAO's efforts at regulation in this particular field dates back to May 29, 1951, when the Council of ICAO first adopted Standards and Recommended Practices for Aerodromes, adopting Annex 14 (Aerodromes) to the Convention on International Civil Aviation,[18] signed at Chicago on December 7, 1944. This Convention, in Article 37, requires that each contracting state undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures and organization in relation to aircraft, personnel, airways and auxiliary services

14. *Report of the Sixth European-Mediterranean Regional Air Navigation Meeting*, at 9-30, ICAO Doc. 8994-EUM/VI (Nov. 27, 1971).

15. *Id.* Recommendations 16/16 and 16/17. *See also* AN-WP/4390 (Feb. 10, 1975).

16. *See* AN-WP/4810 at 1 (May 23, 1978).

17. *Id.*

18. *Convention on International Civil Aviation*, Dec. 7, 1944, 61 Stat. 1180, *available at* http://www.iasl.mcgill.ca/airlaw/public/chicago/chicago1944a.pdf.

in all matters in which such uniformity will facilitate and improve air navigation. To this end, ICAO is mandated by Article 37 to adopt and amend from time to time, as may be necessary, international standards and recommended practices pertaining to eleven key areas of civil aviation, one of which pertains to characteristics of airports and landing areas.[19]

Accordingly, Annex 14 on Aerodromes, in Chapter 9, contains three recommendations pertaining to bird strike reduction. The first recommendation calls for a bird strike hazard on or in the vicinity of an aerodrome to be assessed through the establishment of a national procedure for recording and reporting bird strikes to aircraft and the collection of information from aircraft operators, airport personnel, etc. on the presence of birds on or around an aerodrome.[20] The Annex also recommends that when a bird strike hazard is identified at an aerodrome, the appropriate authority should take action to decrease the number of birds constituting a potential hazard to aircraft operators by adopting measures for discouraging their presence on or in the vicinity of an aerodrome.[21] The final recommendation of the Annex urges that garbage disposal dumps or any such other source attracting birds on or in the vicinity of an aerodrome be eliminated or their establishment prevented, unless studies indicate that such disposal units are unlikely to be conducive to bird activity and a bird hazard problem.[22]

Recommendation 9.5.2, which encourages measures to be taken toward discouraging bird activity within the vicinity of an aerodrome, is recognized in guidance material formulated by ICAO in the form of provisions in the *Airport Services Manual,* Part Three of which is dedicated to bird control and reduction.[23] The manual gives detailed guidance to states on how to organize a national committee and lays out the roles and responsibilities of a control program. Chapter Four of the manual is particularly significant in that it gives a detailed breakdown on how to organize an airport bird strike control program. This calls for a very integrated approach to be developed to control bird activity at airports. Communications between field personnel and air traffic controllers, allocation of monies for bird control and assistance to aircraft operators in coordinating a concerted effort are some recommended measures. There is also a separate chapter on environmental management and site modification, together with segments on dispersal methods, incompatible land use around airports, evaluation of wildlife control programs, and staffing air-

19. *Id.* at article 37(b).
20. *1 Annex 14 Aerodromes: Aerodrome Design and Operations*, ICAO (3rd ed. 1999).
21. *Id.* note 18, Recommendation 9.5.2.
22. *Id.* Recommendation 9.5.3.
23. *Airport Services Manual*, ICAO Doc. 9137-AN/898 Part 3 (3rd ed. 1991).

port bird control programs, which are given special treatment in a chapter. Another ICAO document which lends itself to alleviating bird hazards at airports is the Airport Planning Manual which contains, *inter alia*, an appendix reflecting a land use table for bird hazard considerations.[24]

There are also other compelling factors that airport administrations should take into account when planning for additional aircraft capacity. These factors include the responses of the international community in the form of Standards and Recommended Practices as promulgated by ICAO, in order that international civil aviation retains a certain consistency and uniformity in its global activity. For instance, ICAO has in use, as mentioned earlier, an Airport Planning Manual[25] in two parts, setting out in detail all aspects of airport planning. In this document, ICAO has developed a master planning process that involves the plans, programs and stringent policy that go into making a viable airport. The document serves as a basis for providing for the orderly and timely development of an airport that is adequate to meet the present and future air transportation needs of an area or state.[26] The manual starts with the fact that early aviation history recognized the need for some public control of land in the vicinity of an airport[27] and bifurcates this need to reflect airport needs, i.e., obstacle limitation areas and future airport development, etc., and the need to ensure minimal interference with the environment and the public.[28] By this dual approach ICAO has introduced a whole new area of thought into airport development. While it was once a concern to merely provide facilities for the fluid movement of air traffic, increasingly there are ecological concerns as well. Because of this, airport development now falls into three main areas:

a) the development of airport capacity and facilities;

b) the balancing of airport development with necessary security measures; and,

c) the balancing of airport development with ecology, i.e., city planning, noise pollution avoidance, etc.

The ICAO Airport Planning Manual ensures a balance between airport development and ecological considerations.

On an examination of the foregoing discussions, no one could say that the problem has not been recognized so far, and no one could even say that those responsible for the alleviation of the problem have not

24. *Land Use and Environmental Control Complied in Airport Planning Manual*, ICAO Doc. 9184-AN/902, Part 2 (2nd ed. 1985).

25. *Id.* at Parts 1 & 2.

26. *Id.* at Part 1, 2.9.1 (a).

27. *Id. at* Part 2, 1.3.1.

28. *Id.* at Part 2, 1.3.2.

attempted to solve it. What now remains to be done is to examine the most proper manner in which to approach the problem of bird hazards. There is no doubt that the planners can take off from where we are at present. However, any future planning by individual states on the expansion of their airport programs would have to be done with the primary consideration that in the future air transportation will demand new forms of international collaboration on technical and economic issues.[29]

The collaboration referred to would have to be expanded to include safety and ecological factors in the technical field and all economic research in city planning and infrastructure development in the economic field. These studies would have to be done in the form of committed and in-depth country studies by individual states, taking into consideration future studies of a country's outlook and the financial outlay that the country would be prepared to make for an airport expansion program. The outcome of these studies could then form the basis for legislation concerning the planning of airports. Such legislation would present, for the first time, a cohesive and enforceable set of laws that would deal with the airport congestion problem.

Although the concept of airport planning laws can be summed up as easily as above, the three broad areas of ecology, safety and infrastructure planning need a sustained approach of study before they are incorporated into laws. For a start, ICAO's Airport Planning Manual is geared to provide information and guidance to those responsible for airport planning,[30] where information on a comprehensive list of planning subjects, such as sizes and types of projects,[31] task identification,[32] preparation of manpower and cost budgets,[33] selection of consultants,[34] and standard contract provisions[35] is given. With these guidelines each state can start its planning process.

3. Legal Issues

ICAO's extensive regulatory guidance impels contracting states to take adequate measures to adopt clear and cogent national policies toward a bird strike control program and also assume responsibility for liability arising out of accidents if they are responsible for providing

29. Eugene Sochor, *From the DC 3 to Hypersonic Flight: ICAO in a Changing Environment*, 55 J. AIR L. & COM. 407, 408 (1989).

30. *Land Use and Environmental Control Complied in Airport Planning Manual*, ICAO Doc. 9184-AN/902, Part 3 (2nd ed. 1985).

31. *Id.* at Part 2.1.3.1-1.3.5.

32. *Id.* at Part 2.2.1.

33. *Id.* at Part 2.4.

34. *Id.* at Part 3.1.

35. *Id.* at Appendix.

aeronautical and airport services to aircraft operations. Principles of state responsibility, *inter se*, are now clearly entrenched in public international law.

A. State Liability

The fundamental postulate which establishes a global legal basis for the provision of airports is contained in Article 28 of the Convention on International Civil Aviation,[36] which provides that each contracting state undertakes, as far as practicable, to provide, in its territory, airports, radio services, meteorological services and other air navigational facilities to facilitate international air navigation in accordance with the standards and practices recommended or established from time to time and pursuant to the Convention. In addition, the Chicago Convention also stipulates, *inter alia,* that every aircraft which enters the territory of a state shall, if the regulations of that state so dictate, land at an airport designated by that State for purposes of customs and other examination.[37] Each contracting state to the Chicago Convention could also, subject to the provisions of the Convention, designate a route and available airports to an aircraft which passes through the airspace of the state from another state.[38]

An airport, whether publicly, or privately, owned and operated, has to follow a prescribed policy with regard to the recovery of costs incurred in providing airport and air navigation services. This policy is enshrined in Article 15 of the Chicago Convention which requires that a state is obligated not to impose higher charges on aircraft of another state engaged in international operations than those paid by its national aircraft engaged in similar international operations. This policy is a universal one applying to any type of airport whether public or private since the regulation of airports within the territory of a state is usually the responsibility of that state concerned.

The United Nations General Assembly, at its 93rd Plenary Session in December 1992 endorsed privatization in the context of economic restructuring, economic growth and sustainable development by passing Assembly Resolution A 47/171. The General Assembly, having noted, *inter alia*, that many countries were attaching growing importance to the privatization of state-owned enterprises, urged member states to support the national efforts of fellow states in implementing privatization. In 1993, the General Assembly followed up on its stance on privatization by

36. *Convention on International Civil Aviation*, Dec. 7, 1944, 61 Stat. 1180, *available at* http://www.iasl.mcgill.ca/airlaw/public/chicago/chicago1944a.pdf.

37. *Id.* at art. 10.

38. *Id.* at art. 68.

adopting Resolution A 48/180, which, *inter alia,* requested the Secretary General to strengthen the activities of the United Nations system related to the promotion of entrepreneurship and to the implementation of privatization programs.

On the specific issue of airport privatization, the Latin American Civil Aviation Commission (LACAC), at its Thirteenth Ordinary Assembly held in Chile in July, 1998, adopted Recommendation A 13-4 which recognized, *inter alia,* that airport privatization was becoming more prevalent in the Latin American region and that the process of privatization involves a detailed analysis of different factors. Accordingly, the Assembly recommended that the LACAC member States consider the following issues in order to obtain the best results from the privatization process:

a) Define the role of the state and the responsibilities it must fulfill in order to guarantee the rights of users, as well as airport security and operational safety, in accordance with international standards in force;

b) Consider the convenience of maintaining public ownership of airports, granting concessions for suitable periods of time in keeping with investments made;

c) Clearly establish the required infrastructure, which costs the state and/or the users will be willing to recognize, avoiding surpluses or deficiencies which may be detrimental to them;

d) Determine the services to be transferred to the private sector and those which will remain in the hands of the state, describing the standards to be used in defining the quality of the services provided;

e) As much as possible, aim at establishing a competitive environment for providers of the various services, seeking mechanisms such as public tenders. Maximum allowable rates should be established for monopolistic services;

f) Define the financing of the air transport sector, deciding whether higher-income airports should economically support the less profitable ones or those working at a loss, in order to maintain a self-financed airport network compatible with national civil aviation needs;

g) The contract between the state and private airport service operators must be the result of an open public tender where the required conditions, evaluation formulae and criteria to be used to award the contract must be clearly established and made known to all interested parties, in an absolutely transparent way;

h) Reserve the right to implement the relevant measures to follow up on and maintain operational control over the concession contract;

i) Pay special attention to the contract termination clause for its timely enforcement in case of non-compliance and recovery of the relevant value;

j) The Civil Aviation Administrations should actively participate in all privatization processes.

The privatization process would usually involve a sustained consultation period between the parties, particularly involving the fundamental issue of the exact mode of privatization involved. Some of the options which may be considered are the creation of a new corporation whereby existing assets could be vested in the new entity and be floated publicly. Privatization could also be partial; involving just some assets of the enterprise. Alternatively, there may be a full public share floatation of the enterprise or a management buy-out structure where a company could provide financial backing in order to take the airport concerned into the private sector. There could also be a joint venture arrangement in airport privatization where the private sector and government could share their equity involvements.

At the implementation stage of the privatization process a tremendous amount of information is usually exchanged, particularly from the owners of the enterprise to the investors. Such information should demonstrate the legal rights of the parties and stipulate the rights and liabilities that would remain as residual rights and obligations of the state. A privatization process, whether it be by concession or trade sale would also entail a complex series of negotiations and contractual wrangling. Competing companies would bid against each other for the enterprise being offered for privatization.

It is beyond question that the responsibility of the state is not extinguished merely because an airport is made subject to private ownership or private management control. In international air transportation the mere fact that the state has to provide airport services under Article 28 of the Chicago Convention imposes legal responsibility upon the state to be accountable at public international law for any liability incurred as a result of action on the part of airports within its territory.

The provisions of the Chicago Convention, which is an international treaty, are binding on contracting states to the Convention and therefore are principles of public international law. The International Court of Justice (ICJ), in the *North Sea Continental Shelf* case,[39] held that legal principles which are incorporated in treaties become customary international law by virtue of Article 38 of the 1969 Vienna Convention on the Law of Treaties.[40] Article 38 recognizes that a rule set forth in a treaty would become binding upon a third state as a customary rule of international law if it is generally recognized by the states concerned. Article 28 of the

39. 1970 *I.C.J.* 32.

40. *Vienna Convention on the Law of Treaties*, United Nations General Assembly Document *A/CONF.39/27*, 23 May 1969.

Chicago Convention, which requires States to provide airports for purposes of air transport operations, therefore, becomes a principle of customary international law, or *jus cogens*. Obligations arising from *jus cogens* are considered applicable *erga omnes*, which would mean that states using space technology owe a duty of care to the world at large in the provision of such technology. The ICJ in the *Barcelona Traction* case held:

> [A]n essential distinction should be drawn between the obligations of a State towards the international community as a whole, and those arising *vis-à-vis* another State in the field of diplomatic protection. By their very nature, the former are the concerns of all States. In view of the importance of the rights involved, all States can be held to have a legal interest in their protection; they are obligations *erga omnes*.[41]

The International Law Commission has observed of the ICJ decision:

> [I]n the Court's view, there are in fact a number, albeit limited, of international obligations which, by reason of their importance to the international community as a whole, are - unlike others - obligations in respect of which all States have legal interest.[42]

The views of the ICJ and the International Law Commission, which have supported the approach taken by the ICJ, give rise to two possible conclusions relating to *jus cogens* and its resultant obligations *erga omnes*:

a) obligations *erga omnes* affect all States and thus cannot be made inapplicable to a State or group of States by an exclusive clause in a treaty or other document reflecting legal obligations without the consent of the international community as a whole;

b) obligations *erga omnes* pre-empt other obligations which may be incompatible with them.

Some examples of obligations *erga omnes* cited by the ICJ are prohibition of acts of aggression, genocide, slavery and discrimination.[43] It is indeed worthy of note that all these obligations are derivatives of norms which are *jus cogens* at international law.

International responsibility relates both to breaches of treaty provisions and other breaches of legal duty. In the *Spanish Zone of Morocco Claims* case, Justice Huber observed, "[R]esponsibility is the necessary corollary of a right. All rights of an international character involve international responsibility. If the obligation in question is not met, responsibility entails the duty to make reparation."[44]

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41. *Barcelona Traction, Light and Power Company Limited,* I.C.J. Reports, 1974, 253, 269-270.

42. Yearbook of International Law Commission 1976, Vol II, Part One at 29.

43. 1970 *I.C.J.* 32.

44. 1925 R.I.A.A. ii 615 at 641.

It is also now recognized as a principle of international law that the breach of a duty involves an obligation to make reparation appropriately and adequately. This reparation is regarded as the indispensable complement of a failure to apply a convention and is applied as an inarticulate premise that need not be stated in the breached convention itself.[45] The ICJ affirmed this principle in 1949 in the *Corfu Channel* case[46] by holding that Albania was responsible under international law to pay compensation to the United Kingdom for not warning that Albania had laid mines in its territorial waters which caused explosions, damaging U.K.-flagged ships. The liability and the general principles of international law complement each other in endorsing the liability of states to compensate for damage caused by space objects, thus there is no contention as to whether in the use of nuclear power sources in outer space, damage caused by the use of such space objects would not go uncompensated. The rationale for the award of compensation is explicitly included in Article XII of the Liability Convention, which requires that the person aggrieved or injured should be restored (by the award of compensation to him) to the condition in which he would have been if the damage had not occurred. Furthermore, under the principles of international law, moral damages based on pain, suffering and humiliation, as well as on other considerations, are considered recoverable.[47]

The sense of international responsibility that the United Nations arrogated to itself had reached a heady stage at this point, where the role of international law in human conduct was perceived to be primary and above the authority of states. In its Report to the General Assembly, the International Law Commission recommended a draft provision which provided, "Every State has the duty to conduct its relations with *other* States in accordance with international law and with the principle that the sovereignty of each State is subject to the supremacy of international law."[48] This principle, which forms a cornerstone of international conduct by States, provides the basis for strengthening international comity and regulating the conduct of States both internally - within their territories - and externally towards other states. States are effectively precluded by this principle from pursuing their own interests untrammelled and with disregard to principles established by international law.

Liability of the State at common law is best exemplified by the legal process of the United Kingdom. At private law involving issues of state liability and responsibility, the perennial adage that "the King can do no

45. In Re Chorzow Factory (Jurisdiction) Case, 1927 P.C.I.J. (ser. A) No. 9, at 21.

46. The Corfu Channel Case, 1949 I.C.J. 4 at 23 (Feb. 5).

47. Carl Q. Christol, *Space Law Past, Present and Future* x, 231 (1991).

48. *Report of the International Law Commission to the General Assembly on the Work of the 1st Session*, [1949] Y.B. Int'l L. Comm'n 21, U.N. Doc. A/CN.4/13/1949.

wrong" extended from immunity of the sovereign to cover actions of the central government and its servants when acting within the scope of their employment. This immunity was more focused on exemption from tortious liability rather than on contractual liability and obviated the state's exposure to compensatory damages arising out of injury. There was, however, no bar to imposing personal liability on civil servants, and in 1765, the British Government agreed to pay *ex gratia*, damages awarded against one of its servants.[49] In the 1946 case of *Adams* v. *Naylor*[50], the principle of *ex gratia* payment was rejected, giving way to the enactment in Britain of the Crown Proceedings Act of 1947 which allowed a plaintiff the right to take up a matter involving Crown liability direct in the courts of law. The Act did not apply to members of the armed forces, which essentially meant that if an airport were to be manned by the armed forces, there would be no Crown liability for acts committed officially by the airport management concerned.

B. Liability of the Airport as an Autonomous Entity

Notwithstanding the responsibility of a State with regard to airports within its territories, which is founded both at customary international law and at private law for liability incurred by airports, a privately run airport may incur tortious liability on a private basis, as the occupier of the premises. Airports run by private entities would be liable to the users of airports including air carriers and to non-users, including those outside the premises of the airport, injured by the airport's activities. A good example of the latter is damage caused by environmental pollution through noise within the vicinity of the airport.

In the instance of a privately managed airport where the entity charged with managing airport services is located within the airport premises, such an entity would be considered as a legal occupier for purposes of liability.

The leading case which expands the definition of "occupier" is the House of Lords decision in *Wheat* v. *E. Lacon & Co. Ltd*,[51] where the defendants owned a public house of which Mr. R was their manager. Mr. R and his wife were allowed by agreement to live in the upper floor, access to which was by a door separate from the licensed premises. Mrs. R was allowed to take paying guests on the upper floor. An accident was sustained by a paying guest on the staircase leading to the upper floor. It was held that the defendants were occupiers of the upper floor. Mr. R was only a licensee of that part and the defendants had enough residuary

49. *Entick* v. *Carrington*, [1765] 19 St. Tr. 1030.
50. *Adams v. Naylor*, [1946] A.C. 543.
51. *Wheat* v. *E. Lacon & Co. Ltd*, [1966] A.C. 552, [1966] 1 All E.R. 582

control to be treated as occupiers. In fact, the defendants, Mr. R and Mrs. R, were both occupiers.

The case recognizes three principles: that there may be two or more occupiers at one time,[52] that exclusive occupation is not required, and that the test is whether a person has some degree of control associated with, and arising from, his presence in and use of, or activity in, the premises. The following principles were enunciated by earlier decisions, such as a case where a concessionaire without a lease in a fairground is an occupier;[53] a contractor converting a ship into a troopship in dry dock occupies the ship;[54] and, a local authority which has requisitioned a house[55] is an occupier (even in respect of those parts of the house in which it is allowing homeless persons to live).[56]

Although the *Wheat* case contains a decision on the meaning of "occupier" for the purposes of the Occupiers' Liability Act 1957 of the United Kingdom, the judgments following the case show that it applies to all cases, whether at common law or under that Act, or the Occupiers' Liability Act 1984 which now regulates occupiers' duties to trespassers where it is necessary to determine the duty of care owed by occupiers to entrants.

The Occupiers' Liability Act 1957 was enacted to give effect to the recommendations of the Law Reform Committee and to eliminate the confusion that had clouded the common law rules on liability to entrants on premises. The rules enacted by sections 2 and 3 of the Act "have effect, in place of the rules of the common law, to regulate the duty which an occupier of premises owes to his visitors in respect of dangers due to the state of the premises or to things done or omitted to be done on

52. *See Fisher* v. *CHT Ltd. (No 2),* [1966] 2 Q.B. 475, [1966] 2 W.L.R. 391 (CA), (the owners of a club and the defendants who ran a restaurant in the club under licence from the club were both held to be occupiers). *See also AMF Int'l Ltd.* v. *Magnet Bowling Ltd.* [1968] 1 W.L.R. 1028 (a contractor, as well as the owner, was an occupier of the whole building although part of the building was separated by a screen beyond which he went only to attend to heating and lighting). *See also, Holden* v. *White* [1982] Q.B. 679, [1982] 2 W.L.R. 1030 (CA). (It is doubtful whether someone who has granted a right of way occupies that right of way). *See also Holmes* v. *Norfolk County Council,* (1981) 131 N.L.J. 401 (A highway authority which owns the land but has not adopted the highway is not an occupier of the highway). *See also Whiting v. Hillingdon London Borough Council* (1970) 68 L.G.R. 437 (A highway authority does not occupy a footpath on land owned by another although it has a statutory obligation to maintain it.)

53. *Humphreys v. Dreamland (Margate) Ltd.*, [1930] All E.R. 327.

54. *Hartwell v. Grayson Rollo and Clover Docks Ltd.* [1947] K.B. 901 (CA). *Compare Page v. Read* (1984) 134 N.L.J. 723 (a contractor merely painting a house is not an occupier.)

55. *Hawkins v. Coulsdon and Purley Urban DC,* [1954] 1 Q.B. 319, [1954] 2 W.L.R. 122 (CA).

56. *Greene v. Chelsea BC,* [1954] 2 Q.B. 127, [1954] 3 W.L.R. 12 (CA). *See also Harris v. Birkenhead Corp.,* [1976] W.L.R. 279 (CA) (where a local authority, having acquired a house by compulsory purchase, occupies it even before its staff enter it).

them."[57]

At common law it was necessary to distinguish between invitees, licensees and other entrants on premises. The approximate distinction was that an invitee was requested to enter the premises in the interest of the occupier, whereas a licensee was merely permitted to enter. "Visitors" for the purposes of the Act are those persons who were invitees or licensees at common law:

The common duty of care of an occupier is a duty to take such care as in all the circumstances of the case is reasonable to see that the visitor will be reasonably safe in using the premises for the purposes for which he is invited or permitted by the occupier to be there.[58]

If the entrant does not use the premises for that purpose which entitles him to be there, no duty is owed to him under the 1957 Act and any remedy which he might have would be regulated by the 1984 Act on the duty owed to trespassers.

At common law an occupier discharged his duty to a visitor by a warning sufficient to convey to the visitor full knowledge of the nature and extend of the danger. That rule is changed by section 2(4)(a) of the Act[59] which provides that where damage is caused to a visitor by a danger[60] of which he had been warned by the occupier, the warning is not to be treated without more as absolving the occupier from liability, unless in all the circumstances it was enough to enable the visitor to be reasonably safe.

For example, the farmer who warns the veterinary surgeon whom he has summoned to the farm at night to attend a sick cow by saying, "Be careful how you go down there or you may fall into a tank," or the railway company which warns of the dangerous roof over what is the sole approach to the ticket office can no longer absolve themselves from liability by that warning alone. On the other hand, where a customer does not heed the warning of a shopkeeper not to go to the far end of the shop because there is a dangerous hole, it might presumably be held in all the circumstances that the common duty of care owed to him under the Act has been discharged. If the defendant does not know of the danger he cannot rely on section 2(4)(a), although he may still have a defence under section 2(1).[61]

57. Occupiers' Liability Act, 1957 5 & 6 Eliz. 2 ' 1 (Eng.).

58. *Id.* at ' 2(2).

59. Roles v. Nathan, [1963] 1 W.L.R. 1117 (CA).

60. Here it is valid to consider whether danger means the peril or the thing which creates the peril.

61. White v. Blackmore, [1972] 2 Q.B. 651, [1972] 3 W.L.R. 296 (CA).

1) Assumption of risk

The common duty of care does not impose on an occupier any obligation to a visitor in respect of risks willingly accepted as his by the visitor (the question whether a risk is so accepted should be decided on the same principles as in other cases in which one person owes a duty of care to another).[62] According to the ordinary principles of negligence, a defendant breaches no duty of care towards a plaintiff who has voluntarily assumed the risk.

At common law no duty of care was owed to a visitor who had full knowledge of the nature and extend of the danger.[63] Knowledge is not specifically mentioned as a relevant circumstance in determining whether the common duty of care has been discharged. But since the Act expressly provides that voluntary assumption of a risk discharges the duty of care, its silence about the effect of mere knowledge of the risk makes it clear that knowledge on the part of the visitor in itself no longer serves to discharge the duty of care. Yet the visitor's knowledge of the danger remains relevant in deciding whether in all the circumstances it was enough to enable him to be reasonably safe.[64]

2) Liability towards neighbors

The risk created by dangers caused by the defective state of premises is not confined to entrants to those premises. Slates falling from roofs, crumbling walls, and dangerous activities carried out on a premises are just a few examples of risks as likely to endanger passers-by on the highway, or persons on adjoining premises, as if to injure persons actually on the occupiers' premises. The circumstances in which a duty of care is owed to such persons by the occupier of a premises therefore warrant brief consideration.

An action in nuisance, derived from public nuisance, often is the central strategy of those injured on a highway as a result of harmful conditions on adjoining land. Because of this historical anomaly, in a large number of situations a plaintiff may now sue either in negligence or in nuisance (or, as often happens, in both) for personal injuries, and yet the law is the same whichever tort is relied upon. In several House of Lords cases, it has been a matter of indifference whether the case was decided in negligence or in nuisance, both of which were pleaded.[65] Often, it

62. Occupiers' Liability Act, 1957 5 & 6 Eliz. 2 ' 2(5) (Eng.).

63. London Graving Dock Co. Ltd. v. Horton, [1951] A.C. 737, [1951] 2 All E.R. 1.

64. Bunker v. Charles Brand & Son Ltd., [1969] 2 Q.B. 480, [1969] 2 W.L.R. 1392. See also *McMillan v. Lord Advocate*, 1991 S.L.T. 150.

65. Longhurst v. Metropolitan Water Board, [1948] 2 All E.R. 834; *Caminer v. Northern & London Investment Trust Ltd.*, [1951] A.C. 88, [1950] 2 All E.R. 486; *Bolton v. Stone* [1951] A.C.

seems quite fortuitous which tort is relied upon: if, for instance, some act of negligent omission stands out, the claim will often be negligence. The 1948 decision in *Holling v. Yorkshire Traction Co., Ltd.* is a typical example of this ambivalence:

The defendants emitted so much steam and smoke on to the highway from their adjoining factory that the view was obscured and two vehicles collided, killing the plaintiff, who was on the highway. It was held to be negligence on the part of the defendant to fail to post a man at each end of the affected area. They were also held liable in nuisance.[66]

Accordingly, there is no room for doubt that the ordinary principles of negligence can be applied where highway users are injured because of harmful operations being carried out.[67]

Occupiers are also under a general duty to take reasonable care to prevent dangers existing on their premises from damaging persons or property on adjoining premises.[68] This is so whether the danger arises from disrepair on the premises, or some natural or man-made hazard such as fire caused by lightning striking a tree.[69] It has been held that where adjoining properties have mutual rights of support, an occupier who negligently allows property to fall into dereliction so as to damage the adjoining premises is liable in negligence as well as in nuisance.[70] There are two issues of particular difficulty affecting the duties of care owed, *inter se,* by occupiers of adjoining premises.

First, where a plaintiff tenant sues his landlord for damage resulting from the defective state of repair of premises retained by the landlord the case-law is somewhat ambivalent. The facts in *Cunard v. Antifyre, Ltd.*[71] were that some defective roofing and guttering, which formed part of the premises retained by the defendant landlord, fell into a part of the prem-

850, [1951] All E.R. 1078. Sometimes it is not clear on which tort a judgment is based. See *Mint v. Good* , [1951] 1 K.B. 517 at 526, [1950] 2 All E.R. 1159 at 1168 (CA).

66. [1948] 2 All E.R. 662; *Cf. Wheeler v. Morris,* (1915) 84 L.J.K.B. 1435 (CA).

67. *See, e.g.*, Hilder v. Associated Portland Cement Manufacturers Ltd., [1961] W.L.R. 1434, [1961] 3 All E.R. 709 (In this case the defendant occupiers of field allowed children to play football in the field and were held liable to a motor-cyclist who, when driving along adjoining highway, was knocked off his machine by a ball kicked by the children from the field).

68. Hughes v. Percival, (1883) 8 App. Cas. 443 (the premises for the benefit of which the present rule applies are those in respect of which someone other than the defendant has a vested interest in possession). See also, *Murphy v. Brentwood DC,* [1991] 1 A.C. 398.

69. Goldman v. Hargrave, [1967] 1 A.C. 645, [1966] 3 W.L.R. 513 (PC) (Water normally percolates from the defendants land to the plaintiffs, and the defendant pumps out the water from his land, and by so stopping the subterranean flow causes settlement damage to the plaintiffs land, the plaintiff has no remedy, because the defendant has no duty to adjoining occupiers in respect of percolating water; *Langbrook Properties Ltd. v. Surrey CC,* [1970] 1 W.L.R. 161, [1969] 3 All E.R. 1424).

70. Bradburn v. Lindsay, [1983] 2 All E.R. 408.

71. [1933] 1 K.B. 551 (the principle on which this case was based was approved obiter by Parcq J in *Bishop v. Consolidated London Properties Ltd.*, (1933) 102 L.J.K.B. 257, 262).

ises leased by him to the plaintiff-tenant. As a result, his wife was injured and his goods were damaged. Damages in general negligence were awarded to both the tenant and his wife.

However, in *Cheater v. Cater*,[72] the Court of Appeal had held earlier that a landlord, who had leased a field to a tenant at a time when there was a yew tree on the adjoining premises retained by the landlord, was not liable in negligence when the tenant's horse died by eating leaves from a tree which was then in the same state as the date of the lease. The Court of Appeal in *Shirvell v. Hackwood Estates Co., Ltd.*,[73] a later case, questioned *Cunard v. Antifyre Ltd.* and held that a workman of a tenant could not recover in negligence from a landlord whose tree on adjoining land fell on him. In *Taylor v. Liverpool Corp.*, the plaintiff, the daughter of a tenant of one of the defendant landlord's flats, was injured by the fall of a chimney stack, belonging to these flats, in the yard adjoining the premises. The landlords had negligently maintained this chimney, which formed part of the building retained by them.[74]

The judge found for the plaintiff in negligence, following *Cunard v. Antifyre, Ltd.*, and distinguishing *Cheater v. Cater* on the grounds that the tenant had there impliedly agreed to take the risk in respect to the danger existing on the premises at that time. His Lordship treated the observations in *Shirvells* case as *obiter* on the ground that no negligence had in any event occurred. The above notwithstanding, the principle in the *Cunard* case is more plausible than one which gives the landlord blanket immunity.

4. Conclusion

The two leading aircraft manufacturers, Boeing and Airbus Industrie, have forecast explosive growth in air traffic, producing a steadily increasing need for capacity and services. While Airbus industry has estimated that 13,000 new aircraft will be needed, at a value of U.S. $1.2 trillion by the year 2020,[75] Boeing has made a more liberal estimate of 18,406 new aircraft valued at U.S. $1.25 trillion over the same period.[76] ICAO has forecast an annual growth rate in air transport in excess of 5

72. [1918] 1 K.B. 247 (CA) (not cited in *Cunard v. Antifyre Ltd.*).

73. [1938] 2 K.B. 577 at 594-5 (CA).

74. [1939] 3 All E.R. 329.

75. *Airbus Industrie, 1998 Global Forecast, available at* http://www.Airbus.com.

76. *The Boeing Company, 1998 Current Market Outlook, available at* http://www.Boeing.com. (According to the Boeing forecast, the world fleet is expected to more than double by 2020, with total fleet size growing to 32,954 airplanes. Over the 20-year forecast period, 5,053 airplanes will be retired from active commercial service and will be replaced. An additional 18,406 airplanes will be needed to fill capacity demand.)

per cent over the next 10 years.[77] This expected growth will involve larger investment requirements, *inter alia*, in airport and aerodrome infrastructure, including infrastructural investment for ensuring safety of flight.

In terms of the post-accident economic, environmental and safety implications involved, bird strikes have numerous implications. From an economic perspective, where a bird strike damages an aircraft, apart from direct costs, such as repairs, which are not too difficult to quantify, there are indirect costs relating to delays, re-routing of passengers, non-productivity of an unserviceable aircraft, etc. As for environmental factors, such as those brought about by the jettisoning of fuel after an aircraft is debilitated by a bird strike, in view of the infrequent occurrences, they should primarily be viewed from a trade perspective. As to whether environmental concerns are sufficiently significant to be placed alongside economic and safety issues is a further question. The symbiosis of trade and the environment emerged as a critical issue for trade negotiators in the last stages of the Uruguay Round of discussions.[78] At these discussions the focus remained on two approaches to the issue. The first approach was from the essentially pro-environment groups, who considered that those involved in international trade are primarily interested in the movement of their goods and therefore were not concerned about the environmental implications of their trading activities. The second approach was based on the belief that increased trading activity enhanced possibilities of solving environmental problems. This mode of thinking leaned toward sanctions being introduced against environmentally detrimental trading activity, using GATT (later WTO) as a tool of implementation. The official statement issued in support of the latter approach, which was not supported initially by the majority of States at the Uruguay Round, stated:

GATT Contracting Parties believe that the successful conclusion of the Uruguay Round was an important step towards creating the conditions for sustainable development. Trade liberalization and the maintenance of an open, non-discriminatory trading system are key elements of the follow up to UNCED (United Nations Conference on the Environment)[79]

Developing countries, however, were reluctant to embrace the idea of using trade sanctions for the purpose of environmental protection

77. *Annual Report of the Council*, ICAO Doc 9770, at p.1. *See also*, Airline Financial Results Remain Positive in 2002 Despite Soaring Fuel Prices. ICAO News Release, PIO 05/01.

78. Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations (April 15 1994), 33 I.L.M. 1125 (1994), Annex 1B, Part II Article II.

79. GATT Secretariat, *Report of the GATT Secretariat to the Second Meeting on Sustainable Development*, Let/1873, 94-0438 (May 16-31, 1994).

since their main priority was economic development, and they were not convinced that scarce resources should be deployed to protect the environment. Being a new challenge, environmental protection was viewed in the context of trade liberalization by the developing States in the following manner:

For developing countries, where poverty is the number one policy preoccupation and the most important obstacle to better environmental protection, global trade liberalization, coupled with financial and technological transfers, is essential for promoting sustainable development.[80]

Multilateral lending institutions such as the World Bank and the International Monetary Fund are beginning to place more emphasis on the environmental impact of projects funded by them. However, in the ultimate analysis, both international trade and environmental protection are key issues for development, and they should be viewed as tools that could result in a win-win situation for the parties concerned.

The most important issue, safety, calls for vigilance from the international community given the enormity of the threat to aviation safety posed by bird hazards, particularly in the face of encouraging forecasts for air transport demand in the future. Safety is the primary concern of the world aviation community at the present time. It is not only because the fundamental postulates of the Chicago Convention of 1944[81] call for the safe and orderly development of international civil aviation[82] and mandate ICAO to ensure the safe and orderly growth of international civil aviation throughout the world,[83] but also because the aviation world faces a critical era where, in the words of Dr. Assad Kotaite, President of the ICAO Council, "the international aviation community cannot afford to relax its vigilance . . . . ICAO would continue to take timely action to ensure safety and security standards are in effect, and that deficiencies are properly and efficiently addressed."[84]

The most relevant provision in the Chicago Convention which affects the subject of safety, particularly in the context of bird strikes against aircraft, is Article 12, which requires each contracting state to maintain aviation regulations in conformity, to the greatest possible extent, with those established under the Convention. Indisputably, such a responsibility should fall on the entire world civil aviation community. As mentioned earlier, the methodology for this proposition is already in place, in the form of ICAO Standards and Recommended Practices (SARPs). The

80. *Id.*

81. *Convention on International Civil Aviation*, Dec. 7, 1944, 61 Stat. 1180, *available at* http://www.iasl.mcgill.ca/airlaw/public/chicago/chicago1944a.pdf.

82. *Id.* at Preamble.

83. *Id.* at art. 44 (a).

84. Dr. Assad Kotaite, President of the ICAO Council, ITA Press Release 284 at p. 10.

solution, however, is elusive, purely because ICAO SARPs do not have absolute powers of enforceability under international law.

ICAO promulgates its SARPs through its 18 Annexes to the Chicago Convention, one of which is Annex 14, containing key provisions on bird strike avoidance. Article 54(l) of the Chicago Convention prescribes the adoption of international standards and recommended practices and their designation in annexes to the Convention, while notifying all contracting states of the action taken. The fundamental question which has to be addressed *in limine*, in the consideration of the effectiveness of ICAO's SARPs, is whether SARPs are legislative in character. If the answer is in the affirmative then, at least theoretically, one can insist upon adherence to SARPs by states.

The adoption of SARPs was considered a priority by the ICAO Council in its Second Session (2 September-12 December 1947)[85] which attempted to obviate any delays to the adoption of SARPs on air navigation as required by the First Assembly of ICAO.[86] SARPs inevitably take two forms: a negative form (e.g., that states shall not impose more than certain maximum requirements) and a positive form (e.g., that states shall take certain steps as prescribed by the ICAO Annexes).[87]

As has already been mentioned, Article 37 of the Convention mandates each contracting state to collaborate in securing the highest practical degree of uniformity in regulations, standards, procedures and organization in relation to international civil aviation in all matters in which such uniformity will facilitate and improve air navigation. Article 38 obligates all contracting States to the Convention to inform ICAO immediately if they are unable to comply with any such international standard or procedure and notify differences between their own practices and those prescribed by ICAO. In the case of amendments to international standards, any state which does not make the appropriate amendment to its own regulations or practices shall give notice to the Council of ICAO within 60 days of the adoption of the said amendment to the international standard or indicate the action which it proposes to take.

There is no room for doubt that the Annexes to the Convention or parts thereof lay down rules of conduct both directly and analogically. In fact, although there is a conception based on a foundation of practicality, ICAO's international standards that are identified by the words "contracting States shall" have a mandatory flavor while recommended practices identified by the words "contracting States may" have only an

85. Proceedings of the ICAO Council 2nd Session 2 September-12 December 1947, Doc 7248 - C/839 at 44-45.

86. ICAO Resolutions A-13 and A-33 which resolved that SARPs relating to the efficient and safe regulation of international air navigation be adopted.

87. ICAO Annex 9, Facilitation, Ninth Edition, July 1990, Foreword.

advisory and recommendatory connotation. It is interesting that at least one ICAO document requires States under Article 38 of the Convention, to notify ICAO of all significant differences from both standards and recommended practices, thus making all SARPs regulatory in nature.[88]

Another indicia of the overall ability of the Council to prescribe civil rules of conduct on a strict interpretation of the word is Article 22 of the Convention, in which each contracting State agrees to adopt all practical measures through the issuance of special regulations to facilitate air navigation. This provision can be regarded as an absolute rule of conduct that responds to the requirement in Article 54(l) of the Convention. Furthermore, the mandatory nature of Article 90 of the Convention, that an Annex or amendment thereto shall become effective within three months after it is submitted by the ICAO Council to the contracting states, is yet another pronouncement on the power of the Council to prescribe rules of state conduct in matters of international civil aviation. *A fortiori*, it is arguable that the ICAO Council is seen not only to possess the attribute of the term "jurisfaction" (the power to make rules of conduct) but also the term "jurisaction" (the power to enforce its own rules of conduct). The latter attribute can be seen where the Convention orders contracting States to not allow airlines to operate through their air space if the Council decides that the airline concerned is not conforming to a final decision rendered by the Council.[89] This is applicable when such an airline is found not to conform to the provisions of Annex 2 to the Convention, which derives its validity from Article 12 of the Convention relating to rules of the air.[90] Indeed, it is very relevant that Annex 2, the responsibility for the promulgation of which is given to the Council by virtue of Article 54(l), sets mandatory rules of the air, making the existence of the legislative powers of the Council an unequivocal and irrefutable fact.

Given ICAO's interest and powerful regulatory base, it now behooves both national administrations and private autonomous entities responsible for aircraft and passenger safety to take action consistent with

88. *Aeronautical Information Services Manual*, ICAO Doc 8126 -0 AN/872/3. (ICAO Resolution A 1-31 defines a Standard as, "any specification for physical characteristics . . . the uniform application of which is recognized as necessary . . . and one that States will conform to." The same resolution describes a Recommended Practice as, "any specification for physical characteristics . . . which is recognized as desirable . . .and one that member States will endeavour to conform to . . . ."

T. Buergenthal, *Law Making in the International Civil Aviation Organization*, 1969, p.10 also cites the definitions given in ICAO's Annex 9 of SARPs).

89. *Convention on International Civil Aviation*, Dec. 7, 1944, 61 Stat. 1180, *available at* http://www.iasl.mcgill.ca/airlaw/public/chicago/chicago1944a.pdf.

90. *Id.* at art. 12 (stipulates that over the high seas, the rules in force shall be those established under the Convention, and each contracting State undertakes to insure the prosecution of all persons violating the applicable regulations).

ICAO's guidelines to ensure an adequate response to the problem of bird strikes. In the absence of such a response, the issue of the liability of a state or entity, as the case may be, could be established if satisfactory preventive action is not taken, particularly in the face of the explicit guidance material that already exists.