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A RE-EXAMINATION OF TARMAC DELAYS CAUSES AND SOLUTIONS

P. PAUL FITZGERALD*

I. INTRODUCTION

ALTHOUGH THEY ARE COMPARATIVELY RARE, tarmac delays are the bane of both passengers and airlines. Passengers want to spend as little time aboard as possible, and airlines want to send the plane aloft again at the nearest opportunity. While some tarmac delays may result from airline operations, more often than not the really long delays are a result of factors not completely within the airlines’ control.

Tarmac delays approaching or exceeding twenty-four hours are associated with the diversion of a large number of aircraft on September 11, 2001, and the diversion of distressed aircraft in emergency situations to the closest available airport. Very significant tarmac delays may arise where the airport to which the flight is diverted is distant from the flight’s point of origin, its destination, and the airline’s home base. In cases such as these, holding the airline responsible for the duration of the delay, especially in cases where the duration is beyond the airline’s control, is not reasonable.

This Article examines dozens of tarmac delay cases and over sixty diversions to the isolated airports of Gander, Goose Bay, and Stephenville, in order to understand the degree to which airlines may have control over the duration of those tarmac delays that are not covered by the United States or any other tarmac delay rule. It then makes recommendations with respect to border clearance issues and the inauguration of “no-man’s lands” at certain major airports. It concludes that in a world of climate change, where more weather events will affect major airports, smarter and more adaptive government policies are re-

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quired so that airlines are only made responsible for those things that are under their control.

II. DEFINITIONS

For the purpose of this Article, a tarmac delay will arise if an aircraft has not taken off within three hours of the doors closing or passengers have not been given an opportunity to disembark within three hours of the time the aircraft has landed. Here, it is not necessary that the airport where the aircraft lands be the destination listed on the passenger’s boarding pass.

A. COUNTER-INTUITIVE

It must be understood that airlines only make money when flying; it is against their interest to keep people on board longer than necessary. Just as a taxi driver does not want the passenger in his or her car a minute longer than necessary, as a jet arrives at an airport, plans are well underway for its next flight. Thus, the idea of keeping passengers on the plane longer than absolutely necessary is an anathema to most airline personnel.

1. 10-Minute Turns

The idea of keeping planes in the air was what drove Bill Franklin, the former Vice President of Ground Operations at Southwest Airlines, to devise the “10-Minute Turn” in 1972.1 Having their planes earn money for just a little bit more time is part of the strategy that has kept Southwest Airlines profitable for over four decades.2

2. Refusal to Disembark

Understanding that airlines only make money when their planes are flying, disgruntled Chinese passengers have staged sit-ins on planes in an effort to extract concessions from airlines.3 In one incident, passengers who had been delayed for nine

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2 Id.
hours remained on board the aircraft for another five hours, agreeing to leave only after the police arrived.\footnote{See id.}

III. THE EVOLUTION OF THE ISSUE

In this context, it is hard to understand how a tarmac delay can arise. It occurs principally in two situations. First, an airline seeking a truly efficient hub schedules dozens of flights to leave within minutes in an effort to shorten connection times for passengers. If a weather event reduces the number of aircraft that can take off, the result is a cascading effect where incoming flights may be unable to find a gate, and outbound aircraft may not be able to take off. In the other situation, the aircraft will be diverted due to weather, terrorism, or mechanical issues to an airport other than the point of origin or destination. When this airport is in a third country, logistics and border clearance issues can create a long tarmac delay. This Article will first look at over-scheduling and then examine aircraft diversions.

A. OVERCROWDED SKIES

As more and more Americans have taken to the skies, more airlines have offered more flights and the result is heavily crowded skies and congested airports. On the one hand, airlines serve more destinations, often with commuter aircraft that have fewer than ninety seats. On the other hand, major carriers want to increase hub efficiency so that passengers arriving at a hub from one point are able to quickly connect to dozens of other cities served by that carrier and its partners.

By 2007, airlines had scheduled fifty-six departures in a fifteen-minute period at Minneapolis, and thirty-five or more flights, three times a day, in similar fifteen-minute periods at Chicago O’Hare.\footnote{See Monica Hargrove Kemp, \textit{Mechanisms for Addressing Capacity-Related Delays at U.S. Airports}, 22 No. 2 Air & Space Law. 1, 18 (2009).} In each case, the planned flights exceeded the airports’ capacity. And in any situation where weather or other external factors reduced the airport’s normal capacity, the clear results were canceled flights, delayed flights, and tarmac delays.\footnote{Id. Indeed, this realization provoked an analysis of various options, including building additional capacity, introducing demand-driven landing fees, and tracking of airport performance. See U.S. Gov’t, Accountability Off., GAO-10-542, \textit{National Airspace System: Setting On-Time Performance Targets at Congested Airports Could Help Focus FAA’s Actions} 4, 36 (2010).}
B. Kate Hanni Situation

On December 29, 2006, Napa Valley realtor Kate Hanni was stuck at the Austin Airport with several other American Airlines planes for up to nine hours, during which she and her fellow passengers were denied food, water, and access to working bathroom facilities. Outraged by the fact that she and thousands of others had been treated in this way, she founded a passenger rights advocacy group, Flyers Rights, in early 2007.

C. Tarmac Delay Legislation

In 2010, partly due to Ms. Hanni’s efforts, the United States became the first country to enact a Tarmac Delay Rule and remained the only country with such legislation until Canada amended the Canada Transportation Act in 2018 to require airlines to deal with tarmac delays. In simple terms, both regimes require that within three hours of the aircraft’s doors closing, the aircraft must take off or passengers must be given the opportunity to disembark. Similarly, passengers must be given the opportunity to disembark within a specified time after the aircraft has landed. The U.S. rule has a three-hour time limit for domestic flights and a four-hour limit with respect to international flights. The details of the U.S. Tarmac Delay Rule are very well covered elsewhere, but it is important to note that if airlines unduly delay passengers the airline pays a fine of up to $32,140.

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8 See About Us, supra note 7.
10 See Transportation Modernization Act, S.C. 2018, c 10 (Can.).
11 Id. art. 19; 14 C.F.R. § 259.4(b).
12 See Transportation Modernization Act, supra note 10, art. 19; 14 C.F.R. § 259.4(b)(6).
13 14 C.F.R. § 259.4(b)(1), (2).
14 See generally Henry & Gardner, supra note 7.
15 Pursuant to 49 U.S.C. § 46301, an airline that violates 14 C.F.R. Part 259 or 49 U.S.C. §§ 41712 and 42301 is subject to civil penalties (fines) of up to $25,00 per violation. 49 U.S.C. § 46301. The penalty has been adjusted for inflation and was $32,140 until a catch-up adjustment at the end of 2018. See Revisions to Civil Penalty Amounts, 83 Fed. Reg. 60,734 (Nov. 27, 2018) (to be codified at 14 C.F.R. § 13). It is noteworthy that the money does not go to the affected passenger. See 49 U.S.C. § 46301.
The U.S. rule has achieved its desired effect; since its adoption, the number of tarmac delays exceeding three hours has declined by over 93%. At the same time, some of those flights that formerly frequently experienced tarmac delays of over 120 minutes were canceled. In other cases, the airline proactively canceled problem flights or simply removed them from the schedule. By 2014, those few tarmac delays that remained were no longer related to over-ambitious airline scheduling, but rather to weather and other external factors.

D. New Canadian Tarmac Delay Rules

Recent Canadian legislation has introduced the concept of tarmac delay provisions to the Canada Transportation Act. Section 86.11(1) of the amended Act calls on the Canadian Transportation Agency to, consult with the Minister of Transport to make regulations respecting an airline’s obligations for tarmac delays over three hours, and to make regulations with respect to an airline’s “obligations in the case of flight delay, flight cancellation or denial of boarding.” Canada is possibly the only jurisdiction on earth trying to regulate three distinct incidents: flight delay, flight cancellation, and tarmac delay. The combination of these three concepts is potentially dangerous as it puts airlines in a situation where different clauses of the regulation might lead to contradictory market behaviors. This is not a desired outcome; in 2009, this author harshly criticized a previous Canadian initiative covering the same three topics. American and European regulators have carefully avoided this potential problem. The United States has regulations on tarmac delays
and denied boarding compensation,26 but not on canceled flights. The EU has regulations27 on denied boarding,28 flight cancelation,29 and flight delay,30 but not on tarmac delay.

The new Canadian regulations will also have potential extraterritorial application. Canada intends to regulate “in relation to flights to, from and within Canada, including connecting flights.”31 Thus, if a Canadian traveling between Latin America and Canada via Houston on United Airlines suffers a tarmac delay in Houston, Canada’s new regulations might apply.

E. THE LOOPHOLE IN THE U.S. TARMAC DELAY RULE

Under the U.S. rule, air carriers are not bound to allow passengers to disembark within the applicable time period if the “pilot-in-command determines there is a safety-related or security-related reason (e.g. weather, a directive from an appropriate government agency) why the aircraft cannot leave its position on the tarmac to deplane passengers.”32 Presumably, it would be unsafe to allow passengers to disembark on a runway or taxiway, and it might be illegal to allow passengers on a foreign-originating flight to disembark anywhere other than through a process that does not allow passengers to avoid border clearance formalities. In addition, the U.S. Department of Transportation may also find there was no violation of the Tarmac Delay Rule where “extenuating circumstances prohibited the carrier from deplaning passengers within three hours and enforcement action was not in the public interest for those particular flights.”33 These extenuating circumstances existed with respect to nineteen flights, but no examples were given, and thus it is hard

26 Id. § 250.5.
28 Id. art. 4.
29 Id. art. 5.
30 Id. art. 6.
31 Canada Transportation Act, supra note 21, at s. 86.11(1).
32 14 C.F.R. § 259.4(b)(1)(i). Section 259.4(b)(1)(i) applies to domestic flights while § 259.4(b)(2)(i) applies to international flights. Id. § 259.4(b)(2)(i). Further, § 259.4(b)(1)(ii) and (b)(2)(ii) excuse the airline when air traffic control tells the pilot that moving the plane to the gate or elsewhere would “significantly disrupt airport operations.” Id. § 259.4(b)(1)(ii), (b)(2)(ii).
33 Consent Order American, supra note 19, at 1–2 n.3.
to discern what facts might lead to an extenuating circumstance.34 Nonetheless, it is clear that the obligation to comply with border formalities takes precedence over the Tarmac Delay Rule. Thus, when a Copa Airlines flight from Panama City to Los Angeles was diverted35 to Ontario International Airport on December 21, 2016, passengers were unable to disembark as the airport did not have adequate border clearance facilities.36 However, because the toilets became inoperable during the two hour and thirty-nine minute delay, the U.S. Department of Transportation found the airline to be in violation of the Tarmac Delay Rule since it requires the toilets to be operable during the delay.37 The airline was fined only $25,000, perhaps out of recognition that unsuccessful attempts were made by the crew to fix the toilets, and that no suggestion had been made that the passengers should have been disembarked under the circumstances.38

IV. WHEN DO TARMAC DELAYS OCCUR?

There is no doubt that tarmac delay rules have dramatically reduced the number of delays and probably largely eliminated the former situation of over-scheduling multiple flights at a congested hub. However, tarmac delays still occur and many of them are lengthy. The following examples were provoked by weather, terrorism, or mechanical issues and happened at airports where the U.S. Tarmac Delay Rule does not apply.

A. BEFORE DEPARTURE

One of the worst pre-departure delays on record is a twelve-hour delay on Air Canada Flight 156 from Vancouver to To-

34 See Consent Order American, supra note 19, at 1–2 n.3.
35 Compañía Panameña de Aviación, S.A., Docket No. 2018-0001 (OST Mar. 23, 2018) [hereinafter Consent Order Copa]. The aircraft diverted because Los Angeles advised the crew of heavy rain and congestion and the aircraft did not have enough fuel to wait. See id.
38 See id. at 3.
ronto on December 23, 2008. At the time, there was a snow-storm in metro Vancouver. The airport received twelve inches of snow and Air Canada canceled all short- and medium-haul flights. In the spirit of trying to get passengers home for Christmas, Air Canada focused on operating its trunk routes, including services to Toronto.

Flight 156 was affected by creeping delays, which extended as each new impediment came into focus. During the twelve-hour period, the aircraft was de-iced at least twice, the crew ran out of duty time and had to be replaced, the airport ran out of de-icing fluid, the aircraft was unable to taxi due to snow-filled runways, and it needed to be refueled again. For passengers, creeping delays are horrible.

“Every time something came over the intercom we just didn’t believe it. ‘Cause they’d say, ‘Oh, we’re going to be going in five minutes. Oh, we’re going to be going in 35 minutes.’ It just didn’t happen. It was like another hour, another two hours, and we never got communication to tell us what was happening.”

According to another passenger, “[the] worst of all, people didn’t know when they would get off the ground.”

During the delay, the passengers were kept on board, but they were given food and drinks, the lavatories were functional, the in-flight entertainment system was switched on and working, and regular announcements were made. In addition, Air Canada offered each passenger a $500 voucher. More importantly, those passengers made it home for Christmas.

However, after arriving in Toronto, passengers spoke of a twenty-four-hour ordeal, which included the twelve-hour tarmac delay, and reported being treated as hostages. In fact, the inci-

40 See id.
42 See Fitzgerald, supra note 24, at 59.
43 See “We Felt Like Hostages”: Passengers on Delayed Vancouver-Toronto Flight, supra note 39 (quoting Flight 156 passenger Jae Valentine).
44 Id. (quoting Flight 156 passenger Pina Belparsi).
45 Id.
46 Id.
47 Id.
dent provoked calls for “new rules to better protect airline travellers.” Ultimately, the event helped spur a legislative attempt “to create a passenger bill of rights similar to ones used in New York State and in the European Union.”

1. Alternatives to Tarmac Delays before Departure

In hindsight, it might have made more sense for Air Canada to have canceled the above-mentioned Flight 156. The passengers would not have been home for Christmas, but Air Canada would not have had the bad publicity of a twelve-hour tarmac delay and thus might not have had to offer any compensation to the passengers. Indeed, airline crews may learn to be quicker to cancel such flights after such incidents. The creeping delay that plagued Flight 156 can be modeled and broken down into components. Now, once the first few events happen and the pattern of a potential creeping delay becomes evident, the airline should cancel the flight before two hours have elapsed and thereby avoid any potential liability with respect to a tarmac delay.

2. How is Compensation Affected When a Tarmac Delay Results in a Canceled Flight?

The legislative initiative introduced in the aftermath of Flight 156 would have introduced compensation for tarmac delays and canceled flights. If airlines are to be liable to compensate passengers both for tarmac delays and also for canceled flights, the decision on when to cancel may shift from the crew to management, who will try to minimize their legal obligations.

Just as Air Canada might have been wise to cancel Flight 156 early in the process, had the company been liable for cancelations and tarmac delays, the company might have decided to not even attempt to offer any flights out of Vancouver during the snowstorm. Indeed, depending on the inter-relation between compensation for tarmac delays and compensation for canceled flights, one can imagine a scenario in which flights will either be pre-emptively canceled, not scheduled at all, or very expensively

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48 *Travellers Vent Anger at Air Canada’s Holiday Delays*, supra note 41.
49 *See An Act to Provide Certain Rights to Air Passengers, Bill C-310, 2d Sess., 40th Parl. (2009) (Can.).*
51 *See Fitzgerald, supra note 24, at 64.*
52 *See id. at 45–51.*
priced to cities with particularly inclement weather. Instead of protecting passengers in places like St. John’s, compensation regimes could make air tickets from St. John’s to Toronto in January either harder to find or more expensive to purchase.

B. After Arrival

Where a tarmac delay occurs after arrival, it is often due to ground congestion or obstacles of some sort between the runway and the gate.

1. Domestic Arrival at Alternate or Diversion Airports

Aircraft arriving from domestic destinations simply need a safe place to disembark their passengers, and this could happen either at a gate or by using stairs and a bus. Perhaps for this reason, there are remarkably few current examples of lengthy tarmac delays; there were only four such delays in 2010.53 Thus, one of the few cases is where an Air Canada 787, operating from Calgary to Frankfurt, had to divert to Goose Bay due to an engine oil leak.54 Usually, in cases such as this, the affected aircraft would not be able to continue the flight and passengers would have to wait at least four to five hours55 for a replacement aircraft to arrive. As this was a domestic flight, there were no obstacles to disembarking the passengers at Goose Bay during the wait, but it is difficult to determine whether this actually happened. If not, this would be one of the longer tarmac delays of an aircraft arriving from a domestic point of origin at another airport in the same country.

2. International Arrival at Alternate or Diversion Airports

When an aircraft in-bound from a foreign destination is diverted, there are often complex border clearance issues. Few of the passengers of a Toronto-bound flight from Delhi that had to

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54 See Simon Hradecky, Incident: Canada B789 Over Atlantic on May 29th 2018, Engine Oil Leak, AVIATION HERALD (June 4, 2018), http://avherald.com/h?article=4b97542a&opt=0 [https://perma.cc/EH4R-9TTP].
55 The length of the delay is, in part, based on the distance the replacement aircraft has to fly. In this case, the aircraft was probably based in Toronto, and a non-stop flight from Toronto to Goose Bay is roughly 3.5 hours.
divert to Moscow Domodedovo would have had valid visas for Russia. Russians destined for Thailand encountered visa issues when their plane diverted to Delhi. Russian diplomats got involved when a Russian aircraft bound for Cuba diverted to Atlantic City. Such complexities appear to be impacting decisions as to where to divert. When an aircraft flying from Madrid to Shanghai experienced a fuel leak over Novosibirsk, they chose to divert the aircraft to Helsinki rather than to Moscow.

a. Logistics

A diversion airport must be big enough to accommodate the aircraft, and its runway must be long enough for the plane to land safely and later take off safely. When a Singapore Airlines A380 experienced cabin pressure problems over Afghanistan, a landing in Kabul was unthinkable and the airport at Ashgabat could not handle the aircraft. Similarly, the diversion of an Air France A380 with 497 passengers and twenty-four crew to Goose

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58 Simon Hradecky, Incident: Nordwind B772 Near Delhi on Feb 4th 2018, Engine Trouble, Aviation Herald (Feb. 6, 2018), http://avherald.com/h?article=4b499fb2&opt=0 [https://perma.cc/M86V-MJSZ]. The passengers remained on the plane for over nine hours while visa issues were sorted out. Id. The airline sent replacement aircraft which departed Delhi for Thailand twenty-nine hours after the troubled aircraft had landed. See id. Fortunately, the Indian authorities were able to find a solution that allowed the passenger to disembark and be taken to hotels. See id.

59 See Simon Hradecky, Incident: Azur B763 Near Atlantic City on Jan 31st 2018, Engine Problem, Aviation Herald (Feb. 1, 2018), http://avherald.com/h?article=4b4578c0&opt=0 [https://perma.cc/T4UK-3SLV]. A replacement plane retrieved the passengers from Atlantic City and brought them to Cuba twenty hours later than scheduled. See id.


Bay, a town of 8,000 people, was an overwhelming prospect and there was some doubt as to whether the airport had stairs that could grant access to the aircraft.62

b. Customs Availability

Even if an airport is a designated port of entry for the country in which it is located, many airports without significant international traffic do not have customs facilities which are available twenty-four hours a day,63 there may be reduced staff at certain periods of the day, and some airport’s customs facilities may only be available at specific terminals.64

i. Customs May Be Closed or Under-Staffed

On Saturday, March 8, 2008, two Montreal-bound aircraft of Cubana, the national Cuban airline, were diverted to Ottawa because of a significant snowstorm in Montreal.65 The aircraft, Cubana Flights 170 and 172, landed at Ottawa at roughly 6:00 P.M., where snow was also falling, and their crews subsequently found that the Montreal airport had closed due to inclement weather.66 As the delay became longer, there was a question of getting access to a gate, but the aircraft were stuck in the snow and, as inbound international flights, the passengers needed to
clear customs and immigration formalities. By the time the crews decided to disembark the passengers in Ottawa, it was after 3:45 A.M. and customs and immigration facilities were closed. Eventually, after being on the ground for eleven hours, a passenger called 911 and the Royal Canadian Mounted Police let them off the plane. It is not clear whether the passengers were sent to a holding area or processed through the Canadian border formalities, but the incident produced a significant amount of finger-pointing between the various authorities and provoked calls for tarmac delay legislation in Canada.

ii. Customs May be Unavailable

On September 11, 2001, thirty-eight wide-body planes were diverted to Gander and each one of them had to proceed through Canadian border formalities. Gander does not usually receive inbound wide-body flights and so Canadian officials told the captain of the thirty-third inbound plane that she and her passengers would not be getting off the plane until the next day. The people of Gander brought supplies to her plane, but she and her passengers spent twenty-one hours on the tarmac at Gander, waiting to be cleared through Canadian border formalities. Amazingly, the record for the longest tarmac delay is probably held by the passengers of Delta Flight 37, who spent nearly twenty-seven hours on their plane at Gander.

67 See id.
68 See Nicole Michaud, Attente Interminable à Bord du Vol 170, Le Devoir (Mar. 18, 2008); Fliers’ Bill of Rights is a Timely Idea, supra note 65.
69 See Fliers’ Bill of Rights is a Timely Idea, supra note 65.
71 Indeed, Gander does not usually receive international flights and so customs agents had to be brought to Gander by car from St. John’s and a make-shift customs facility was set up. See Marc Weissman, Remembering 9/11, CBC “THE WORD” (Sept. 8, 2011), http://www.cbc.ca/nl/theword/2011/09/08/marc-weissmann-thank-you-to-gander/ [https://perma.cc/X39E-EVJR].
73 Id.
74 Passengers on Delta Flight 37 London-Cincinnati spent roughly thirty-one hours on the plane, which would have taken roughly four hours to reach Gander from London. See Weissman, supra note 71.
iii. Getting Off and Getting On

Obviously, the best way to avoid a lengthy tarmac delay is to allow the passengers to enter the terminal. However, this is no simple request, particularly where the aircraft has been diverted to an unplanned destination and passengers are eager to arrive as quickly as possible at the destination printed on their boarding pass. Allowing passengers to access the terminal requires bringing the aircraft to a gate or bringing stairs and perhaps a bus to the aircraft. The passengers must clear the country’s border formalities and then, prior to boarding the new aircraft, the passengers will be subject to pre-board screening.

It should not be assumed that all of the passengers will have the correct immigration documentation to enter the country, unless the airport is located in the same country as the final destination. However, even if all of the passengers have the right documents, the process of disembarking the passengers, clearing them through the country’s border formalities, and then clearing them through pre-board screening will take between 90 and 120 minutes. If many aircraft are in the same situation, these times could increase dramatically.

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75 On September 11th, at least three Mexico-bound flights from European airports were diverted to Canada. See 777-500er, All Flight Diversions!, Airliners.net (Sept. 2001), https://www.airliners.net/forum/viewtopic.php?t=106431 [https://perma.cc/8MF9-KWZ5]. Many of the passengers would likely not have had immigration documentation for Canada as they had boarded non-stop flights to Mexico. The flights were: (1) Airtours 039, flying Glasgow to Cancun, and diverted to Halifax; (2) Martinair 932, flying Amsterdam to Mexico and diverted to Moncton; and (3) Aeromexico 006, flying from Paris to Mexico and diverted to Stephenville. See id.

76 In 1989, when Delta was flying from Tokyo to Atlanta via Portland, they allowed ninety minutes in Portland for Atlanta-bound passengers to clear U.S. customs and immigration, go through security screening, and re-board the plane. Delta was using a 216-passenger Lockheed L-1011-500 and not all of the passengers arriving in Portland would have been continuing on to Atlanta. Had the plane been bigger or had a greater percentage of the passengers been destined for Atlanta, more time might have been allocated for the stop in Portland. At the time, Delta was the only carrier providing international service to Portland.

77 In 1975, years before Calgary had U.S. pre-clearance facilities, U.S.-bound passengers would usually clear U.S. border formalities at Spokane, Washington, which was the nearest U.S. port of entry. Hughes AirWest knew that none of its passengers were bound for Spokane, and so it budgeted an hour to clear seventy-eight passengers through customs and immigration and provide pre-board screening. Of course, this was a quarter century before September 11, 2001, and the Hughes AirWest aircraft was the only one on the tarmac that needed to access customs and immigration facilities.
Thus, even if the parents of toddlers want access to toilet facilities and a play area, if a passenger wants to be able to walk around and get some fresh air, or if a smoker really needs to light up, the crew must add 90–120 minutes to the time the passengers will be in the terminal and assure themselves that the passengers will be back on the plane before it is time to depart. Consequently, in situations where the duration of the delay is unknown, crews may be reluctant to allow terminal access out of fear that such access would actually prolong the delay and further slow the flight’s final arrival at its scheduled destination.

C. NATURE OF THE STOP

Over sixty incidents at three small Canadian airports were studied in order to analyze tarmac delays in isolation. The airports included Gander, Goose Bay, and Stephenville, all in the Canadian province of Newfoundland and Labrador. Gander is a former global crossroads and en-route fuel stop for transatlantic flights, Goose Bay is an air base of the Royal Canadian Air Force, and Stephenville airport is a former U.S. Air Force base.

The airports are located close to the flight path followed by aircraft operating transatlantic flights and they all have very long runways. Yet none of the three airports receives wide-body aircraft on a scheduled basis and none are served by a foreign carrier. Thus, when a foreign carrier lands a wide-body aircraft at one of these airports, the normal infrastructure the airline might have had at the airport of departure or the airport of arrival is lacking and each of the airports are thousands of miles away from any major international airport.

Predictably, when the crew of an airliner experiences a problem over these airports, the general desire is to land somewhere else. Thus, when a U.S.-bound Virgin Atlantic flight had a fuel-transfer problem, the crew initiated a diversion to Stephenville.

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81 See id.; Gollner, supra note 78; 5 Wing Goose Bay, supra note 79.
82 See About Us, supra note 80; Gollner, supra note 78; 5 Wing Goose Bay, supra note 79.
but ultimately landed in Boston;\textsuperscript{83} when a Paris-bound Delta flight experienced generator failure over Goose Bay, the crew diverted to New York,\textsuperscript{84} and when the crew of a Rome-bound Alitalia flight discovered fuel contamination over Gander, the crew initiated a diversion to Gander but ultimately landed in St. John’s.\textsuperscript{85}

\subsection{Quick Stop}

Airlines will land at one of the three airports in the case of a minor repair. Thus, when the auxiliary power unit (APU) of an Atlanta-bound Delta Airline flight failed over Goose Bay, the crew chose to land and have the APU fixed and quickly took off again.\textsuperscript{86} Possibly because Goose Bay is a well-equipped Air Force base, a Delta crew landed there due to smoke in the cockpit,\textsuperscript{87} a

\begin{footnotesize}
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\item See Simon Hradecky, Incident: Delta B763 Near Goose Bay on Jan 2nd 2018, Generator Failure, AVIATION HERALD (Jan. 3, 2018), http://avherald.com/h?article=4b32a0c2&opt=0 [https://perma.cc/5JUU-YVLL].
\item The aircraft spent two hours on the ground at Goose Bay. See Simon Hradecky, Incident: Delta B763 Near Hudson Strait on Apr 22nd 2012, APU Failure, AVIATION HERALD (May 2, 2012), http://avherald.com/h?article=44eeda66&opt =0 [https://perma.cc/VFY9-3C66].
\item The aircraft spent 3.45 hours on the ground at Goose Bay. See Simon Hradecky, Incident: Delta Airlines B763 Near Goose Bay on Nov 13th 2009, Smoke in Cockpit, AVIATION HERALD (Nov. 25, 2009), http://avherald.com/h?article=422d9777&opt=0 [https://perma.cc/UL6H-AFD9].
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United crew landed there to deal with smoke in the cabin,\textsuperscript{88} and a Continental crew landed there to deal with a faulty lavatory.\textsuperscript{89} Airlines such as Lufthansa,\textsuperscript{90} Jet Airways,\textsuperscript{91} Emirates,\textsuperscript{92} and Northwest\textsuperscript{93} have made emergency landings at Gander to drop sick passengers at Gander’s hospital. Similarly, airlines such as Virgin Atlantic,\textsuperscript{94} US Airways,\textsuperscript{95} and Jet Airways\textsuperscript{96} have deposited unruly passengers with the Gander Royal Canadian Mounted Police detachment, and these passengers have quickly been ordered to pay large fines and compensate the airline for the costs of the diversion. In addition, the unruly passenger has to find his or her way home from Gander, an endeavour which is neither cheap nor easy.

\textsuperscript{88} The aircraft spent 4.5 hours on the ground at Goose Bay. See Simon Hradecky, \textit{Incident: United B752 Near Goose Bay on May 3rd 2012, Smoke in Cabin}, AVIATION HERALD (May 11, 2012), http://avherald.com/h?article=44f683ff&opt=0 [https://perma.cc/2HUk-5jF8].


\textsuperscript{93} The aircraft spent ninety minutes on the ground at Gander. See Simon Hradecky, \textit{Incident: Northwest A333 Near Gander on Jul 24th 2008, Medical Emergency}, AVIATION HERALD (July 26, 2008), http://avherald.com/h?article=40a39651&opt=0 [https://perma.cc/3MWK-DZKH].

\textsuperscript{94} The aircraft spent 1.5 hours on the ground at Gander. See Simon Hradecky, \textit{Incident: Virgin Atlantic B744 Near Gander on Oct 21st 2010, Unruly Passenger}, AVIATION HERALD (Oct. 27, 2010), http://avherald.com/h?article=43287248&opt=0 [https://perma.cc/6VDB-37BK].


Whether at Gander, Goose Bay, or Stephenville, none of the aircraft making a quick stop spent more than four hours on the ground and the crews could always count on local authorities to replenish any needed supplies.97

2. Complex Stop

When an aircraft crew experiences flight control problems,98 an in-flight loss of an engine,99 a generator and APU failure,100 an indication of an on-board fire in the crew area101 or in the cargo hold,102 or a bomb threat,103 the decision is made to land at the nearest available airfield big enough for the plane to land and take off again. Once on the ground, an assessment is made of how serious the problem is. If the crew determines that the aircraft cannot fly safely, the airline will summon another aircraft to bring the passengers to their final destination. Depending on the facilities at the airport, and whether passengers need to clear border formalities, it may make sense for the passengers to remain on the aircraft.

When one of the engines of a Los Angeles-bound Air France Airbus A-380 blew out over Nuuk, Greenland, the crew immediately initiated a diversion for Goose Bay and informed the airline.104 When the plane arrived in Goose Bay, the 497

passengers and twenty-four crew were informed that the airport did not have stairs that were high enough to allow a safe disembarkation. Moreover, the Canadian border formalities at Goose Bay airport are not designed to handle an aircraft with more than fifteen passengers and crew and thus, even if stairs had existed, Canadian officials might not have permitted the passengers to disembark.

The A-380 landed at 12:41 P.M. Labrador time, and an Air France 777 arrived from Montreal at 2:50 A.M. the next morning and departed for Atlanta at 6:55 A.M. with some passengers, some fourteen hours after the A-380 had landed. Four hours later, at roughly 2:52 P.M., a 737-700 leased from Nolinor arrived to take the remaining passengers to Los Angeles with a technical stop in Winnipeg. When the Air France 777 arrived, stairs were found that would facilitate the safe disembarkation of passengers from the A-380.

Given that the stairs facilitated people destined for the United States to board aircraft bound for the United States, it is possible that the real obstacle to an earlier disembarkation of the A-380’s passengers and crew were officials with the Canadian Border Services Agency. In any event, one of the passengers who waited for the Los Angeles-bound Nolinor flight told a journalist that he was on the A-380 for almost twenty-four hours.

A more typical situation might be that which faced passengers on Delta Flight 446, flying from New York to Reykjavik in June 2016. The crew diverted the flight to Goose Bay due to deteriorating weather conditions in Iceland. While the crew waited for the weather in Iceland to improve, they found themselves in a situation where they would reach the end of their duty time

105 See id.
108 Id.
109 Id.
before they could land in Reykjavik. 112 Delta sent a replacement
crew, and the flight resumed about eight hours after the plane
had landed in Goose Bay. 113 The passengers were kept on board
during the stop in Goose Bay. 114

Typically, a longer tarmac delay will happen if the airline’s
base is very far from the airport where the emergency landing
was made. When Delta made a diversion to Goose Bay due to
engine trouble, a replacement aircraft arrived within five
hours.115 However, when a Qatar Airways 777 diverted to Gan-
der under similar circumstances, the record does not indicate
where the Airbus A332 that carried the passengers from Gander
to London was based.116 If it were based in New York or in
London, it could have flown to Gander in under four hours, but
if it were based in Doha, the trip would have taken much longer.
In situations such as this, where a long delay is known in ad-
ance, airlines will often try to disembark the passengers and
give them meals and accommodations while they wait to depart
again.

Thus, when the crew of a Lufthansa 747 was informed of
smoke in the cabin because of an electrical problem in the gal-
ley, they diverted to the closest airport, which was Goose Bay.117
Shortly after landing, it became apparent that the source of
smoke was a malfunctioning coffee maker and a decision was
made to bring in mechanics from Germany to fix it.118 Given
that the mechanics would not arrive for at least sixteen hours,
the decision was made to disembark the passengers, process
them through Canadian border formalities, and work with local
authorities to meet the passengers’ needs for food and accom-
modation.119 As a result, rather than being subject to an eternal

112 See id.
113 See id.
114 See id.
115 See Hradecky, Incident: United B763 Over Atlantic, supra note 99. The replace-
ment plane probably came from Newark.
116 See Simon Hradecky, Incident: Qatar Airways B773 Near Gander on Sep 6th
h?article=40d01076c&opt=0 [https://perma.cc/XR3F-6247].
117 See Simon Hradecky, Incident: Lufthansa B744 Near Goose Bay on Oct 26th
h?article=458146e5d&opt=0 [https://perma.cc/MJ2PYBKT].
118 See id.
119 See id.
wait on the aircraft, passengers spoke of a twenty-three-hour vac-

cation in Goose Bay.\textsuperscript{120}

3. \textit{Evolving Stop}

The worst nightmare is, of course, the evolving stop. This is
where the conditions change after the plane has landed or other
unforeseen factors come into play. These can dramatically ex-

tend any delay.

Normally, as has been seen already, a medical emergency in-
volve a fairly quick stop at the chosen airport, and these delays
rarely exceed two hours. But when a Cork-bound Norwegian
737-800 and a Gatwick-bound British Airways 777-200 both di-
verted to Gander within twenty minutes of each other at around
2:40 A.M., the duration of the stop greatly exceeded what the
crews anticipated.\textsuperscript{121} In both cases, the diversions were to deal
with a medical emergency, but once on the ground the delays
mounted and passengers on both aircraft remained on board
for six hours or more.\textsuperscript{122} At this point, the crews realized that
they would not be able to complete the flights within their duty
time, and thus, the stays extended to nearly twenty-four hours.\textsuperscript{123}
Given that the length of the extension was known, both crews
decided to disembark their passengers and process them
through Canadian border formalities. The Norwegian airlines
passengers were put up in a hotel; the British Airways passengers
stayed in the airport terminal.\textsuperscript{124}

4. \textit{Many Aircraft Seeking a Quick Stop}

In 2017, fourteen major airports and airline hubs including
“Boston, Chicago, Delhi, Houston, London, Miami, Montreal,
Mumbai, New York, Philadelphia, Phoenix, Tokyo, Toronto,
and Washington, were fully or partially closed at least on one
occasion due to weather or weather-related events.”\textsuperscript{125} In each

\textsuperscript{120} See id.

\textsuperscript{121} See Tyler Dunne, \textit{Pair of Diversions Lead to Chaotic Day at Gander Airport}, CBC

\textsuperscript{122} See id.

\textsuperscript{123} Id.

\textsuperscript{124} Id.

\textsuperscript{125} See \textsc{Armand De Mestral et al.}, \textsc{Sustainable Development, International Aviation, and Treaty Implementation} 3 (2018).
case, aircraft bound for those airports were diverted to other airports.

In cases where numerous aircraft were diverted to a single smaller airport, the consequences on passenger comfort were often serious. In almost every case where an inbound international aircraft is diverted to a small airport which is not used to receiving large numbers of international flights, the crew’s intention is to land, re-fuel, and depart as quickly as possible for the final destination.

a. Halifax, September 11, 2001 and Ottawa, July 31, 2017

On July 31, 2017, twenty aircraft were diverted to Ottawa when bad weather closed both Montreal and Toronto airports. This number is roughly half that of the number of planes diverted to Halifax on September 11, 2001.

On September 11, the United States closed its skies at 9:25 A.M. EDT and Canada followed suit within an hour, as of 11:25 A.M. ADT. At that time, 157 west-bound trans-Atlantic flights were still cleared to land in North America. Ten minutes later, the first diverted plane landed in Halifax and the first passenger disembarked at 15:30, resulting in a minimum tarmac delay of roughly four hours. The fortieth plane landed prior to 22:30 and its passengers began disembarking at 4:00

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129 Atlantic Time (UTC - 4) is one hour ahead of Eastern Time (UTC - 5).

130 See How NATS Responded to the Day of Terror, UNITED KINGDOM FLIGHT SAFETY COMM. (Sept. 20, 2008), http://www.ukfsc.co.uk/files/Safety%20Briefings%20Presentations/ATM%20How%20NATS%20responded%20to%20the%20day%20of%20terror%20Sept%202008.pdf [https://perma.cc/9UHK-YA7S].


132 Susan Bradley, Terror Strikes; Jets Find Safe Runways in Halifax; North American Air Travel Shut Down, Passengers Find Refuge in N.S., CHRONICLE HERALD (Sept. 12, 2001), A4.
resulting in a maximum tarmac delay of roughly six and a half hours. By comparison, the first diverted aircraft that landed in Ottawa on July 31, 2017, spent one hour and twenty-five minutes on the ground, whereas the twelfth of eighteen aircraft (Air Transat 157) that landed endured a tarmac delay of almost six hours.

i. Factors in Common

Prima facie, the Halifax diversions of September 11, 2001, and the Ottawa diversions of July 31, 2017, are comparable. Both were extraordinary events. The Halifax situation was provoked by an unprecedented terrorist attack of New York and Washington and the subsequent closure of North American skies. The Ottawa situation was provoked by the unprecedented simultaneous closure of both Toronto and Montreal airports, which serve as the primary Canadian destinations for flights from Europe, the Middle East, and South Asia.

Both Halifax and Ottawa were non-hub airports that did not have significant international traffic and they received dozens of aircraft in a short time frame; Halifax received twenty-three inbound international flights in under two hours and Ottawa received eighteen inbound international flights in roughly the same time interval. In both cases, many aircraft were parked on runways and taxiways, in positions that made disembarkation difficult. In both cases, the length of tarmac delay increased as the aircraft’s position in the queue increased; aircraft that arrived earlier in the process had shorter delays than those that arrived later.

In both cases, there were factors that made shortening the delay difficult. Planes in Halifax faced the need to clear passengers and their baggage through a growing queue for Canadian border formalities. Planes in Ottawa needed to wait for fuel at one of the few Canadian airports where it is still delivered by
tanker truck, and on a day when only seven of the nine trucks were operational. Thus, to a certain extent, the duration of the tarmac delays was unknown to the crew and was also largely beyond their control.

ii. Points of Distinction

However, the situations at the two airports are different as well. It was immediately clear to the crews of the aircraft landing in Halifax in 2001 that their aircraft would be on the ground for at least twenty-four hours. By contrast, the crews of the aircraft landing in Ottawa in 2017 believed that they would be landing, refueling, and departing for their final destination once the weather had cleared.

Thus, from the moment of landing, the passengers had very different expectations. The passengers in Halifax quickly recognized that they would face a lengthy tarmac delay and that the duration of the delay was principally in the hands of Canadian officials who would decide when they would be disembarked and processed through Canadian border formalities. The passengers in Ottawa were told that Ottawa was a re-fueling pit-stop, and that the flight would take off as soon as the flight was fueled and the destination airport was re-opened. These very different passenger expectations made a 6.5-hour tarmac delay in Halifax quite acceptable, while making a shorter 5.75-hour tarmac delay in Ottawa the subject of a public outcry.

Thus, when officials looked into the 2017 Ottawa tarmac delay, rather than looking holistically at how mass diversions to small- or medium-sized airports can be better managed in the

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future, they focused on the two flights on which passengers had made 911 calls, namely Air Transat Flights 157 and 507.  

V. TARMAC DELAY: ARE AIRLINES CULPABLE?

Given that major airlines schedule a large number of airlines to land at their hubs within a relatively short interval of time, there will be cases where a delayed departure of one aircraft will mean that a gate is not available for an arriving aircraft. In such cases, to the extent that a lengthy tarmac delay affects the arriving aircraft, such a delay would be largely the fault of the airline in the sense that they could have avoided it through better planning, such as having spare gates or not scheduling so many flights within a given time frame.

Similarly, if a plane experiences a lengthy tarmac delay prior to departure because the crew scheduling department did not assign a crew with enough duty time to fly to the intended destination, this would be the fault of the airline, and consequently, any resulting tarmac delay would also be their fault. However, as has been pointed out, since the passage of the U.S. Tarmac Delay Rules, these types of tarmac delays have been virtually eliminated.

A. DELAY IS NOT IN AN AIRLINE’S INTEREST

Airlines measure efficiency by available seat miles and aircraft utilization. Thus, any lengthy delay affects both measures negatively and, consequently, has potential effects on the airline’s balance sheet. For example, when a malfunctioning coffee maker forced the crew of a Lufthansa 747 bearing registration D-ABTL to divert to Goose Bay, the unplanned twenty-three-hour stop in Goose Bay forced Lufthansa to get Canadian officials to allow the 293 passengers to disembark, and to be fed and accommodated at Lufthansa’s expense. In addition, Lufthansa had to divert a second 747 to Goose Bay to drop off the mechanics to fix the coffee maker, causing the second aircraft a three-hour delay in reaching its destination.

The fact that D-ABTL was kept on the ground for nearly a day meant that Lufthansa was unable to use its aircraft to operate a planned round-trip flight between the United States and Ger-

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142 See Hradecky, Incident: Lufthansa B744 Near Goose Bay, supra note 117.
143 Id.
many and derive revenue from those flights. In addition, the
carrier would have had to find a replacement aircraft to operate
those flights or cancel those flights and pay compensation to
586 passengers\footnote{See id. D-ABT was carrying 293 passengers when it was diverted. For the
purposes of this calculation it will be assumed that the round-trip flight the next
day would have carried the same number of passengers in each direction for a
5, 7. Europe’s Passenger Rights regulations apply to European airlines on all
routes to and from the EU. See id.} for a total of up to
EUR 351,600 in disbursements.

If the compensation to the passengers of the canceled flights
is added to the cost of feeding and accommodating D-ABTL’s
passengers, Lufthansa’s total out-of-pocket cost for the incident
involving the malfunctioning coffee maker could easily exceed
EUR 500,000. Given the costs of dealing with a tarmac delay and
the consequent effect of the delay or cancelation of subsequent
flights, it is clear that tarmac delays are definitely not in an air-
line’s interest.

\section*{B. Delay May Be Due to Factors Beyond an Airline’s Control}

In virtually all of the more than sixty incidents where airlines
made en-route landings at Gander, Goose Bay, or Stephenville,
the landings were provoked by safety issues which had not been
apparent to the crew of the aircraft when the flight departed for
its destination. In every case, the landing was made by the crew
in the interest of aviation safety and none of the landings were
subsequently found to have been unnecessary. Thus, the land-
ing was provoked by factors beyond the crew’s control, and in
each case the length of time the aircraft spent on the ground
was often beyond the control of the crew as well. As has been
pointed out above,\footnote{See supra section IV.B.2.b.iii.} at a foreign airport, it would take between
90 and 120 minutes to disembark and re-embark passengers
who wanted to enter the terminal as a result of the need to clear
both border formalities and pre-board passenger screening.
Thus, unless the crew is reasonably certain from the moment of
arrival at the airport that the stop will exceed 120 minutes, little
thought is given to this idea.
VI. SHOULD OTHER ENTITIES PLAY A ROLE?

In cases where a large number of aircraft from foreign points of origin are diverted to an airport in another country, consideration should be given to whether there may exist options other than leaving the passengers on the plane or processing them through border clearance formalities to disembark and then pre-board screening to re-embark.

For example, it is in fact true that on the morning of September 11, 2001, none of the passengers on the various European U.S.-bound flights that were subsequently diverted to Canada were expecting to visit Canada during their trip. Thus, they did not have Canadian dollars and, in the case of non-European or non-American passengers, they probably did not have Canadian visas in their passports. Their arrival in Canada was just as much a surprise to them as it was to Canadian officials.

A. THE ELEMENT OF SURPRISE

Generally speaking, if an event is a complete surprise to all involved, it is also a surprise to mal-intentioned people who wish to take advantage of the situation. In 2009, on his first visit to Canada, U.S. President Barack Obama’s motorcade “made an unannounced detour to Ottawa’s historic ByWard Market” where he picked up some souvenirs. The visit was so spontaneous that even the Royal Canadian Mounted Police only got a few minutes notice. But the length of the visit, which was less than ten minutes, plus the element of surprise, resulted in a situation where the President of the United States was at very little real risk. His security detail was present and no adversaries had an idea he would be visiting the ByWard market until after he had left it. Indeed, this strategy of surprise, short, secret visits has been used often before and with considerable success: “[t]he White House has a history of making unpublicized visits to parts of the world where security is an issue.”

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148 Id.

B. How Important is Security?

While there can be no doubt that the highest standards of aviation security must be maintained, especially in the post-September 11 context, the need for proper risk analysis cannot be overstated. On September 11, thirty-eight aircraft were diverted to Gander,\(^{150}\) and some of the passengers waited up to thirty-one hours to disembark.\(^{151}\) Given that the aircraft brought 6,656 passengers to a town with a population of less than 10,000\(^{152}\) and that there were no other aircraft departing Gander for ninety-six hours afterwards, if the passengers had not been cleared through Canadian border formalities, the risk would have been minimal. This is because none of the passengers had intended to visit Gander on the morning of September 11, 2001, and none intended to stay in Gander once the skies re-opened. Furthermore, in a tight-knit community like Gander, the foreign passengers, virtually none of whom had a Newfoundland accent, would have been conspicuous to all. However, all of the passengers were cleared through Canadian border formalities because that is what the law and process required. Nonetheless, no risk-based analysis would have supported keeping foreigners on planes for over twenty-four hours in order to clear them through border formalities in an isolated town they had no intention of visiting.

C. Are Passengers Really Visiting the Country?

The idea of simplifying a fast visit is central to the customs and immigration protocols in place for cruise ship passengers at Caribbean ports. For most of these, no passport is required.\(^{153}\) Passengers keep their cruise card which is scanned when they leave the ship and scanned again when they re-enter.\(^{154}\) This is because the local authorities know that the passengers have no intention of staying in their country and that they will make every effort to re-board the cruise ship. By not making passengers go through customs and immigration, they allow passengers more time to visit local tourist attractions, buy souvenirs, and dine in local restaurants. The ship provides the local au-

\(^{150}\) See 11-09-2001 Four Days in September, supra note 70.

\(^{151}\) See Weissman, supra note 71.

\(^{152}\) See 11-09-2001 Four Days in September, supra note 70.


\(^{154}\) See id.
If the same risk-based approach were applied to diverted aircraft at Gander, Goose Bay, and Stephenville, it would eliminate most of the tarmac delays in Canada and might even set a precedent for behavior abroad.

1. No-Man’s Land

Airports, especially in situations where past lengthy tarmac delays have occurred after the arrival of un-scheduled aircraft flying from foreign lands, should consider the establishment of “no-man’s lands” or other “sterile” facilities which could be temporarily used by the passengers of such aircraft. This would allow passengers to disembark and use clean toilet facilities, other passengers might walk around to stretch their legs, young children would have a chance to run around, others might buy a drink or a sandwich, and yet others might phone loved ones to update them on potential arrival times.

The facility would be set up so that passengers could not leave it except to return to the plane and thus, it would not be necessary for them to clear border formalities of a country they had no intention to visit. Moreover, if the only people in this sterile area were fellow passengers, airport security, airline and concession employees, and possibly passengers from other, similarly-affected flights, these passengers would not need to be processed through any pre-boarding screening. Where a facility at an airport is not heavily used most of the time and has convenient air-side access, thought should be given to making it available in times of potential tarmac delays to give respite to beleaguered passengers. In addition, non-isolated airports that have experienced the phenomenon of multiple diverted international in-bound flights during a short time interval should be forced to identify a facility where such passengers could be granted temporary access to a sterile “no-man’s land” or, in the case where none exists, to create one.

155 Frequently Asked Questions from Congressional Offices, DEP’T OF HOMELAND SECURITY (June 22, 2018), https://www.cbp.gov/about/congressional-resources/faqs [https://perma.cc/X4JH-K5RK]. Where passengers miss the ship, they are responsible for getting home or to the next port of call. What to Expect on a Cruise, supra note 153. Often this would be a very expensive proposition.
D. SOME FINAL THOUGHTS

In almost all the cases of tarmac delay considered here, the principle cause of delay has been the need to process the passengers through border formalities and then, as required, pre-screen them before allowing them to board the continuation of their flight. This raises three issues:

(1) In such cases, to what extent is the airline responsible for the duration of the tarmac delay?

(2) Are there cases where a risk-based approach might eliminate the need to process certain passengers who have no intention to visit and no documents to enter the state in which the airport is based?

(3) Have airport authorities provided sterile facilities where inbound international passengers could be temporarily accommodated without the need to be processed through border formalities and later pre-screening procedures?

First, to the extent that the airline has no control over customs and immigrations, it should not be fair to hold airlines responsible for delays caused by their action or inaction. Moreover, given the relative isolation of Gander, Goose Bay, and Stephenville, and the fact that it would be impossible to leave any of these for a major airport without boarding an aircraft and showing a passport, serious reconsideration should be given to whether it is really necessary to process passengers of aircraft diverted to these remote airfields through Canadian border formalities. Second, a risk-based approach needs to be taken in responding to the challenge of dealing with inbound, foreign-originating passengers with no intention of visiting the country in which the diversion airport is located. Third, and finally, many airports have facilities that could be quickly set up as sterile “no-man’s lands” to accommodate in-bound foreign-originating passengers. In a world where climate change is a reality, airports need to be able to adapt to evolving situations; and in the future the number of diversions due to weather events is likely to increase. In this context, having a sterile “no-man’s land” should be required of any major airport that routinely receives international flights.
VII. CONCLUSION

There is no doubt that tarmac delays must be avoided at all costs, and to the extent that these were caused by over-ambitious scheduling, the U.S. Tarmac Delay Rule has done a very admirable job of virtually eliminating such delay. If one understands the impact of a tarmac delay on airline operations, it is obvious that tarmac delays are hated more by the airlines than by the passengers. However, the over sixty tarmac delays that were considered by this Article show that government policies and actions to a great extent may influence both the duration of the delay and the decision as to whether and at what point to allow passengers to disembark.

Ideas such as waiving customs clearance where risk analysis suggests there is no threat to public safety, and creating “no-man’s lands” at major airports are two ways that governments can reduce the length of tarmac delays at airports to which aircraft are diverted.

It is one thing to punish, fine, or force airlines to compensate passengers for tarmac delays; it is far better for governments to consider the role that government institutions might play in eliminating such delays.