



# NUCLEAR WEAPONS: THE ONLY NUMBER THAT MATTERS IS ZERO



PHYSICIANS FOR GLOBAL SURVIVAL



## OH, CANADA: A LOOK BACK AT OUR NUCLEAR LEGACY

Since the dawn of the nuclear age, Canada has played a small but significant role in the development and proliferation of nuclear weapons. This nation could have been, and still could be, a voice of reason against the nuclear weapons menace.

## THE ONLY NUMBER THAT MATTERS IS ZERO

Weapons of mass destruction (WMDs) have the potential to kill millions and to devastate the environment with effects that persist for generations. International treaties governing WMDs include the nuclear Non-Proliferation Treaty (1970), the Biological Weapons Convention (1975), and the Chemical Weapons Convention (1977).

Chemical and biological weapons are outlawed, stigmatized, delegitimized. But nuclear weapons provide a means for states to gain and maintain political power on the international stage. The elimination of nuclear weapons, although called for by the NPT, has not been achieved.

In 1945 the world was thrust into the nuclear age with the atomic bombings of Hiroshima and Nagasaki. Each of those took about 100,000 lives immediately, and inflicted fatal and non-fatal injuries on countless more. Today's nuclear weapons are

10 to 50 times more powerful. Their massive destructive force could devastate the planet — directly, and through starvation caused by a “nuclear winter”.

From a 1980s Cold War high of 70,000, the number of nuclear warheads has dropped significantly. But going to zero is more challenging. Large warheads are sometimes replaced by smaller, strategic nuclear weapons intended to enhance the utility and acceptability of nuclear weapons by limiting collateral damage and reducing radioactive fallout. The US has earmarked one trillion dollars over the next 30 years to modernize its nuclear arsenal.



## URANIUM MINING AND THE “VILLAGE OF WIDOWS”

America's World War II initiative to develop the atomic bomb was fully supported by the United Kingdom and Canada. Initially, uranium used for the Manhattan (A-Bomb) Project came from the mine at Port Radium, N.W.T. Indigenous Dene men carried crushed radioactive ore in cloth sacks, without protective clothing. At times, these cloth sacks ripped and covered them in radioactive powder. The men were not informed of the serious, known health risks associated with the radioactive by-products of uranium.

- Because of the devastating loss of Dene men in Déline, N.W.T. to cancer in the years following

the mining at Port Radium, the town became known as the “Village of Widows”.

- About two million tons of radioactive waste were dumped into Great Bear Lake and onto adjacent land.
- The Dene, years after their labour, were horrified to learn that material they had transported had been used in the atomic bombs dropped on Hiroshima and Nagasaki.
- Besides the Dene, all the mining populations that contributed uranium to the nuclear weapons buildup during the Cold War suffered from a high incidence of radon-caused lung cancer.

## REFINING URANIUM AND THE CANADIAN FALLOUT

With the only facility for refining radioactive ores in North America, Eldorado in Port Hope became a Crown Corporation, and played an essential role in processing uranium for the top-secret Manhattan Project. The Port Radium uranium ore and 1200 tons of uranium concentrate from the Belgian Congo were refined in Port Hope.

Following World War II, Eldorado continued to process uranium for the US nuclear weapons programme; by 1959 uranium ranked as Canada's fourth-largest export. We remained the world's largest exporter of uranium until recently. Eldorado is now the privately-owned Cameco, and continues to operate in Port Hope and to produce uranium for domestic and international nuclear power.

- Radium-bearing radioactive waste from Eldorado was used extensively across Port Hope as free landfill, including in playgrounds and schools.
- Citizens' concerns of harmful radiation exposure and increasing cancer rates were countered with government assessments indicating (*SEE OVER*)

# HELP US! LET'S GET THEM DOWN TO ZERO

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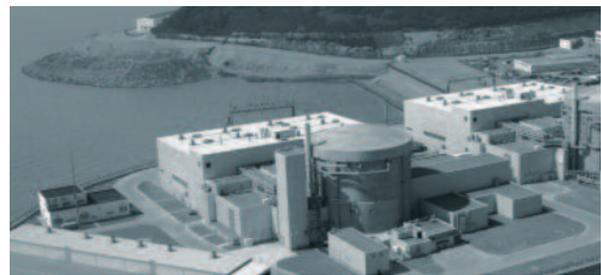
In 1985, International Physicians for the Prevention of Nuclear War (IPPNW) was awarded the Nobel Peace prize. This year, on 6 October 2017, the International Campaign to Abolish Nuclear Weapons (ICAN) was awarded the 2017 Nobel Peace Prize. Physicians for Global Survival is the Canadian Affiliate of IPPNW.



**2017 NOBEL PEACE PRIZE**  
International Campaign to Abolish  
Nuclear Weapons (ICAN)

limited to normal levels of radiation, and cancer rates comparable to communities elsewhere.

- Nevertheless, the Canadian government has implemented a billion-dollar Port Hope Project for the removal and storage of 1.2 million cubic metres of low-level radioactive waste.



## CANADA'S PEACEFUL ATOM PROLIFERATES

The nuclear Non-Proliferation Treaty (NPT) prohibits non-nuclear weapons states from obtaining nuclear weapons, while the nuclear armed states (the US, Russia, Great Britain, France, and China) proceed in good faith toward complete nuclear disarmament. In exchange, the non-nuclear weapons states are granted the right to access nuclear technology for peaceful purposes (nuclear energy).

From the 1940s, Canada embraced "Atoms for Peace" and developed its nuclear energy industry. CANDU reactors were marketed around the globe and Canadian uranium was for sale.

- Nuclear cooperation with India allowed it to develop its own nuclear energy programme.
- On 18 May 1974, India became a nuclear weapons state after testing its first atomic bomb using plutonium produced in a Canadian CIRUS (research) reactor. Canada had inadvertently enabled nuclear proliferation; in protest, Canada

- implemented a nuclear embargo on India.
- In 2013, the Canada-India Nuclear Cooperation Agreement came into force: a \$350 million, five-year contract for uranium exports to India.
- India has never been a signatory to the NPT, and has an estimated nuclear arsenal of over 100 warheads. South Asia remains a hotspot for potential nuclear armed conflict. The remaining nuclear armed states (Pakistan, Israel, and North Korea) also remain non-signatories to the NPT.
- Even if Canadian uranium were used only for nuclear power, it would free up Indian uranium for its nuclear weapons programme.

## THE TREATY ON THE PROHIBITION OF NUCLEAR WEAPONS: NOT THERE/ DON'T CARE

As a member state of the North Atlantic Treaty Organization (NATO), Canada supports the position that "as long as nuclear weapons exist, NATO will remain a nuclear alliance".

- Canada voted "no" to Bill L41, the 2016 UN General Assembly resolution to establish a mandate for nations to negotiate a Nuclear Weapons Ban treaty, and did not participate in the 2017 Nuclear Ban Treaty Negotiations.
- These actions are in line with a directive from the US Mission to NATO in a memo sent to members on 17 October 2016, claiming a Nuclear Ban Treaty would undermine the current disarmament process and the security of NATO nations.
- Canadian Prime Minister Justin Trudeau called the Ban Treaty negotiations "useless" as nuclear weapons states had boycotted the meetings.

122 countries voted in favour of the Ban treaty; Singapore abstained, and the Netherlands (a NATO

member) participated in the negotiations but eventually voted against it. Although Canada did not participate in the negotiations, it could still become a signatory to the Ban Treaty and agree to the international terms laid out for progression to a nuclear weapons-free world.

## ADDING A NEW CHAPTER TO THE CANADIAN NUCLEAR LEGACY

As nuclear threats grew to challenge global security, Canada focused on preventing proliferation of nuclear weapons, rather than total disarmament.

- Canada was the first nation technologically capable of developing nuclear weapons that declined to pursue its own nuclear weapons programme.
- In 1968, Prime Minister Lester B. Pearson declared there would be no further export of Canadian uranium for nuclear bombs.
- Canada ended its NATO commitment to host the US nuclear weapons on its soil, becoming nuclear weapons-free in 1984.
- Canada's Senate and the House of Commons unanimously passed a 2010 resolution calling on the Government of Canada to "deploy a major world-wide Canadian diplomatic initiative in support of preventing nuclear proliferation and increasing the rate of nuclear disarmament". Sadly, a subsequent prorogation of Parliament terminated the resolution without fulfillment.
- Canada continues to be deeply involved in the ongoing Fissile Material Cut-Off Treaty, an initiative to halt the production of new fissile material (highly-enriched uranium, plutonium) for nuclear weapons.

Canadian initiative and leadership helped the treaty to ban landmines, often referred to simply as the

Ottawa Treaty, become international law in 1999. Lack of support from nuclear superpowers including the US, Russia and China did not derail the process: landmine possession and use will forever remain stigmatized, delegitimized, and illegal.

On 20 September 2017, the Treaty on the Prohibition of Nuclear Weapons was opened for signatures. By signing, Canada and Canadians can start a new chapter in our nuclear legacy — for our nation, our planet, and future generations.

## JOIN US! TOGETHER WE CAN HELP MAKE THE WORLD A SAFER PLACE.

**On 6 October 2017, the International Campaign to Abolish Nuclear Weapons (ICAN) was awarded the 2017 Nobel Peace Prize.** ICAN was initiated in 2007 by International Physicians for the Prevention of Nuclear War (IPPNW) of which Physicians for Global Survival is the Canadian affiliate.

Our sister organization, Canadian Physicians for Research and Education in Peace, promotes education on the risks of nuclear conflict and accidents. We need your help to continue to be effective in bringing progress on this issue. Together, we can make a world of difference ... **Join us today!**



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**Canadian Physicians for Research and Education in Peace**



Affiliate of International Physicians for the Prevention of Nuclear War

## YES! Count me in!

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