

Fanning the Flames:

The grave risk of Canada's arms exports to Israel



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Cover image: Palestinians inspect the damage following an Israeli airstrike on the El-Remal area in Gaza City on October 9, 2023. Credit: Palestinian News & Information Agency (Wafa) in contract with APImages / [CC BY-SA 3.0](#).

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Introduction

Following the October 7 attacks by Hamas, in which more than [1,000](#) Israeli civilians were killed and hundreds more kidnapped, both acts being [war crimes](#), Israel launched an [unprecedented](#) assault on the Gaza Strip. The ensuing military campaign, named Operation Iron Swords, has killed more than [18,000](#) Palestinians, with [most](#) being [civilians](#). [Amnesty International](#) has said that there is “damning evidence of war crimes in Israel’s bombing campaign”; this conclusion has been reiterated by other credible observers, including the [Office of the UN High Commissioner for Human Rights](#).

As the international community grapples with the humanitarian consequences of this conflict, a critical concern has come into focus: the flow of foreign arms to the conflict parties. Canada has long exported military goods to one of these parties – Israel – and the annual value of these transfers has recently increased.

Of particular significance is Canada’s supply of military components to the United States, some of which are later supplied to the Israel Defense Forces (IDF). These Canadian-made components include some integrated into the Israeli F-35I Joint Strike Fighter, which has reportedly been [utilized](#) in the ongoing [bombardment of Gaza](#).

The gravity of this situation calls for immediate action to ensure Canada is meeting its domestic and international obligations to mitigate the risk of contributing to violations of international law, for example, violations of international humanitarian law (IHL), including possible war crimes, in Gaza. Given the substantial risk that Canadian military goods could contribute to such abuses in Gaza, Canada must immediately halt all transfers of weapons to Israel.

Project Ploughshares is monitoring Canadian arms exports for the potential that such arms could be used in ongoing [violations](#) in other parts of the Occupied Palestinian Territories. However, the analysis of this report focuses solely on exports that relate to the humanitarian crisis in Gaza.

Canada’s arms control obligations

The Arms Trade Treaty (ATT) has been ratified by 113 states, including Canada. A key objective of the ATT ([Article 1](#)) is the establishment of the “highest possible common international standards for regulating ... the international trade in conventional arms” for the purpose of “reducing human suffering.” According to the government of Canada, Canada’s ATT obligations were integrated into the Export and Import Permits Act (EIPA) in December 2018, following the royal assent of [Bill C-47](#).

Two central obligations under the ATT are established in Article 6 and Article 7 of the Treaty text. [Article 6.3](#) declares that “a State Party shall not authorize any transfer of conventional arms ... if it has knowledge at the time of authorization that the arms or items would be used in the commission of genocide, crimes against humanity, grave breaches of the Geneva Conventions of 1949, attacks directed against civilian objects or civilians protected as such, or other war crimes as defined by international agreements to which it is a Party.”

Under [Article 7.1](#), if the export is not prohibited under Article 6, States Parties must “assess the potential” that arms transfers could be used to commit or facilitate serious violations of IHL or international human rights law (IHRL), among other considerations. If there is a substantial risk that such transfers would result in these negative consequences, and those risks cannot be mitigated, then the transfer must not take place, as set out in [Article 7.3](#).

Israel has brazenly and repeatedly violated IHL and IHRL during Operation Iron Swords. Violations include air and artillery strikes on [hospitals](#), [apartment complexes](#), [refugee camps](#), and critical [civilian infrastructure](#). These strikes have also killed an unprecedented number of [journalists](#) and [UN aid workers](#).

Some of these attacks [likely constitute](#) war crimes. In addition, Israel’s ongoing [blockade](#) of Gaza and the [mass forced displacement](#) of nearly [two million](#) civilians from northern Gaza have been cited as war crimes. UN experts have also warned of the “[increasing genocidal incitement](#)” of Israel’s operation within Gaza.

There is a substantial risk that the export of Canadian military goods to Israel could contribute to ongoing violations of IHL or IHRL. Therefore, Canadian officials must halt the further transfer of weapon systems to Israel to meet both its international obligations under the ATT and domestic obligations under the EIPA.

As per [Article 4](#) of the ATT, Canadian officials must also close loopholes that allow the unregulated export of military goods to Israel through the United States.

The growing volume of arms exports to Israel

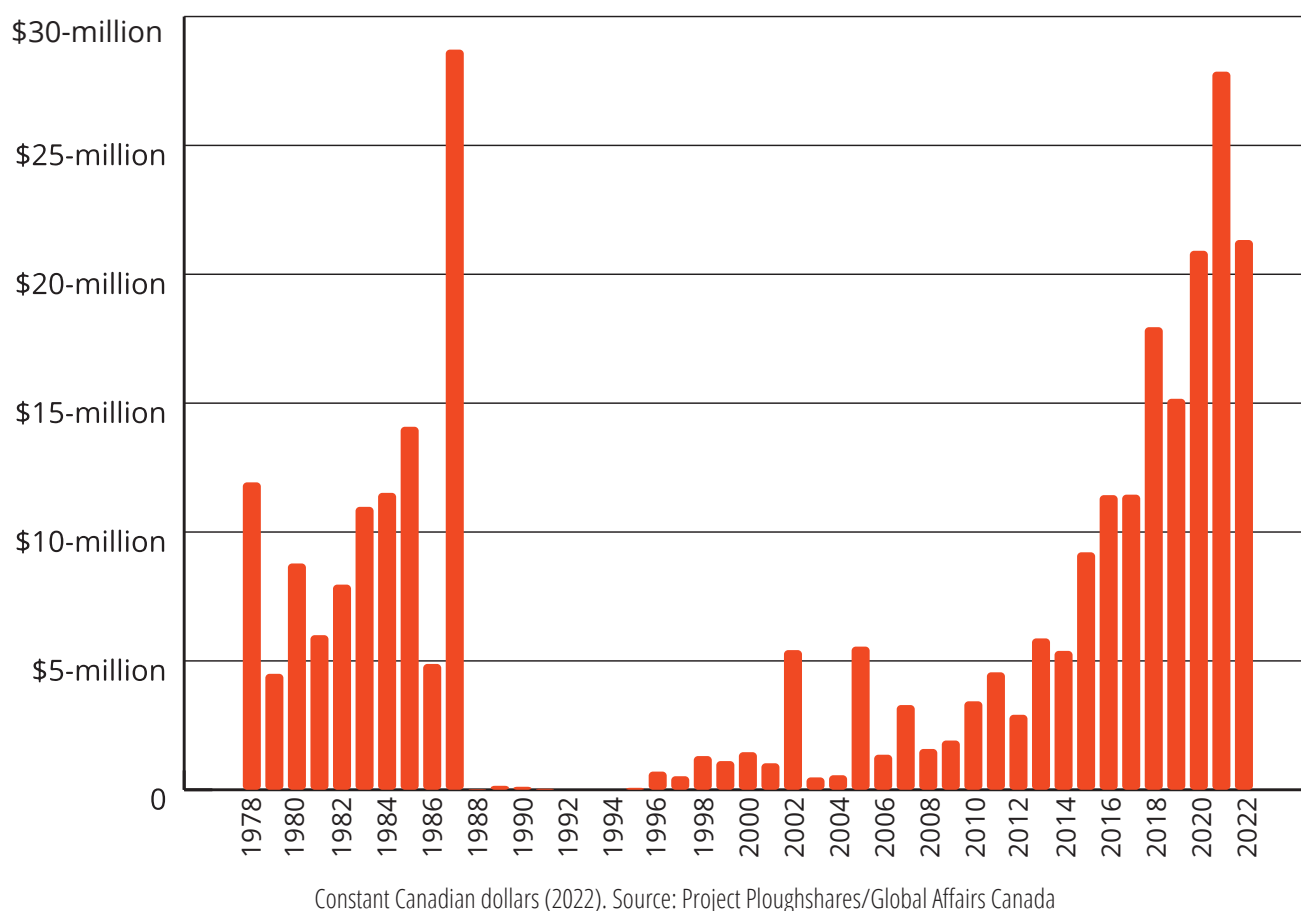
Global Affairs Canada (GAC) reports arms exports on an annual basis through the *Exports of Military Goods* report. Each report lists the value of direct military exports to each country for the prior year, according to categories of military exports listed under Group 2 (the “Munitions List”) of Canada’s [Export Control List](#) (ECL).

Canada has exported military equipment to Israel since at least 1978, when official annual records begin. Canadian military exports to Israel reached their highest-ever annual value in 1987 (\$28,716,527¹), before dropping to \$0 between 1992 and 1994. Military exports resumed in 1995 and have continued to this day.

Since 2015, the value of annual Canadian military exports to Israel has generally been [on the rise](#). For the year 2021, GAC reported exports of \$27,861,256 in military goods to Israel – the second-highest year on public record. In 2022, Canadian officials reported \$21,329,783 in Israel-bound military goods.

¹ Unless otherwise stated, all figures are in constant Canadian dollars (2022).

FIGURE 1. Annual value of Canadian military exports to Israel (1978-2022)



Since 2015, the largest annual categories of military exports to Israel by value have typically fallen into these ECL classifications:

- Category 2-4, “Bombs, torpedoes, rockets, missiles, other explosive devices and charges and related equipment and accessories, and specially designed components therefor”
- Category 2-10: “Aircraft,” “lighter-than-air vehicles,” “Unmanned Aerial Vehicles (‘UAVs’),” “aero-engines and ‘aircraft’ equipment, related equipment, and components, specially designed or modified for military use”
- Category 2-11: “Electronic equipment, ‘spacecraft’ and components.”

The annual *Exports of Military Goods* report provides an aggregate figure for goods from each ECL Category transferred to each country, without further details on the type of technology being exported or its application in the country of end-use. Without additional information, understanding the nature of these transfers is difficult, if not impossible.

A 2020-2021 [study](#) by Canada’s Standing Committee on Foreign Affairs and International Development (FAAE) into the granting of export permits to Türkiye provided partially re-

dacted records of export permits and permit applications under review for the transfer of controlled goods to a number of locations, including Israel. These records indicate that Canadian manufacturers were seeking to supply circuit boards for Israel's fleet of F-15 and V-22 aircraft, components for radios, transport vehicles, and other military goods.

FIGURE 2: Export permit applications for ECL Group 2 exports to Israel (February-May 2018)²

Applicant	Consignee ³	ECL Category	Description
2000007 ONTARIO INC./INKAS	[redacted]	2-6.b	International 7400 Truck 4x4
Viasystems Toronto, Inc.	Elbit Systems Ltd.	2-5.a, 2-6.a, 2-10.a, 2-11.a	Bare printed circuit boards
[redacted]	[redacted]	2-11.a	Waveguide filters
CMC Electronics Inc.	Elbit Systems Ltd.	2-11.a, 2-22.a	CMA-9000 flight management system for demonstration
Viasystems Toronto, Inc.	Artem Technologies Ltd.	2-15.d	Bare printed circuit boards for thermal cameras
Viasystems Toronto, Inc.	Artem Technologies Ltd.	2-10.a	Bare printed circuit boards for display in F-15 aircraft
Viasystems Toronto, Inc.	Artem Technologies Ltd.	2-10.a	Bare printed circuit boards for display in V-22 aircraft
Viasystems Toronto, Inc.	Elbit Systems Land And C4I Ltd.	2-11.a	Bare printed circuit boards for use in software-defined radios (SDR) for ground forces
[redacted]	[redacted]	2-11.a, 2-22.a, 2-21.a.1	Antenna
Viasystems Toronto, Inc.	Artem Technologies Ltd.	2-11.a	Bare printed circuit boards for use in SDR for ground forces
[redacted]	[redacted]	2-15.d	Hyperspectral Imager
Viasystems Toronto, Inc.	Artem Technologies Ltd.	2-11.a	Bare printed circuit boards for use in SDR for ground forces
[redacted]	[redacted]	2-11.a	Circulators for use in an antenna system

2 This table reflects export permit applications that were under review by Canadian officials as of May 8, 2018. Information was adapted and reproduced in the form of a simplified table. Permit applications that did not seek the transfer of any ECL Group 2 goods were not included. For original records released by Committee, see [here](#).

3 GAC defines "consignee" as the "foreign party or parties to whom the Canadian exporter will be shipping the goods or technology to directly" ([E.3.3.1](#)).

These documents provide a narrow but useful look into the precise types of technology that Canadian suppliers have sought to export to Israel. Most notable is technology controlled under ECL Groups 2-10 and 2-11, two of the three largest ECL categories of military goods by value that Canada has exported to Israel since 2015. As the Israeli Air Force has routinely committed attacks that could amount to IHL or IHRL violations while conducting airstrikes, the proposed transfer of aerospace goods categorized under ECL Group 2-10 is of particular concern as it is unclear what if any mitigation measures have been put in place to ensure that these goods are not used in the facilitation of these acts.

As there is no record of Canadian officials' denying arms export permits to Israel,⁴ it is highly likely that these proposed transfers were authorized and later occurred.

The role of the United States

The United States is not only the largest [provider](#) of military aid to Israel but is also typically the largest consumer of Canadian-made military goods in any given year. Project Ploughshares conservatively estimates that the value of annual Canadian military exports to the United States is well over C\$1-billion.

Some Canadian-made components transferred to the United States, including components integrated in the F-35 aircraft, are eventually supplied to the IDF. Because the vast majority of Canadian military exports to the United States are neither [regulated nor reported](#), exact volumes and values of these exports are not available to the public and remain unknown.

The F-35 Joint Strike Fighter

The F-35 Joint Strike Fighter is "[considered](#) to be the most technologically advanced fighter jet ever made." Produced by a consortium led by [Lockheed Martin](#), it is a multirole strike fighter aircraft that possesses advanced stealth capabilities and can engage airborne targets and targets on the ground.

The [aircraft](#) is assembled with components from manufacturers in more than a dozen countries, including Canada. Since the late 1990s, at least 110 [Canadian-based suppliers](#) have been awarded contracts for the F-35 program valued in excess of C\$3.8-billion.

Canadian suppliers have [manufactured](#) segments of the F-35's airframe and a host of internal components, including engine monitoring sensors, printed circuit boards, segments of the landing gear, inserts of the weapons bay door, and the horizontal tail of the aircraft.

According to publicly available U.S. Department of Defense federal procurement records, a number of active F-35 production contracts include subawards to Canadian aerospace

⁴ GAC has reported on export permit denials in the *Exports of Military Goods* report since 2016. Any export permit applications that were denied by Canadian officials, for any reason, are listed in Table 4 of the report.



The F-35I "Adir" aircraft is pictured at the Tel Nof Airbase near Rehovot, Israel. Credit: Amit Agronov / IDF Spokesperson's Unit / [CC BY-SA 3.0](#).

manufacturers or Canadian-based subsidiaries, including Apex Industries, Asco Aerospace Canada, Avcorp Industries, Centra Industries, Héroux-Devtek, Honeywell ASCa, and Magellan Aerospace.⁵

Canadian components produced for the F-35 program are manufactured in Canada and exported to [Fort Worth](#), Texas, to be integrated into the aircraft on the final assembly line, "Plant 4", a [government-owned](#) production facility that is operated by Lockheed Martin.

The number of Canadian-made components in an individual F-35 aircraft depends upon the variant and the date of production. However, according to industry representatives and Canadian officials, all F-35s produced include Canadian-made parts and components. An April 2018 [study](#) commissioned by Lockheed Martin outlining the economic impact of F-35 production on the Canadian economy stated that "there is \$2.3 million USD [approximately C\$3.1-million] worth of Canadian components on every F-35 jet manufactured." In January 2023, then Canadian Minister of National Defence Anita Anand [stated](#) that "approximately three thousand F-35s are forecast to be produced for partners and allies across the world – and every one of these jets will also include Canadian components – from landing gear parts, to engine parts, to software – making the F-35 a testament to Canada's world-class aerospace and defence industry."

⁵ These contracts were accessed via [Tech Inquiry](#) with relevant contract data later extracted from [USAspending.gov](#). Prime award Procurement Instrument Identifiers (PIIDs), which include subcontracts to the Canadian suppliers listed, include N00019-20-C-0009, N00019-16-C-0033, and N00019-17-C-0001.

The F-35I

Israel was the [first](#) international recipient of the F-35. The [United States](#) has provided Israel with its fleet of F-35s as a form of military aid exercised through its Foreign Military Financing [program](#). Israel is currently due to receive [75 F-35s](#), 36 of which had been delivered by November 2022. In [2018](#), Israel became the first country to use the F-35 in combat, striking targets in Syria.

The unique [Israeli F-35](#) (F-35I) is built on the ‘baseline’ F-35A. The F-35I differs from conventional F-35s because it includes certain [Israeli-made equipment](#), such as, inter alia, modified wing sets; customized command, control, communications, and computer (C4) systems; domestically produced weapon systems; and software [upgrades](#), among other modifications.

It is unclear how – or if – these modifications affect the level of Canadian-made technology retained in each F-35I. Israeli [modification](#) of the F-35A reportedly involves “add[ing] capabilities on top of the existing infrastructure,” not “changing anything inside the aircraft.” Critical aspects of the aircraft apparently unaltered on the F-35I variant include the F135 engine, elements of the landing gear, and parts of the fuselage, all of which contain Canadian components.

Israeli officials have stated that the F-35I has been used in the ongoing bombardment of Gaza. In early November, IDF Chief of Staff Lt. Gen. Herzl Halevi [said](#) that F-35Is were contributing to the bombing campaign and “destroying Hamas’s infrastructure in Gaza.” The F-35Is have reportedly been equipped with 2,000-lb GBU-31 JDAM [bombs](#).

Regulatory void

The exemptions afforded to Canadian military transfers to the United States, and eventually to Israel, reveal a larger problem. The associated lack of transparency means that the scope of the issue – that is, the extent to which other Canadian components are being filtered through the United States to Israel – is totally unknown.

All of these Canada-origin exports are still subject to American export controls, including the U.S. [Conventional Arms Transfer](#) (CAT) Policy, which was updated in February 2023 and aims to “promote norms and controls for the responsible international transfer of conventional arms and exercise restraint in transfers of weapons systems that may be destabilizing or dangerous to international peace and security.” However, the Biden administration has faced allegations of [violating](#) the CAT directive in its continued provision of arms to Israel. As well, the U.S. government recently moved to [limit](#) congressional oversight and remove restrictions on military aid to the IDF.

The excessive risk of arms flows

The risks that military goods supplied to Israel – and, in particular, technology that could be utilized in unlawful air strikes – will be used to violate IHL or IHRL is evident. By mid-December, more than [18,000](#) people had been killed across the Gaza Strip, or nearly one in 100 Gazans, with [most](#) being civilians. More than [60 per cent](#) of homes in Gaza have been

destroyed or severely damaged and almost all Gazan medical facilities are [non-operational](#). Israeli airstrikes are responsible for [most of this destruction](#).

In response to such catastrophic violence, [UN experts](#) have issued calls for states to halt the transfer of arms to all conflict parties, including Israel. [Control Arms](#), a coalition of more than 300 civil society partner organizations, including Project Ploughshares, recently urged States Parties to the ATT to “halt the transfer of arms or other items controlled by the Treaty to any combatant party to the conflict.”

In November, [Dutch civil society](#) organizations, including Oxfam Novib, PAX, and the Rights Forum, launched a legal challenge against the Netherlands for supplying F-35 components to Israel. The challenge came after [leaked reports](#) that Dutch officials were concerned that F-35 components exported to Israel could be used to commit serious IHL violations, “because Israel used the F-35s in large-scale bombings of the very densely populated Gaza Strip.”

The same month, [Human Rights Watch](#) identified Canada as an ally of Israel that “should suspend military assistance and arms sales to Israel so long as its forces commit widespread, serious abuses amounting to war crimes against Palestinian civilians with impunity.” [Human Rights Watch Canada](#) later stated that “the risks of war crimes being committed are very real” and that “if Canada knowingly continues to contribute to these attacks by supplying arms to Israel, it can be considered an accomplice to war crimes.”

Despite evidence that Israel has violated IHL and IHRL during Operation Iron Swords, which has been marked by a “shocking disregard for civilian lives,” according to [Amnesty International](#), Canadian officials recently [stated](#) that they had conducted no additional reviews on Canadian military exports to Israel since the operation in Gaza began. Yet, GAC had previously [determined](#) that providing equipment used in airstrikes to end-users who have repeatedly violated IHL while conducting airstrikes would be barred under Article 7(3) of the ATT.

Recommendations

When the IDF's conduct during Operation Iron Swords is considered, there is a substantial risk that military exports to Israel could be used in serious violations of IHL or IHRL.

In addition to direct military exports, Canadian-made parts and components continue to reach Israel via the U.S. Department of Defense. Such processes remain outside Canada's arms control regime, despite clear obligations under the ATT to control all trade and transfer of military components. [Article 4](#) of the ATT requires States Parties to “establish and maintain a national control system to regulate the export of parts and components” and to ensure that the provisions of Article 6 and Article 7 are applied to all exports of parts and components.

To safeguard against the use of Canadian technology in serious violations of IHL or IHRL and to ensure Canada's compliance with its domestic and international obligations, the government of Canada must:

- Revoke existing export, transit, and brokering permits for the transfer of goods and

technology controlled under Group 2 ("Munitions List") of Canada's Export Control List to Israel;

- Implement a presumption-of-denial policy on new export, transit, and brokering permit authorizations for such goods to Israel, with a particular focus on equipment or technology that could be used in the current violence in Gaza, or similar offensives in the future;
- As required by Article 4 of the ATT, close loopholes that allow the unregulated and unreported transfer of military goods to Israel through the U.S. Department of Defense.



Project Ploughshares is a Canadian peace research institute with a focus on disarmament efforts and international security, specifically related to the arms trade, emerging military and security technologies, nuclear weapons, and outer space.

For more information please visit: www.ploughshares.ca.