

## CLIENT ALERT

### Top Risks For Aviation Insurers: Climate Change And Flooding

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Climate change is the most significant risk facing the aviation industry according to a survey conducted at a conference hosted by Willis Towers Watson Airport Risk Community. Flooding is the main weather-related risk identified during the conference, which brought together insurers, brokers, and other aviation industry experts.

According to the survey, 86 percent of the audience said that airports are either very exposed or somewhat exposed to the dangers of climate change. John Rooley, CEO of Willis Tower Watson Global Aerospace, added that “[a]irport clients were quite specific in their concerns about climate risk and its impact on airport functionality.” Ugo de Carolis, CEO of Aeroporto di Roma S.p.A., urged industry members to act now. In his opening remarks to conference attendees, Mr. de Carolis stated that “[a]s the aviation industry continues to grow, the risks increase, therefore the need for discussion and knowledge sharing is paramount to support and build a stronger and more resilient aviation industry.” Javier Echave, Heathrow Airport’s chief financial officer, added that aviation authorities “must develop a roadmap for the uptake of sustainable fuels across our industry” as “aviation is not the enemy, carbon is.”

Airports have indeed started to act. In 2017, Heathrow launched Heathrow 2.0, a “sustainable growth” plan aimed at meeting the goal of the Paris Agreement and keeping global warming below 2 degrees. Heathrow 2.0 focuses on four core areas: (1) accelerating the arrival of new aircraft technology; (2) modernizing airspace and making ground operations more efficient; (3) encouraging the production and use of sustainable alternative fuels; and (4) promoting the right carbon pricing to support innovation and developing best practices for offsetting in the UK (i.e., providing funds or resources to other projects that reduce carbon dioxide so as to make up for the emissions that one is not able to eliminate). The plan notes that major aerospace firms are working on electric technology and start-ups are coming up with alternative ways the industry can reduce its carbon footprint.

Heathrow is not alone. The Airports Council International Europe has stated that 50 European airports have achieved Level 3+ Airport Carbon Accreditation, the highest level of certification for carbon neutrality. A total of 100 European airports have committed to being carbon neutral by 2030. Unfortunately, however, the United States is far behind in these efforts. San Diego International Airport and Dallas Fort Worth International Airport are the only two U.S. airports to have reached carbon neutral accreditation.

Airlines and aviation-related manufacturers have also started taking steps to reduce the industry’s carbon footprint. In 2008, KLM partnered with the World Wildlife Fund to develop a climate action plan. It became the first commercial airline to execute a commercial flight with biojet fuels in 2011. IAG, which owns British Airways and Spain’s Iberia, has pledged to invest \$400 million in developing alternative fuels over a 20-year period, and United Airlines has stated that it will spend up to \$2 billion annually on fuel-efficient aircraft. In June 2019, Airbus’ CEO Guillaume Faury stated that “a new generation of decarbonized airplanes must be the target for our developments.” The company added that it could potentially build an emission free, 100-seat regional

aircraft by the early 2030s. Fulcrum BioEnergy, which is based in California, has partnered with United to work on developing waste-to-fuel refineries.

The aviation industry's reasons to act on climate change range from environmental pressure to disruptions in operations. For instance, the general public has pressured the industry to reduce its carbon footprint and, in some places in Europe, has even started so-called "flight-shaming" frequent travelers about how emissions from aircraft contribute to climate change. The Centre for Aviation (CAPA) reports that "[c]hanges in temperature, precipitation, storm patterns, sea level and wind patterns are the five main ways climate change is expected to affect aviation." It explains that temperature changes may affect airport infrastructure as runways and taxiways may experience heat damage. Moreover, changed precipitation patterns will likely cause delays and cancellations, as well as increased flooding incidents at airports. Stronger storms may also lead to both infrastructure damage and flight disruptions. Further, as climate change is blamed for rising sea levels, there is a risk that storm surges could lead to the loss of airport capacity and cause additional physical damage, as many international airports are built on reclaimed land, such as in Hong Kong. Australia is considered to be particularly vulnerable because many of its airports are located on reclaimed swamps that sit only a few meters above sea level.

In fact, 48 percent of attendees noted flooding as their main weather risk. The IPCC (Intergovernmental Panel on Climate Change) has noted that it is increasingly clear that climate change "has detectably influenced" several of the water-related variables that contribute to floods, such as rainfall and snowmelt. Thus, although warming may not directly cause floods, it exacerbates the factors that lead to floods. According to the Climate Science Special Report, flooding has increased in the United States and, in only decades, doubled in coastal areas. In 2012, the Federal Aviation Administration identified 13 major airports with runways at risk of moderate to high storm surge and rising seas spanning nine states and territories (California, Florida, Hawaii, New Orleans, New York, New Jersey, Philadelphia, Puerto Rico, and Virginia). For example, both San Francisco International Airport and Oakland International Airport could see disruptive annual flooding by 2050. To combat the issue, the San Francisco airport has announced a project to build a new seawall around the airport's 10-mile perimeter. The project is estimated to cost \$587 million.

In addition, the conference attendees also cited cyber and data privacy breaches related to airports' IT systems as critical risks for airports. We reported on those risks in [October](#) and [November](#).

In sum, it will be important for insurers to keep these issues in mind while taking on aviation risks. The industry has embraced the need for action on climate change and begun to act, but the effects of those changes will only be seen over time.

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