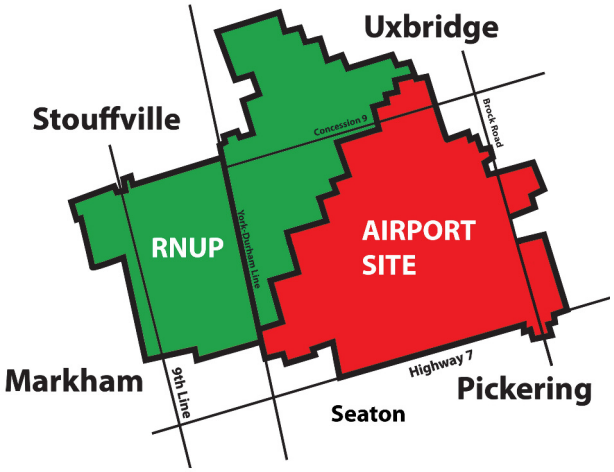
THEN / NOW / NEXT

21st-Century Reasons to Cancel Pickering Airport



Land Over Landings

2018

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Summary

THEN In 1973, a Commission of Inquiry on the Pickering airport project limited admissible evidence on need and location to new evidence that "was not in the mind of the Canadian Government [on] 30 January, 1973."

NOW Herewith, crucial new evidence that has arisen since the Inquiry:

1 Carbon Emissions and Climate Change: Aviation is on a collision course with climate change. The IPCC 2018 report warns that at current rates of increase "global warming is *likely* to reach 1.5°C between 2030 and 2052," harming health, food, water, security, and economic growth. Global CO_2 emissions must "start to decline well before 2030." Yet they keep rising. Aviation, reliant on fossil fuel, is pinning its hopes on carbon offsetting (which doesn't cut emissions) and on a shift to biofuels – a logistical and environmental challenge that may prove insurmountable in the time remaining. Another safety valve, large-scale ways to capture and store CO_2 haven't yet been invented. Investors with greener priorities are on the rise and will adversely affect the fossil-fuel industry and, inevitably, aviation. Yet the sector is planning for rapid "demand-driven" growth. Calls for a cap on aviation are now starting. Since most air passenger trips are elective, government sanctions may become unavoidable.

2 Food Security: Concerns are growing over the volume and stability of global food supplies as population numbers keep climbing. The FAO has estimated that the world will need *70%* more food by 2050. Population growth and climate change compel us to conserve farmland, including the prime farmland of the Pickering site, to meet future food needs: as the planet warms, food from southern climes will become scarce or non-existent.

3 A New-Farmer Shortage: The 2017 "Barton Report" highlighted Canada's huge potential for agricultural growth and export improvement. But most Canadian farmers will be retiring in the next few years, and entrant farmers, expecially around the GTA, our largest food market, can't find affordable farmland to buy or suitable parcels to lease – a local food-security crisis in the making. The Pickering site should be made a training ground and launching pad for our next generation of food producers. "A Future for the Lands," a 2018 agricultural economics study, shows how making the site a food hub would help alleviate a looming farmer shortage.

4 Dozens of Indigenous Sites: At least 32 (and there are likely more) Indigenous archaeological sites have now been registered on the Pickering Lands, including the Draper site with a million artifacts. First Nations want such sites formally assessed and protected to prevent the disturbance of centuries of history and culture.

5 Protection of History and Natural Capital: Since 1973, seven structures on the Pickering site have been classified as federal heritage properties. The Lands themselves are best-quality farmland. They act as a carbon sink. They host a provincial Atlantic salmon restocking project. They contribute $6.1 million in eco-services annually.

6 Ontario's Land-Use Policies: The Pickering site has been designated by the Province as a permanent Prime Agricultural Area. Its northern reaches are on the protected Oak Ridges Moraine. About a third of the site is in the Provincial Greenbelt, and almost all of it would be Greenbelt if the airport zoning were removed.

7 Canada Geese: The greatest bird hazard to aviation safety, Canada geese, in their many thousands, live year-round on the site, which, after 46 years of minimal human activity (mostly limited to farming corn, wheat, and soybeans), has become an unofficial wildlife sanctuary.

8 Rouge National Urban Park (RNUP): The Park will showcase nature, culture, and agriculture. Toronto, embracing this gift on its doorstep, is creating a 16 km city-park, called "The Meadoway," to run from the Don Valley to the Park. Yet draft plans for a Pickering airport show that all "preferred' runway approaches would cross RNUP. Commercial aircraft could be as low as 350 ft. above visitors and wildlife. CALPA opposes an airport adja-

cent to a wildlife sanctuary and opposes abnormally steep landing glide slopes to reduce bird strike risk. RNUP north of Hwy 407 would be inside the Wildlife Hazard Zone and subject to wildlife and other environmental controls maximizing aviation safety, thereby destroying the ecological integrity and legitimacy of the national park.

9 Toronto Pearson's Ground Lease: The GTAA has leased and operated Pearson since 1996. Pearson's Master Plan 2017–2037 indicates that the airport is nowhere near capacity and has options for handling predicted growth, including an already approved 6th runway if needed after 2037. The Lease runs to 2056 with a 20-year extension option. Under the Lease, Transport Canada cannot build and operate a major international airport within 75 km of Pearson; the Pickering site is inside that limit. In the US, since 1943, no major international airport built on a "greenfield" site in a multi-airport system has been successful *without direct and significant government interference in the local multi-airport marketplace* – meaning, for instance, major flight restrictions at the older airport or even its closure. Such interference isn't in the cards for Pearson. In Canada, use of the restrictions strategy to force flights from Dorval to Mirabel still failed to make Mirabel successful.

10 The Southern Ontario Airport Network (SOAN): Eleven leading commercial airports are collaborating to meet the region's aviation needs over the next 3 decades, and are also planning to actively seek out "untapped markets." They have available capacity. At least 5 of the 11 can substantially expand. SOAN never mentions a Pickering airport. The network's 30-year planning horizon is 2048 – within the global-warming danger zone.

11 A Stranded Asset: The Pickering site has been an under-performing asset for decades. Given the immense logistical/environmental obstacles in the way of obtaining sufficient feedstock to produce commercial volumes of biofuels, a Pickering airport would stand a good chance of being a *stranded asset* even before it opened.

12 The Cost of Perpetual Limbo: Under federal management, annual economic activity on the Lands has dropped since 1971 from $14 million to $7 million. Over the decades, Pickering site management has drained federal coffers of hundreds of millions of dollars. Moreover, the perpetual airport threat has hollowed out surrounding communities, scaring off investment and devastating the local economy. "A Future for the Lands" shows how these few thousand acres *alone* could deliver over 2,100 jobs and almost $240 million annually in overall economic activity (a rebirth that would spur the revitalization of the surrounding communities too). Implementation of the vision on just these 9,600 acres could grow our economy by *$4.4 million weekly.*

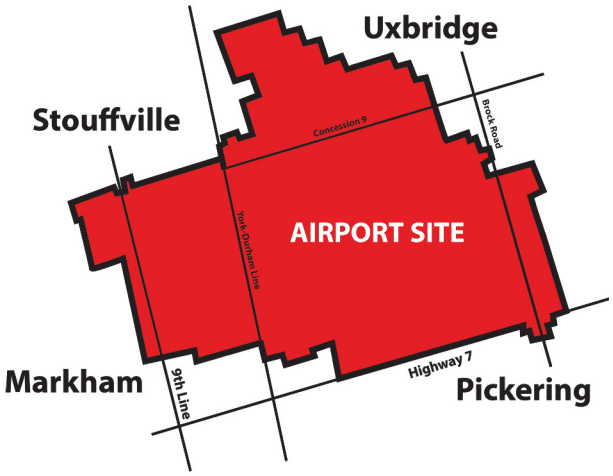
NEXT The destructive effects of climate breakdown are already being felt and will get much worse. Our ability to provide for our food needs will be among the most pressing challenges we face as this century unfolds. How many local sources of fresh, safe, accessible, affordable food will there be for the GTA to rely on if California's Central Valley is no longer exporting, if food from other continents is scarcer, more expensive, or unavailable?

This century's #1 priority must be to restore our planet's health and ensure our survival. If the choice at Pickering comes down to using prime farmland for an airport or for the growing of food, then food must prevail. *The need to eat is not elective.* North Pickering Farms on the Lands would be of far greater benefit to the residents of the GTA than any other use, including an airport.

Today we ask the Government of Canada to permanently protect this farmland, and to enable an agriculture and agri-tourism future for the Lands that will not only create jobs and economic activity but also sustainably feed future generations in a time of unprecedented climate change. Our children's worries about the future are fully justified. If we don't act on their behalf, their inevitable question will also be a profound indictment of us: "You knew this was coming, *so why didn't you do something?*"

THEN

1973



October 5, 1973 – On this date, through an Order-in-Council, the Privy Council of Canada established a Commission of Inquiry (formally named the Airport Inquiry Commission but commonly known as the Gibson Inquiry) to look into the matter of the Pickering airport.[1]

The Honourable Mr Justice Hugh F. Gibson, a judge of the Federal Court of Canada and the Commission's chairman, limited admissible evidence regarding the need for and the location of the airport to new evidence that had "arisen since the 30th January, 1973" – the date on which the expropriation of the land had been confirmed.

The new evidence that had "arisen" he defined as **"something that was not in the mind of the Canadian Government when it took, on 30 January, 1973, the policy decisions referred to"** in the Order-in-Council of October 5, 1973.[2]

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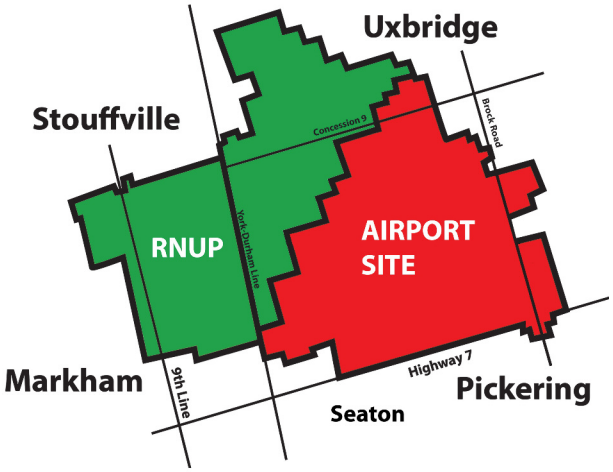
At the Gibson Inquiry, several independent experts testified that Transport Canada's projected air passenger forecasts were wrong – the numbers were far too high – and they argued that Toronto did not, in fact, need a second major airport.[3] The Government of Canada decided to believe its own forecasts and proceed with the Pickering airport as planned.

A 1975 analysis by the Ontario government disagreed with the federal forecasts and concluded that a Pickering airport wasn't needed. The Province decided not to fund the infrastructure to support the airport, causing Ottawa to shelve the Pickering project.

NOW

2018



Herewith, vital new evidence that was not in the mind of the Canadian government on the 30th of January, 1973:

1. Carbon Emissions and Climate Change

Carbon emissions and the danger they pose to our future did not figure in the airport/expropriation decisions of 1972–73. Climate change and its implications were not on the radar of the Canadian government then or for many years after. The first federal department responsible for climate change was created only in 2015.

That year, climate scientists were warning that the world must stop emitting greenhouse gases altogether in the next half-century to escape a cataclysmic future of extreme droughts and floods, lost coastal areas due to rising sea levels, biodiversity die-off, crop failures, mass migration from uninhabitable areas, widespread social unrest, and more.

The November 2015 Paris Agreement committed countries to keeping global warming "well below 2 degrees C," with hopes of limiting warming to 1.5°C and arriving at a carbon-neutral world in the latter half of the century.[1] Many countries aimed to achieve their goals by 2050 ("mid-century," per the deal). Canada undertook to reduce its carbon emissions by 80% by 2050, relative to 2005 levels. Yet ever since the Agreement was signed, global emissions have risen.[2]

The Intergovernmental Panel on Climate Change (IPCC)
Today we know that nothing that was agreed to in 2015 was enough. Not even close. On October 3, 2018, the UN's IPCC released its latest report, "Global Warming of 1.5°C." The warnings, as expressed in the Summary for Policymakers,[3] are blunt and frightening:

- Global warming is *likely* to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate (*high confidence*).
- Climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase with global warming of 1.5°C and increase further with 2°C. […] Any increase in global warming is projected to affect human health, with primarily negative consequences (*high confidence*).
- Pathways limiting global warming to 1.5°C […] would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems (*high confidence*).
- Such large transitions pose profound challenges for sustainable management of the various demands on land for human settlements, food, livestock feed, fibre, bioenergy, carbon storage, biodiversity and other ecosystem services (*high confidence*).
- Avoiding overshoot and reliance on future large-scale deployment of carbon dioxide removal (CDR) can only be achieved if global CO_2 emissions start to decline well before 2030 (*high confidence*).

There it is: 2030. The tipping point. Only 12 years from now.

Delaying action will cost us in every conceivable way, triggering planet-wide disruption that may not be reversible through human agency. The report makes it clear that we cannot rely on carbon dioxide removal options. Large-scale methods have yet to be invented. If and when they are, they may have unintended and harmful consequences.[4] Keeping our planet fit for us to live on will instead require rapid and dramatic reductions in our carbon emissions, including "deeper emissions reductions in transport."[5]

Is the transportation sector up to the task?

In some ways, yes. Electrified railways are already commonplace. The electric road vehicle market is growing. Maritime shipping is looking at many emissions-reduction options, including wind, solar,[6] and "slow steaming" (the best bet while other technologies are being refined).[7] Aviation, though, faces daunting logistical challenges, mainly thanks to its near-total reliance on fossil fuel. Today's global fleet burns through millions of barrels of petroleum-based fuel daily. Electric-powered aircraft remain in the development stage, technologically limited in size as well as in reach (i.e., short-haul flights of about 500 km), and may be ready to enter commercial service only 10 to 20 years from now.[8]

In August 2016, the respected climate policy website, Carbon Brief (www.carbonbrief.org), took a good look at aviation's steep emissions-reduction challenges.[9] The International Civil Aviation Authority (ICAO), the UN's "body for flying," had just issued its "Environmental Report 2016," and a leading authority on carbon budgets, using the ICAO data, had calculated that aviation emissions alone, from 2015 to 2050, would consume *27% of the world's remaining carbon budget* (based on a goal of keeping global temperature rise to less than 1.5°C above pre-industrial levels).

Aviation's strategy

The International Air Transport Association (IATA) reported in 2017, with no discernible pangs of conscience, that "passenger numbers [are] set to double over the next 20 years... " and that aviation is gearing up to handle the "demand-driven" load.[10] Industry growth would be carbon-neutral, says IATA, thanks to a four-pillar climate-change strategy involving more-efficient aircraft, new air-traffic-management systems, carbon offsetting, and the use of sustainable low-carbon fuels.[11]

There have indeed been some encouraging reductions in carbon emissions from the introduction of more-efficient aircraft[12] and better air traffic control systems.[13] But the sector's emissions challenges remain huge.

Carbon offsetting

Industry watchers have been openly critical of IATA's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).[14] Promoted as a method of "offsetting emissions growth above the 2020 baseline,"[15] the scheme simply shifts responsibility to a counterbalancing entity. Offsetting does not cut overall emissions. Despite the criticism and warnings, IATA has not changed course. in September 2018, it was still touting carbon offsetting as an "environmentally effective option."[16]

Still, by characterizing CORSIA in its literature as "ambitious"[17] – which can mean "determined" but also "difficult" and "wishful" – IATA seems to be tacitly acknowledging that the scheme is flawed, and that the carbon-neutrality goal is likely unachievable.

Alternative fuels

Equally worrying has been IATA's hope for what it calls "one of the most promising elements" – the development of sustainable aviation fuels.[18] The UN's ICAO, for its part, made clear in 2016 that, even with *100% use of alternative fuels by 2050*, the sector's carbon emissions would still be no lower than 2020 levels. The ICAO was overtly skeptical of IATA's optimism with respect to biofuel availability:

> Achieving this level of emissions reduction would also require the realization of the highest assumed increases in agricultural productivity, highest availability of land for feedstock cultivation, highest residue removal rates, highest conversion efficiency improvements, largest reductions in the GHG emissions of utilities, as well as a strong market or policy emphasis on bioenergy in general, and alternative aviation fuel in particular. This implies that a large share of the globally available bioenergy resource would be devoted to producing aviation fuel, as opposed to other uses.[19]

The skepticism was well-founded, as confirmed a year later when the International Renewable Energy Agency (IRENA) took an in-depth look at the state of biofuels and their challenges. Here are some illuminating excerpts from their Technology Brief, "Biofuels for Aviation":[20]

- … production [of bio-jet fuel] is currently very limited, at less than 0.1% of global total consumption of all types of jet fuels.
- The vast majority of bio-jet available now is derived from oleochemical feedstocks such as vegetable oil, animal fats, and used cooking oil (UCO). However, costs for these feedstocks, as well as supply and sustainability concerns, make it impossible to scale up production to meet demand.
- Today, the vast majority of currently available commercial volumes of bio-jet fuels are HEFA bio-jet [Hydroprocessed Esters and Fatty Acids], and a number of commercial-scale facilities can produce it. […] Even if all of this were to be used to make bio-jet, supply would still amount to less than 1.5% of the world's jet fuel requirements.
- Currently, there are no policies [in the world] that would encourage the preferential diversion of oleochemical-derived feedstocks (vegetable or animal) from road-transport fuels [i.e., bio-diesel] to aviation.
- Alternative feedstocks that are considered more sustainable will likely suffer from a lack of availability, preventing significant production increases.
- … the market for bio-jet has been slow to develop, and [the fuel] remains available only in small volumes thanks primarily to high costs and a lack of public-policy support, but also because of technical challenges.

Yet the aviation sector persists – in public, anyway – in flaunting its emissions solutions. Its reports tend to imply that all the wood waste, agricultural waste, used cooking oil, palm oil, algae, halophytes, camelina, jatropha, and so on will be used to produce the more than 600 million litres of jet fuel consumed daily.[21] IRENA describes the industry's targets as "mostly aspirational,"[22] and shows that no alternative fuel yet considered can be produced in anything like the commercial volumes needed to keep the global fleet in the air.

A number of practical hurdles present daunting – perhaps insurmountable – barriers to the ramping up of production to deliver the remaining 98% of jet-fuel needed. Any significant reliance on palm oil, the most readily available feedstock, would replace the current carbon emissions problem with a host of other environmental dangers.[23,24] Biofuels, in themselves, are not benign. Nor are they always carbon-neutral in their production.[25,26] Their feedstock can involve monoculture plantings, heavy pesticide and fertilizer use, copious use of fresh water, massive destruction of forests, and the wide-spread co-opting of farmland that should be producing food.[27] There are concerns too about second-generation biofuels made from agricultural crop waste that should by rights be returned to the soil wherever possible to reverse the decline in soil organic matter and increase farm crop productivity.[28]

And do biofuel projects take into account the soil degradation of intensive farming, the looming difficulty of accessing phosphorus for fertilizer, the urgent need to plant and protect forests as carbon sinks, and the rising temperatures and sea levels that will render some parts of the planet uninhabitable and feedstock for biofuels ungrowable there? The IPCC report points to the danger of relying on forests and field crops as sources of biofuel: the need for afforestation and bioenergy "may compete with other land uses and may have significant impacts on agricultural and food systems, biodiversity and other ecosystem functions and services (*high confidence*)."[29]

It remains to be seen whether our already stressed planet could even come close to producing the staggering amount of source material required to make enough fuel for aviation's (and others') needs – and to keep doing so year round, year after year, without devastating environmental consequences.

Investors and climate risk

Finally, there is the crucial matter of investors. Internationally, risk perceptions are beginning to catch up with reality. Financing fossil-fuel-dependent projects is increasingly viewed as unwise.[30] Michael Bloomberg has called "irrational" the high level of exposure of Canadian banks to an oil industry that does no serious climate-risk analysis.[31] In October 2017, Canada's largest pension fund, the Caisse de Dépôt et Placement du Québec,* announced, in the wake of the Paris Agreement, an array of far-reaching strategies that truly change the conversation:

> From now on, climate change will factor in each and every investment decision we make across the breadth of our portfolio. In building this strategy, we have undertaken a thorough analysis of markets and institutional investors' best practices. We have also been guided by our longstanding conviction that we need to think and act as builders, in everything we do. This is why we set a short-term target to increase our investments in low carbon assets by over $8 billion, and a medium-term target to reduce our carbon footprint by 25% per dollar invested. These objectives are ambitious, achievable, and measurable, and we'll report on our progress toward them every year.[32]

Andrew Parry, head of sustainable investment at Britain's Hermes Investment Management, has noted how investment is starting to be done on environmental, social, and governance principles, in part because millennial investors "want to see their values reflected in their portfolio managers." Concerns about carbon emissions form part of the thinking of this new investor generation.[33]

Investment drives business. And greener shifts in investor priorities are causing change. In December 2017, over 300 institutional investors with control over global assets worth upwards of $32 trillion US,

*Quebec Deposit and Investment Fund

launched Climate Action 100+, a coalition aimed at getting the world's largest CO_2 emitters to alter course. Targetted from the start were the major oil firms, automotive companies, Airbus, and Boeing. Within months, 22% of the coalition's initial 161 targets had agreed to set science-based CO_2-reduction goals. More shifts will follow. No company wants to be left in the competition's dust.

On December 3, 2018, Climate 100+ and Royal Dutch Shell jointly announced that Shell – the first energy giant to take such concrete steps – will go beyond its own investments in solar energy and electric charging stations and set itself tangible, near-term emissions-reduction goals aimed at carbon neutrality. There will be transparent progress reporting, and the compensation of senior executives (including the CEO) will be tied to the company's success in meeting its reduction goals.[34]

It's an important step. Other players in the energy sector will have to follow suit or risk becoming pariahs. The fossil-fuel industry will start to shrink. Aviation will inevitably be affected, possibly well before the many and complex biofuel challenges are resolved, if they ever are.

Options for the future

Aviation, reliant on fossil fuels, and a major source of CO_2 and other emissions, has few mitigation options open to it – and none that will meet tough reduction targets so long as "demand-driven growth" remains the business model. Should governments still give aviation an easier ride despite its emissions? An example of what this would mean has been demonstrated in the UK. If the government wants to add Heathrow's planned third runway without using up the country's carbon budget, it has been calculated that "large swathes of the economy" would have to become virtually emissions-free[35] – a staggering sacrifice to expect of other sectors (and of the public) so that aviation can be left free to grow. It's impossible to imagine meek acceptance by the losers in this decision.

Far more probable is that aviation will be obliged to adopt significant carbon-reduction policies, including strong market-based measures. Until recently, there had been no political or public discussion of the need to place curbs on aviation.[36] Only a handful of concerned scientists and journalists had raised the issue. But the situation changed on October 26, 2018, with an Open Letter to the ICAO, signed by more than 130 concerned citizens' organizations from around the world.[37] The Letter debunks the sector's ineffective approaches to its carbon-emissions problem, and calls for a cap on aviation.

The call for real action is justified. Most air passengers are tourists flying for pleasure and leisure to see the sights in the rest of the world. Their trips are, in short, elective. A recent study has shown that tourism alone currently accounts for 8% of global carbon emissions.[38] While the 8% applies to all tourism, it is safe to say that, since the jet age facilitated the global tourism explosion, the imposing of sanctions on aviation's carbon emissions would have a significant dampening effect on tourism emissions overall. Market-based measures, including higher airfares, would cause budget-conscious air passengers to fly less frequently, lowering demand and reducing the number of flights.[39]

Precious government resources, in Canada and elsewhere, will increasingly be allocated to green transit, such as high- and higher-speed train services, to reduce or eliminate high-carbon short-haul flights.[40] If aviation's self-imposed mitigation measures fall short, as industry watchers calculate they will, then government intervention will be unavoidable[41] and the sector will be hit with sanctions. If it is forced, as seems likely, to join the global economy's other major sectors in an all-out race to achieve

zero CO_2 emissions by the end of this century (or possibly far earlier), then clearly, the sector's growth forecasts will not be realized. One way or another, the number of flights worldwide – including those at Pearson – will decline.

What this means for Pickering

The need to provide relief for an overburdened Pearson has always been the driving argument behind the Pickering airport project. But the combination of two irrefutable facts – (a) that southern Ontario's current airport infrastructure is operating well below its runway capacity, and (b) that global aviation will be obliged to radically reduce and ideally eliminate its carbon emissions within the next decades – could prove fatal to a Pickering airport. The facility would never recoup its investment or operating costs and, without heavy government subsidies, would become another failed airport.

As matters stand today, the aviation sector is locked on a collision course with climate change, its future beset by logistical obstacles with no certainty of resolution. As the destructive effects of climate breakdown become ever more apparent, the arguments once made for building Pickering – relieving congestion at Pearson, spurring economic growth, increasing passenger convenience – fail as forward thinking; they qualify instead as willful climate-change denial.

Mandate Letter, Minister of Environment and Climate Change, 2015

I will expect you … to deliver on your top priorities:

- In partnership with provinces and territories, establish national emissions-reduction targets … These targets will recognise the economic cost and catastrophic impact that a greater-than-two-degree increase in average global temperatures would represent, as well as the need for Canada to do its part to prevent that from happening.

Mandate Letter, Minister of Finance, 2015

I will expect you … to deliver on your top priorities:

- Work with the Minister of Environment and Climate Change in creating a new Low Carbon Economy Trust to help fund projects that materially reduce carbon emissions under the new pan-Canadian framework.
- Work with the Minister of Environment and Climate Change to fulfill our G20 commitment and phase out subsidies for the fossil fuel industry over the medium-term.

Mandate Letter, Minister of Innovation, Science and Economic Development, 2015

I will expect you … to deliver on your top priorities:

- Support the Ministers of Environment and Climate Change and Natural Resources in making strategic investments in our clean technology sector.

Mandate Letter, Minister of Natural Resources, 2015

I will expect you … to deliver on your top priorities:

- Work with the Minister of Innovation, Science and Economic Development to invest in clean technology producers, so that they can tackle Canada's most pressing environmental challenges and create more opportunities for Canadian workers.

2. Food Security

Food security did not figure in the airport/expropriation decisions of 1972–73. The term originated in the mid-1970s and was defined at the UN's 1974 World Food Summit as "availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices."[1]

Concerns about the volume and stability of global food supplies are increasing as population numbers soar. While the explosive *rate* of growth since 1972 has begun to slow, our actual *numbers* will continue to climb to uncharted heights throughout the century. Based on UN Food and Agriculture Organization (FAO) estimates, by 2050 we will need to be producing *70%* more food than we grew in 2011.[2]

World population, past, present, and projected:

1972: 3.8 billion
2018: 7.6 billion
2050: 9.8 billion
2100: 11.2 billion[3]

For the first time, Ottawa is developing federal food policies[4] with the aim of: (a) increasing access to affordable food; (b) improving health and food safety; (c) conserving our soil, water, and air; and (d) growing more high-quality food.

The 2018 IPCC report states: "Some agriculture, forestry, and other land use-related carbon dioxide removal measures such as restoration of natural ecosystems and soil carbon sequestration could provide co-benefits such as improved biodiversity, soil quality, and local food security. If deployed at large scale, they would require governance systems enabling sustainable land management to conserve and protect carbon stocks and other ecosystem functions and services."[5]

The Pickering Lands could play a significant role here. If protected for agricultural uses, they would help the federal government achieve all four of its food policy objectives, turning the farmland into a source of fresh, safe food for Canada's largest population centre while improving food security. The Lands' importance would only increase as the planet warms, and as the produce we currently rely on from more-southern climes becomes less plentiful or very costly to transport or can no longer be grown in the altered climate there.

Mandate Letter, Minister of Agriculture and Agri-Food, 2015

I will expect you … to deliver on your top priorities:

- Develop a food policy that promotes healthy living and safe food by putting more healthy, high-quality food, produced by Canadian ranchers and farmers, on the tables of families across the country.
- Work with provinces, territories, and other willing partners, to help the sector adjust to climate change and better address water and soil conservation and development issues.

3. A New-Farmer Shortage

The urgent need to secure our farmer base was not a consideration in the decisions of 1972–73. But by 2016 (the year of the most recent agricultural census), the average age of a Canadian farmer was 55. Most farmers were between the ages of 55 and 59 and will be retiring in the next few years.[1] Replacing them is crucial to our future.

The issue isn't that there is a dearth of young people and newcomers eager to start farming. Far from it. The problem is the lack of accessible land. In and around the Greater Golden Horseshoe – the country's largest food market – entrant farmers are finding it *almost impossible* to locate affordable farmland to buy, or suitable parcels to lease. This is a disaster in the making. Left unresolved, the situation will have grave consequences for our food security.

The concern was highlighted in December 2017 in the "Report of the Standing Committee on Agriculture and Agri-Food," which focused on the four food policy themes on which the federal government was consulting, and included the Committee's belief that "the food policy should also take into account the following issues: the next generation of farmers, access to farmland and farm labour."[2]

The report noted the high percentage of next-generation farmers today who are coming to farming with no farming background, need training, and need access to suitable, affordable land:

> The rising cost of farmland is an obstacle for people seeking to enter agriculture. The next generation of farmers often does not have the means to buy land at high prices. Furthermore, agricultural land is increasingly being used for urban development.[3]

The report went on to quote David J. Connell, Associate Professor of Ecosystem Science and Management, University of Northern British Columbia, on saving agricultural land:

> [T]he federal government can play a critical role in helping to better protect Canada's agricultural land base. Specifically, the federal government could adopt a clear, direct statement of policy to protect the agricultural land base and to support its use for farming.[4]

The second set of recommendations of the federal Finance Minister's Advisory Council on Economic Growth (the "Barton Report")[5] identified Canadian agriculture's huge potential for growth and export improvement throughout this century. Our country is globally renowned as a trusted supplier of safe, nutritious food, and has the opportunity to become the world's second-largest food exporter, supplying an expanding global population and helping countries that are now suffering from increasingly extreme weather events that are destroying their crops.

The Barton Report picks up on the FAO's warning that, by 2050, global food demand is expected to have risen *by 70%*. It notes as well that many middle-class consumers "want proof that their food has been produced in a safe and environmentally sustainable way." It recommends that government, in collaboration with the private sector, undertake bold moves to develop agricultural-economic-

growth pilot projects, such as the creation of several food processing hubs across Canada, noting that our "sophisticated, ethnically diverse consumer base stimulates processed product development that can find appeal around the world."

Here, then, is an opportunity for the federal government to set policy and show responsible and inspired leadership, not only supporting entrant farmers but also helping to resolve a looming food crisis and expanding the number and variety of our food exports. A visionary step towards that goal would be the preservation of the Pickering Lands for agriculture. Through a leasing arrangement within a land trust or other type of federal custodianship, these Lands could be configured to meet individual farmers' requirements, and an integrated farming incubation centre could give entrants the precise training and start they need. The soil on these thousands of acres is almost entirely Canada Land Inventory Class 1 farmland. And the Lands are surrounded by transportation routes, are less than an hour from Canada's hub airport, Pearson International, and are close to numerous large urban markets.

Such a plan would ensure a smooth transition to our next generation(s) of food producers. The marvel is that the essentials – rich soil, clean water, ideal location, and capacity for lot-size flexibility – are already in place, an unparalleled advantage. To nudge this vision into reality, all that is needed is a federal decision to protect the land to meet 21st-century food-security needs.

As it happens, some of the groundwork has already been laid. An in-depth, first-ever agricultural economics study of the remaining Federal Lands was undertaken in 2017 by Econometric Research Ltd. and JRG Consulting, the aim of analyzing the current situation and determining the viability of an agricultural future on the Lands. The study's findings more than confirmed the wisdom of the plan. The report, "A Future for the Lands,"[6] describes the economic and social renaissance that would take place if the site were turned over to food production, agri-tourism, and agricultural research and innovation. The consultants have provided a roadmap for implementation of the plan, outlining the wide-ranging, long-term benefits that would flow from a food hub on the Lands.

Mandate Letter, Minister of Agriculture and Agri-Food, 2015

As Minister of Agriculture and Agri-Food, your overarching goal will be to support the agricultural sector in a way that allows it to be a leader in job creation and innovation. You will implement our government's plan to help Canada's agriculture sector be more innovative, safer, and stronger. Canada's farmers, ranchers and food processors are the foundation of our food sector. Government must use its policy and financial tools to support the agricultural sector in its vital work.

4. Dozens of Indigenous Sites

On the 18,600 acres expropriated in 1972–73, only a couple of Indigenous sites were known about. Unknown at the time was the fact that there are Indigenous sites everywhere on the Federal Lands.

During the 1970s, in the area of the remaining Federal Lands in Pickering alone, eight Indigenous villages were identified. Only two have been completely explored. By April 2017, more than 80 archaeological sites had been registered in that same area, their cultural affiliations identified as 32 Indigenous, 15 historic Euro-Canadian, and 34 undetermined. Most of those categorized as "undetermined" contain evidence of waste left from stone tool production, or parts of stone tools that lack dateable features, so it is possible that further archaeological work could identify those sites positively as Indigenous.[1]

Today, our governments rightly place far greater importance on respecting and protecting the culture of Indigenous peoples and the historic contributions they have made to their land. For example, a change was recently made to an infrastructure project on land just outside the boundary of the remaining Federal Lands in Pickering: in 2012, after a thorough archaeological assessment of the Brock Road/Hwy 407 interchange site, at which time more than 1,700 artifacts were evaluated. When they positively identified a Middle Iroquoian village, Ontario permanently protected the village by relocating the interchange.[2,3]

Will Ottawa exhibit the same diligence as Ontario and undertake a thorough archaeological reassessment of the remaining Federal Lands currently zoned for an airport? Major roadworks, earthworks, sewerage, terminals, runways, hangars, and warehouses risk disturbing centuries of Indigenous history and culture. Will Canada honour the wishes of its First Nations who want protection of the Indigenous sites on the remaining Federal Lands, including the historically significant Draper site, where at least 1,000,000 artifacts have been found?[4,5]

Mandate Letter, Minister of Natural Resources, 2015

I will expect you … to deliver on your top priorities:

- Work with the Minister of Environment and Climate Change, ... and the Minister of Indigenous and Northern Affairs to ... restore robust oversight and thorough environmental assessments of areas under federal jurisdiction.

5. Protection of History and Natural Capital

In 1972–73, the federal government barely paid lip service to historical assets. Responding to the 1972 report of Hearing Officer J.W. Swackhamer, Q.C., regarding the Pickering site, Transport Canada stated that Ottawa and Ontario were jointly committed to "preserving, and where appropriate, relocating, specific buildings of historical interest."[1] The effort was superficial. Not all buildings were surveyed. Few were moved, and those that were moved lost their historical context. Most were demolished or were allowed to deteriorate until demolition was called for. Above-ground traces of cultural history are now scarce on these Lands.

Of the remaining housing stock, the majority of farmhouses are handsome, solidly built century homes of brick or fieldstone. Seven buildings on the Lands are now designated as Federal Heritage Building Properties under the Treasury Board Policy on Management of Real Property.

As for "natural capital," the term was coined by the economist E.F. Schumacher and used in his book *Small Is Beautiful: A Study of Economics As If People Mattered*. Although the book was published in 1973, it seems reasonable to conclude that it was not on Transport Canada's radar when the Pickering airport expropriation was confirmed that same year. Since then, however, there has been increasing recognition of the Lands' natural capital: the value of the picturesque countryside, wooded valleys, and clean streams; the hundreds of acres of natural habitat that contribute an estimated $6.1 million in eco-services annually;[2] Duffins Creek, one of the GTA's cleanest watersheds and the site of a provincial Atlantic salmon restocking project;[3] the Lands' value as a carbon sink for as long as the soil is not paved over and as long as these Lands, bordered by a sea of urban sprawl, remain overwhelmingly agricultural.

The growing popular appreciation of such attributes may be a direct reaction to the urban sprawl nearby – which, by its very nature, tends to destroy natural capital. Suburbanites today often live in communities wiped clean of their history, heritage, and natural places. To create new subdivisions, bulldozers all too often remove existing infrastructure to let builders start with a blank slate. Rare are the attempts to protect and restore any existing homes – far more solidly built, in comparison with today's standards – and incorporate them into the new settlement. Rarely do plans for new urban infrastructure expressly avoid the destruction of a spectacular tree or grove. Instead, the symbols of history and heritage are too frequently erased. Streams are diverted into underground pipes. The landscape is often scraped bare and levelled, leaving no trace of its former self.

It's no wonder, then, that suburbanites love the Greenbelt and Oak Ridges Moraine, and the access to nature that these areas afford. It is reassuring that government policies are starting to assign value to the irreplaceable natural assets that do so much to keep us mentally, physically, and spiritually healthy.

Which brings us back to north Pickering. As pointed out with considerable passion by the authors of "A Future for the Lands," the remaining Federal Lands are "at the intersection of nature, culture, agriculture, and history." The benefits that such non-quantitative amenities deliver, the consultants noted, "are priceless" for our physical and mental health.[4]

Mandate Letter, Minister of Environment and Climate Change, 2015

I will expect you … to deliver on your top priorities:

- Treat our freshwater as a precious resource that deserves protection and careful stewardship, including by working with other orders of government to protect Canada's freshwater …

Mandate Letter, Minister of Natural Resources, 2015

I will expect you … to deliver on your top priorities:

- Work with the Minister of Environment and Climate Change, ... and the Minister of Indigenous and Northern Affairs to ... restore robust oversight and thorough environmental assessments of areas under federal jurisdiction.

6. Ontario's Land-Use Policies

The Province's desire to keep urban development from destroying natural habitat, fresh water sources, and prime agricultural land, especially in the Greater Golden Horseshoe (GGH), crystallized years after the airport decisions of 1972–73. Protection began with 1990s legislation to protect the Niagara Escarpment. Further provincial policies safeguarding the agricultural and recreational land of the GGH were later enshrined in the *Oak Ridges Moraine Conservation Act* and the *Greenbelt Act*, in 2001 and 2005 respectively,[1] as well as in the *Duffins Rouge Agricultural Preserve Act, 2005*.[2]

Most recently, on February 9, 2018, the entire "airport site," with the exception of the hamlet of Brougham, was designated by the Province as a Prime Agricultural Area, protected for permanent agricultural uses exclusively.[3]

So today, this "airport site" has been formally declared agricultural, its northern reaches are on the protected Moraine, and about a third of it is within the Provincial Greenbelt. There is little doubt that virtually all the rest would be in the Greenbelt, were it not for the current federal airport zoning.

Mandate Letter, Minister of Environment and Climate Change, 2015

I will expect you … to deliver on your top priorities:

- Treat our freshwater as a precious resource that deserves protection and careful stewardship, including by working with other orders of government to protect Canada's freshwater …
- Support the Minister of Infrastructure and Communities in protecting our communities from the challenges of climate change and supporting them in the transition toward more sustainable economic growth by making significant new investments in green infrastructure.
- Work with provinces and territories to set stronger air quality standards, monitor emissions, and provide incentives for investments that lead to cleaner air and healthier communities.

7. Canada Geese

The Canada goose population explosion on the Lands over the past four decades could not have been anticipated at the time of the government's airport decisions in 1972–73. In those days, the concern was gulls, and federal studies[1] had shown that Pickering had "a lower gull population than other areas of the Toronto-Centred Region." Moreover, "the bird situation at Pickering" was deemed to be "roughly equivalent to the situation at Malton." At the time, airport construction was expected to start immediately.

But 46 years of minimal human activity on the Lands, and of farming operations almost exclusively limited to corn, wheat, and soybeans, have transformed the site into a *de facto* wildlife sanctuary, where the geese have bred prolifically. Great numbers have chosen to make the area a year-round home, adding to their population annually and feeding happily on the crop residue.

There are now countless thousands of geese on the Lands. More geese (and swans) join them during spring and fall migration. Canada geese are the greatest bird hazard to aviation,[2] so the year-round presence of so many of these large birds presents a major barrier to any airport plan. While local populations within the airport's Wildlife Hazard Zone could be captured and killed during the moulting season to reduce the risk to aviation, complete elimination is impossible, as New York has discovered. Since the 2009 "miracle on the Hudson," tens of thousands of Canada geese, as well as gulls and other birds, have been trapped and killed, yet an Associated Press analysis in 2017 found that bird strikes actually went up during that period.[3]

Canada geese tend to return to the place where they were born. Today they share the Lands with great blue herons, owls, mallards, turkey vultures, wild turkeys, pheasants, a great many raptors, songbirds, rabbits, raccoons, opossums, foxes, beavers, mice, and the greatest mammal hazards to aviation: deer and coyotes.[4] In the official wildlife sanctuary immediately adjacent to the airport site (see next page), all these creatures and their habitats are protected by law.

8. Rouge National Urban Park (RNUP)

No national park figured in the airport decision-making of 1972–73. Of the 18,600 acres of mostly farmland expropriated at that time, some of the western and northern acreage was intended to be used merely as a noise-buffer area. In 2001, those acres were designated (although never officially formalized) as Federal Green Space.[1] Then, in 2013, Ottawa made the surprise announcement that over 5,000 of the westernmost acres would become part of a new national park.[2] Two years later, a further 5,000 acres, including lands along the northern boundary, were transferred to the park.[3] Since a large percentage of the transferred land was productive farmland, Rouge National Urban Park is being designed to showcase nature, culture, and agriculture.[4]

Ottawa's financial commitment to RNUP is substantial: a total of $170.5 million over 10 years to establish the Park, and then $10.6 million annually for ongoing operations.[5]

The City of Toronto, aware of the many benefits its residents will derive from this national park on its borders, has announced an ambitious city-park project called "The Meadoway," to take shape over the next seven years along a 16 km stretch of power corridor running from the Don Valley to the Park. The Meadoway is expected to cost $85 million.[6] It is fair to say that Torontonians, delighting in their new pathway to a national park, would not be pleased to find themselves under a runway approach when they reached their destination.

The comment isn't frivolous. In 1973, Transport Canada declared unequivocally, in response to the report of Hearing Officer Swackhamer, that the "preferred runway orientations related to wind and weather are available."[7] In the Draft Pickering Airport Site Zoning Regulation issued by Transport Canada in 2015, the orientation was unchanged.[8] The approaches of all three proposed runways run straight across the Park. Commercial aircraft flying a stabilized approach could be at altitudes as low as 350 ft. above Park visitors and wildlife.

Given the risk that wildlife, particularly the Canada Geese resident in the area, could pose to aircraft safety, the Canadian Air Line Pilots Association (CALPA) has consistently opposed an airport adjacent to a protected wildlife sanctuary. The Association is also opposed to the imposition of steeper than normal landing glide slopes as a way to reduce the bird strike risk.[9]

If an airport were built, the air in the Park under and around the runway approaches would contain high levels of pollution, including the kind of ultrafine particulate matter that is a by-product of engine combustion. Whatever was known in 1973 about the character and distribution of these particles, today we know they can lodge deep in the lungs and enter the bloodstream, causing significant health problems and even premature death. They can be carried great distances by the wind before settling, and can cause damage to forests and farm crops and acidify waterways.[10] A 2014 study of takeoffs and landings at Los Angeles International Airport found the particles in high concentrations over a far wider area than the researchers had anticipated.[11] This is bad news for the wildlife in the Park and for anyone working or living in the Park.

There is more bad news. All of RNUP north of Hwy 407 would be inside the airport's Wildlife Hazard Zone[12] and therefore subject to wildlife and other environmental controls that prioritize public safety.

Regarding such "off-airport habitat management," Transport Canada has this to say:[13]

> The guidelines also identify moderately hazardous land-use activities that are not recommended within 3.2 km of airport-reference points. These activities include:
> - specific agricultural practices,
> - managed or supplemented natural habitats,
> - migratory waterfowl refuges,
> - designated mammal refuges.

All these activities are fundamental aspects of the Park right next door.

The mandates of a national park and an airport are diametrically opposed. One is designed to protect wildlife, the other must protect humans and aircraft from the dangers to aviation safety that wildlife poses. An airport on the site would prevent the Park from meeting its obligations under the *Rouge National Urban Park Act*. Ottawa would be forced to break its ecological-integrity commitment to Ontario. And the legitimacy of the national park as a protected wildlife sanctuary would be destroyed.

The Park will have to struggle with this existential threat as long as the remaining Federal Lands across the fence – roughly 9,600 acres of farmland, wetlands, streams, and woodlots – continue to be held for an airport that is, in every way, incompatible with a national park.

Mandate Letter, Minister of Environment and Climate Change, 2015

I will expect you … to deliver on your top priorities:

- Develop Canada's National Parks system, as well as manage and expand National Wildlife Areas and Migratory Bird Sanctuaries.
- Develop Parks Canada programs and services so that more Canadians can experience our National Parks and learn more about our environment and heritage.
- Protect our National Parks by limiting development within them, and where possible, work with nearby communities to help grow local eco-tourism industries and create jobs.
- Work with the Ontario government to enhance the country's first urban National Park – Rouge National Urban Park – including improved legislation to protect this important ecosystem and guide how the park will be managed.

9. Toronto Pearson's Ground Lease

The current Ground Lease postdates the airport decisions of 1972–73 by more than two decades. It was 1994 when Transport Canada announced a new National Airports Policy, in which ownership of smaller airports would be transferred to local authorities and the operations of larger ones would be leased out. Pearson has been leased and operated by the Greater Toronto Airports Authority (GTAA) since 1996.

The official reason given in 1972 for building a new major airport at Pickering was the looming threat of congestion at Malton (now Pearson). Malton, it was said at the time, could not be expanded beyond its three runways and therefore could not handle the tens of millions of additional passengers the government studies were forecasting. The huge Pickering airport was therefore urgently needed and would open by 1979 to start handling the crush.[1]

More than four decades later, the congestion crisis has yet to materialize. Pearson has continued to expand over the years and now has five runways. In Pearson's Master Plan for 2017–2037[2] the GTAA makes clear that Pearson is nowhere near capacity and has plenty of options left within the Plan's timeframe for dealing with anticipated increases in aircraft movements and in passenger and cargo volumes. After 2037, there is the ability to add, if needed, an already approved sixth runway. And a recent article in UrbanToronto.ca, reporting on a discussion between urban scholar Richard Florida and the GTAA's CEO Howard Eng, refers to the possibility of even further expansion:

> … in the far long term, it is also theoretically possible that a fifth east-west runway could be accommodated at the centre of the airport property, though it would likely require some land acquisition on the western end.[3]

Transport Canada's arrangement with the GTAA states that the "term of the Ground Lease is 60 years, commencing on December 2, 1996, and expiring on December 1, 2056. The GTAA has an option to extend the term for a further 20 years to December 1, 2076."[4]

On the landlord's ability to introduce direct competition for Pearson, the Ground Lease states:

> If the Tenant is continuously and actively meeting any capacity and demand requirements for airport and aviation services at the Airport, the Landlord will not construct and operate, during the Term, an airport as a Major International Airport within seventy-five (75) kilometres from any point on the perimeter of the [Pearson] Lands. [subsection 44.01.01]

The Pickering Federal Lands are within that 75 km zone. "Major International Airport" is explained most clearly in the Annual Information Form of the GTAA:

> A Major International Airport, as defined in the Ground Lease, means an airport serving large population centres that link Canada from coast to coast and internationally, and that is used by air carriers as the point of origin and destination for international and inter-provincial passenger and cargo air service in Canada.[5]

So the federal government, by the terms of its own Ground Lease, is prevented from building this type of airport at Pickering before 2056 (more likely 2076), as long as Pearson continues to meet its obligations under the Lease – which the GTAA says it is capable of doing.

While the Ground Lease contains no sections or subsections covering a *new* airport, it does allow leeway at three existing ones:

> "Nothing in this Article 44 shall prohibit, restrict, affect or reduce:
>
> […] (b) the Landlord's right to construct or operate the Toronto City Centre airport, Hamilton airport, or Oshawa airport in any manner it deems appropriate; [subsection 44.01.02]

The Ground Lease definition of "Major International Airport" does (narrowly) appear to allow for a new airport as long as its carriers do *not* fly to Canadian coastal destinations or overseas during the life of the Lease. Could this loophole be exploited for a Pickering airport? In theory, yes. But who is keen to fund such a costly project? The federal government? In 2016, *Jets & Jobs*, a report to the Transport Minister on the findings of a public consultation on future economic development on the site, recorded the risk concerns of bankers and other potential financiers. They would require "a clear market-driven vision." Building a new airport is "very expensive," revenues "aren't guaranteed," forecasts are "not always accurate and air travel is affected by many factors."[6] Add to this the fact that southern Ontario's existing airports are mostly underutilized and have been so for years, despite persistent efforts to attract new air carriers. Most airports operate at a loss. Some municipal airports must be subsidized by the local community. And it has been made clear in recent years that any attempt to build a competing airport at Pickering would trigger a political firestorm in Hamilton, at the very least.

Pickering was always intended as a reliever for Pearson congestion but Pearson seems confident in its ability to handle the anticipated passenger and cargo volumes through to 2037, and has expansion options after that. The latest Master Plan states that, while Pearson expects to see more passengers per flight, it anticipates no change in, or a decline in, the number of dedicated freighter aircraft, forecasting:

- a 61 per cent gain in the volume of belly cargo per passenger aircraft movement – made possible by an increase in the number of wide body aircraft, which have additional cargo capacity.[7]

Although the news media and various consultants' reports tend to stress passenger numbers as the measure of an airport's capacity, Pearson's Master Plan rightly concentrates on anticipated aircraft movements, and describes how Pearson will be able to accommodate them. The GTAA expects "to be able to meet demand with existing capacity throughout our 20-year planning period."[8]

Finally, there is the painful reminder of Mirabel. In the jet age, there has never been a *naturally* successful major international airport built on a "greenfield" site in North America as part of a multi-airport system. The key word is *naturally*. While there *have* been several successful major international airports built in the USA on "greenfield" sites in multi-airport systems since 1942, their success was achieved only through *direct and significant government interference in the local multi-airport marketplace*[9] – including closing the older airport or significantly restricting the kinds of business it handled. In Canada, use of this strategy to force flights from Dorval to Mirabel still failed to make Mirabel successful. Such intervention at Pearson is not in the cards. Significantly, in 2018 both France and Mexico, after fierce public opposition, cancelled long-planned major "greenfield" airport projects, opting instead to expand existing airports.[10,11]

10. The Southern Ontario Airport Network (SOAN)

Formed in 2017, the network of eleven leading southern Ontario commercial airports postdates the airport decisions of 1972–73 by more than four decades. The network's members are working in concert for the first time to meet the area's future aviation needs.[1]

SOAN states in its introductory report that "together, the members of the Southern Ontario Airport Network have a clear vision for southern Ontario and the benefits they can deliver over the next 30 years."[2]

The report goes on to say that "each airport has available capacity for additional air service or related operations," and notes specifically[3] that "London, Windsor, Waterloo, Hamilton and Kingston airports all have the ability to substantially expand current operations as they have available capacity."

There is no suggestion of any need to increase the number of southern Ontario airports. Instead, SOAN's focus is on the expansion of services at existing airports, and on *actively seeking* new business:

> Many of the network airports have the capacity to support additional air service. There are also clear indications that there is market demand to match. [...] The available capacity at network airports presents an opportunity to develop passenger service based on local market demands, providing more choice to passengers and businesses.[4]

SOAN's conclusion is that "airports throughout the region can support new scheduled air services *for untapped markets*" (italics added).[5] Clearly, no looming capacity crisis is preoccupying our existing airports.

Nowhere does SOAN's report make the slightest mention of Pickering airport or even the airport site. For that matter, neither does Pearson's current Master Plan. Pearson's annual reports have not referred to Pickering since 2006.

11. A Stranded Asset

The *Expropriation Act* was never intended to be used to seize property from private citizens and then place it in "maybe someday" limbo for decades. The government's intent in 1972 was to build a new airport and provide the community with more jobs and economic activity. When the airport plan was shelved but the land retained, the opposite occurred: a thriving community was destroyed, infrastructure was neglected and demolished even in the midst of an affordable-housing crisis, and the entire area was left economically crippled.

The Pickering site, once a prosperous farming community, is now a forlorn zone, empty of prospects, a place out of time, no longer of the 1970s but not of 2018 either.

HSBC Global Reseach defines *stranded assets* as "those that lose value or turn into liabilities before the end of their expected economic life."[1] The Federal Lands in north Pickering are (and have been for decades) a seriously underperforming asset, and they will remain so while the state of limbo persists. An airport, on the other hand, would be at high risk of becoming *a stranded asset* – just one more victim of the destructive consequences of two centuries of burning fossil fuels and of the now-urgent need to stop.

The IPCC report makes very clear what inaction on climate-change mitigation measures will mean:

> ...delayed actions to reduce greenhouse gas emissions include the risk of cost escalation, lock-in in carbon-emitting infrastructure, stranded assets, and reduced flexibility in future response options in the medium to long-term (*high confidence*).[2]

In 1972, the airport was said to be urgently needed, was thought to be just seven years away, and was fully expected to happen. In 2018, the shelved project haunts some unknown future beyond various 20- and 30-year planning horizons, taking it into the very heart of the IPCC's climate-change danger zone, where all bets are off.

12. The High Cost of Perpetual Limbo

In 1972–73, the federal government did not know that the airport project would be shelved in 1975. Nor did it know that Transport Canada would retain the expropriated farmland and hamlets.

The government was totally unprepared to be the landlord of these Lands for decades. Budget allocations were too low to maintain the property; local residents believe this was a policy of willful neglect. Whatever the reason, under federal government management the agricultural economic activity on the Lands has dropped by half since before expropriation – from $13.9 million in 1971 to $7.0 million in 2016 (the year of the most recent agricultural census).[1]

Once the project was shelved and the site "landbanked" for a potential future airport, the costs of administration, security, and maintenance; the cost of demolishing barns, houses, churches, and commercial structures; and the drop in the number of tenants (and consequent loss of revenue) became a drain on federal coffers that has gone on for close to half a century. Hundreds of millions in taxpayers' dollars have been spent on maintaining the site. Management costs between 1998 and 2016, the only time span for which data have been provided by the federal government, totalled $159,571,600 (about $195 million in 2018 dollars).[2] The costs between 1972 and 1998 were not forthcoming. Nor is it known what has been spent since March 31, 2016.

Acquisition of the property in 1972 apparently cost $120 million in total (just under $720 million in 2018 dollars).[3] The cost of the airport-planning studies leading up to the 1972 announcement and the cost of the most recent studies (at least one still ongoing) have been unobtainable or are unavailable.[4] And then there are the costs that are never included in such studies and calculations. The perpetual threat of an airport – implicit in decades of restrictive one-year leases on the Lands – has hollowed out once-vibrant nearby communities, scared off investment, and devastated the local economy. The overall cost of this airport project may by now have exceeded $1 billion in today's dollars. And the residents of north Pickering and environs remain trapped by a 1970s federal plan with no known future.

There *is* a viable alternative. "A Future for the Lands" has shown how these few thousand acres *alone*, if devoted to diversified agriculture and the agri-tourism and eco-tourism that would grow around it, could very soon deliver more than 2,100 jobs and nearly $240 million in overall economic activity annually[5] – a stunning increase over today's figures. Implementing the plan on these 9,600 acres would not only safeguard a critical, irreplaceable natural asset but also potentially grow our economy by *$4.4 million weekly* (see charts on the following pages).[6]

Adoption of the alternative plan would spark an economic turnaround, with returns increasing year over year as farming and related tourism flourished. The rebirth would have a ripple effect, triggering a revival of the surrounding communities and significantly boosting their employment numbers and economic output and impact. Ajax, Markham, south Pickering, Stouffville, Uxbridge, and Toronto would all be beneficiaries. The Lands' farm produce and tourism would substantially increase tax revenue for all levels of government, reversing the financial drain of decades.

Mandate Letter, Minister of Finance, 2015
Mandate Letter, President of the Treasury Board of Canada, 2015

I will expect you … to deliver on your top priorities:

- Work with … your colleagues to conduct a review of tax expenditures and other spending to reduce poorly targeted and inefficient measures, wasteful spending, and government initiatives that are ineffective or have outlived their purpose.

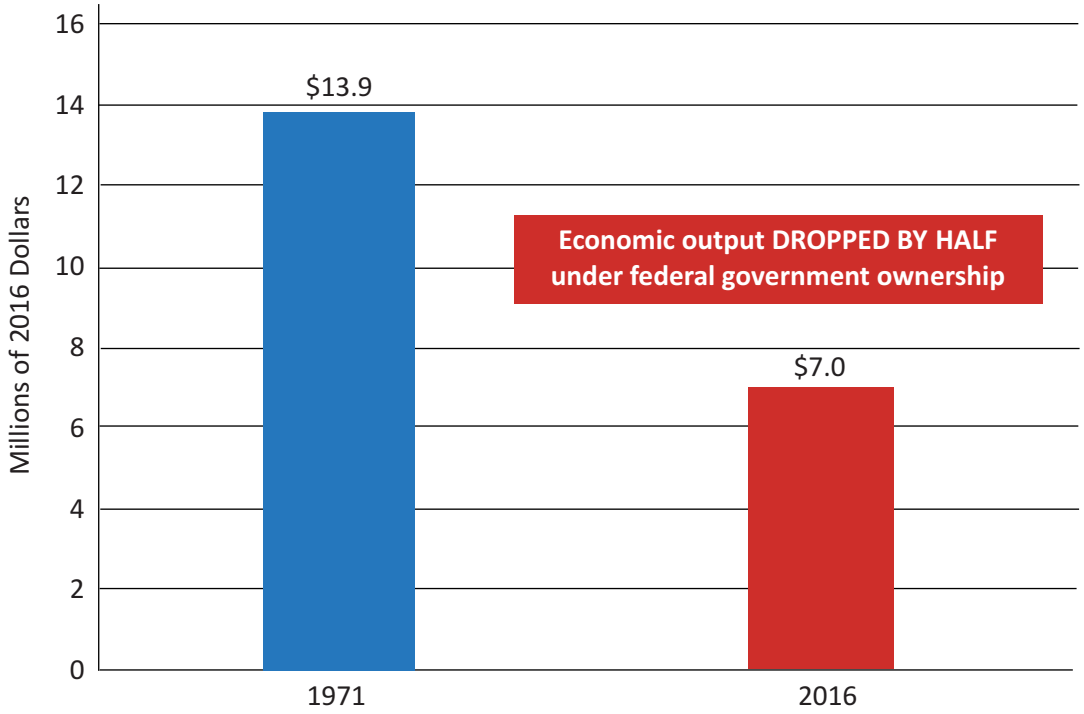
Mandate Letter, Minister of Small Business and Tourism, 2015

I will expect you … to deliver on your top priorities:

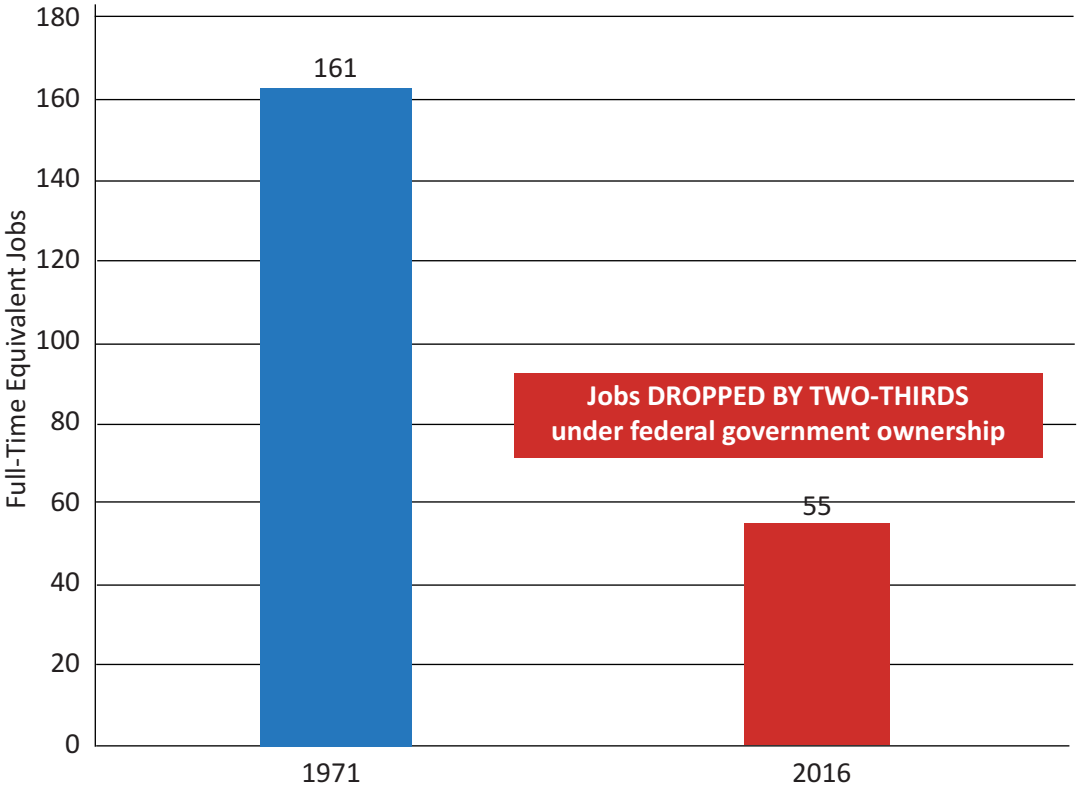
- Support the Minister of Environment and Climate Change, who is responsible for Parks Canada, in promoting Canada's National Parks and in working with nearby communities, where possible, to help grow local eco-tourism industries and create jobs.

Then / Now

ECONOMIC IMPACT in Ontario from Farming Activity on Remaining Federal Lands

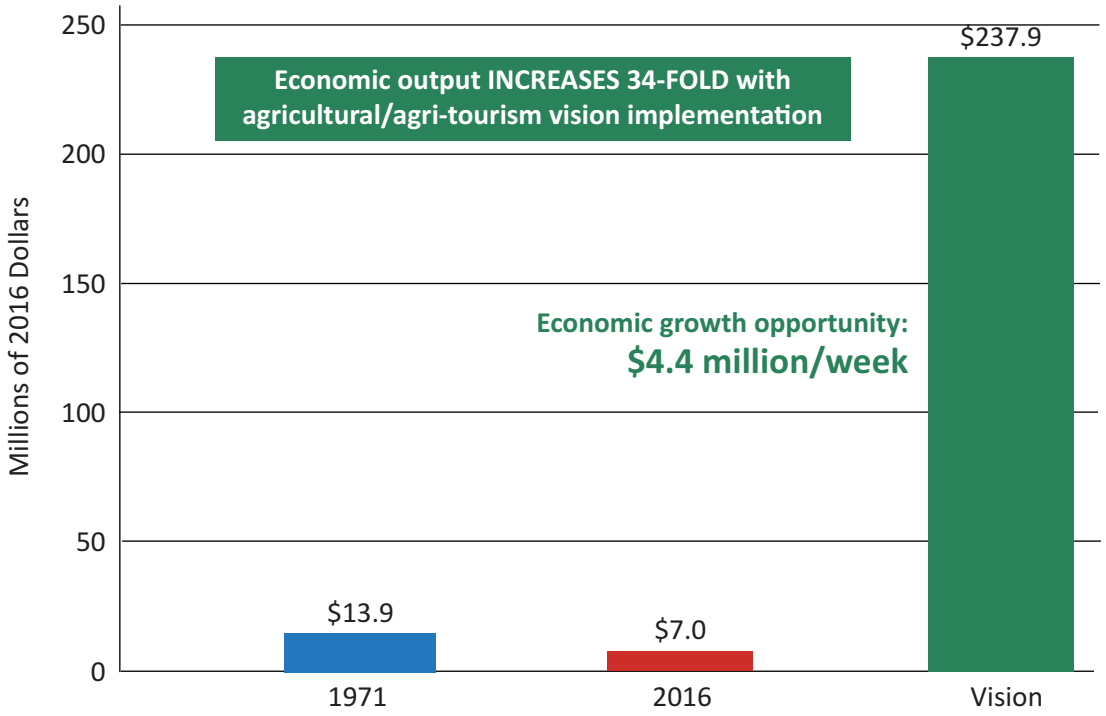


IMPACT ON JOBS in Ontario from Farming Activity on Remaining Federal Lands

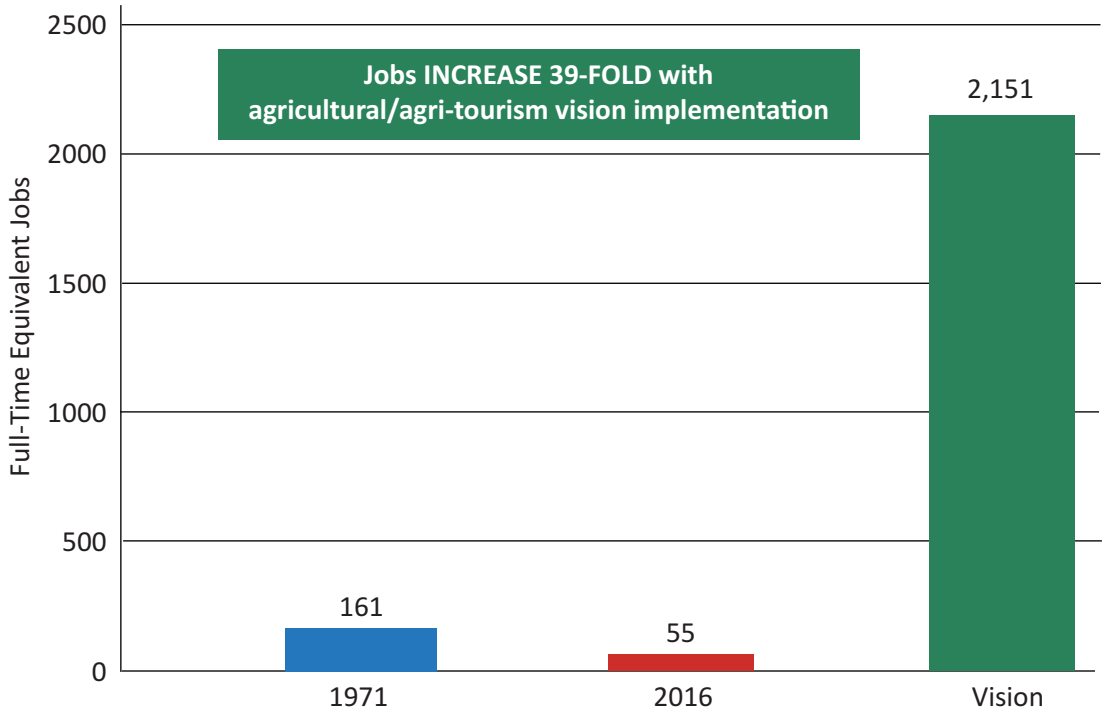


Then / Now / Vision

ECONOMIC IMPACT in Ontario from All Activity on Remaining Federal Lands

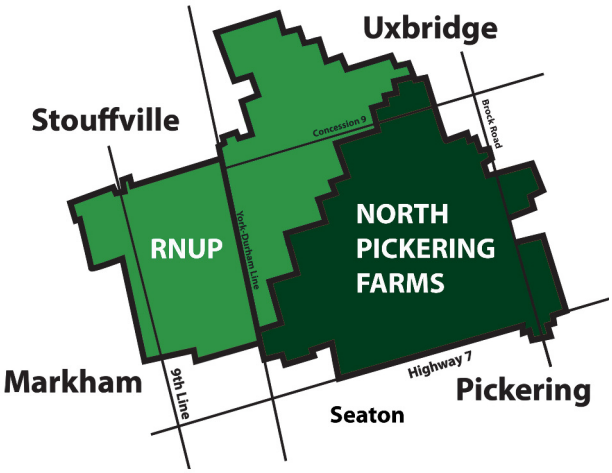


IMPACT ON JOBS in Ontario from All Activity on Remaining Federal Lands



NEXT

2019 –



The devastating consequences of climate change inform much of this document. We can no longer shrug off or deny the extreme weather events the world is experiencing almost daily – harbingers of even worse to come as our planet warms. Food insecurity and the results of climate breakdown are already matters of life and death in parts of the world.

Despite the Paris commitments, the concentrations of CO_2 in our atmosphere had reached 406.03 ppm by October 14, 2018,[1] higher than the 2015 record of 400 ppm, which at the time was the highest level since the dawn of civilization – "higher, in fact, than since the Pliocene epoch, several million years ago."[2] Without massive mitigation efforts, however painful and unpalatable they prove to be, we will reach 450 ppm by mid-century, the cut-off point for possible reversal and recovery. The coming decades will demand a complete rethinking of our priorities, our consumption habits – everything – if we and our children and theirs are to have a livable future on this planet. It is glaringly obvious that "business as usual" is no longer an option.

In that context, "demand" cannot continue to drive aviation's business model. It cannot be used as the excuse for rapid growth when so much passenger demand is elective. Similarly, the advantage of same-day or next-day commodity delivery in the bellies of large airliners will soon have to be weighed against the negative impact on the climate and environment. New policies and legislation restricting most air traffic to critical business travel and selected cargo are not inconceivable. And biofuel scarcity looks likely to play its own part in shrinking the sector.

As this document has shown, many powerful new arguments for cancelling the Pickering airport project have emerged since 1973, among them the irrationality of planning to put an airport next to a national wildlife sanctuary; the need to end the site's drain on public coffers; the need to end the economic devastation of a formerly prosperous food-producing area; the importance of protecting

Indigenous sites; the necessity of addressing the shortage of suitably located, affordable farmland for our next generation of farmers; the advisability of providing the GTA with greater food security in a time of increasing risk.

All these arguments need to be considered now by the Government of Canada. They deal with 21st-century issues that cannot be ignored or wished away. They align with the current mandates of many of this government's ministers. And they make clear that *long-term basic human needs* must govern any decision on the future of the Federal Lands.

The Lands could and should be part of the Government of Canada's efforts to meet our country's climate-change objectives. They are already a source of fresh water and could once again be a source of fresh local food and of jobs for food producers. They could be a place to facilitate agricultural research into carbon capture and climate-change adaptation. The ability to provide for our food needs will be among the most pressing challenges we face as this century unfolds, and as vulnerable food supply chains are threatened by deteriorating climate and weather conditions. The need for food is *not* elective.

It is time to consider an economically sound alternative to an airport on the Lands. Permanently protect them. Return them to their highest and best use. Transform them from a neglected asset into a high-performing one by dedicating them to agriculture, agri-tourism, and ecological protection and restoration – all those uses envisioned in "A Future for the Lands." Allow them to become the successful, beneficial, and sustainable resource they should and can be.

The lifestyle of many residents of the GTA will likely be affected as the future unfolds. Food, recreation, education, and cultural activities will be constrained by the strictures imposed by new and challenging circumstances. When cheap flights are no longer offered, when long-distance car travel is increasingly unavailable to many, where will city dwellers be able to go, via public transit, for recreation, student trips, recuperative breaks, adventures? How many local sources of fresh, safe, accessible, affordable food will there be for the GTA if California's Central Valley is no longer exporting, if food from other continents is no longer available or becomes more limited and more expensive? Would the GTA be better served by an additional airport? Or by the local food producers of North Pickering Farms?

Today we ask the Government of Canada to permanently protect this farmland, and to enable an agricultural and agri-tourism future for the Lands that will create jobs and economic activity and sustainably feed future generations in a time of unprecedented climate change. Our children's worries about the future are fully justified. If we don't act on their behalf, their inevitable question will also be a profound indictment of us: "You knew this was coming, *so why didn't you do something?*"

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