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## Opportunity Costs: Militarism and Nuclear Weapons



The cost of nuclear weapons can be thought of in many ways: the astronomical economic outlay for the development, production, and maintenance of nuclear warheads and associated delivery technologies; the human cost suffered by Japan in 1945, or projected in models of global thermonuclear war; and the environmental impact that has left a permanent radioactive mark on the geological record, a before-times and after-times, visible everywhere on Earth.

In this issue of MEDED, we highlight the broad array of opportunity costs that have come with maintaining a nuclear arsenal, both in the U.S. and globally. We also look beyond, and ask why, given the obvious and existential nature of these costs, do we continue down this path? Finally, we will use those lessons to suggest how our efforts toward total denuclearization might best be targeted.

### The Monetary Cost of Nuclear Weapons

It is estimated that the [U.S. spent almost \\$6 trillion](#) related to nuclear weapons between 1940 and 1996, representing 11% of all government expenditure over that period. Today, billions more are spent every year maintaining a state of nuclear readiness. In 2020, the Poor People's Campaign released their 'Moral Budget' in which they argue that the U.S. could save over \$40 billion annually by dismantling their nuclear arsenals. Additionally, a program to renew and modernize the U.S. nuclear arsenal is [expected to cost a further \\$1.2 trillion](#) over the next 30 years.

**How much  
do you pay for  
nuclear  
weapons?**



For over three decades, the [Nuclear Weapons Community Costs Program](#) at the Los Angeles chapter of Physicians for Social Responsibility (PSR-LA), led by Robert Dodge, MD, has been calculating the individual and community tax burden of U.S. nuclear weapons spending.

In FY 2020, verified U.S. nuclear weapons programs expenditures totalled \$67.595 billion, over \$619 million of which was paid by lowans. On average, each individual (adults and children) in our nation paid \$205.93.

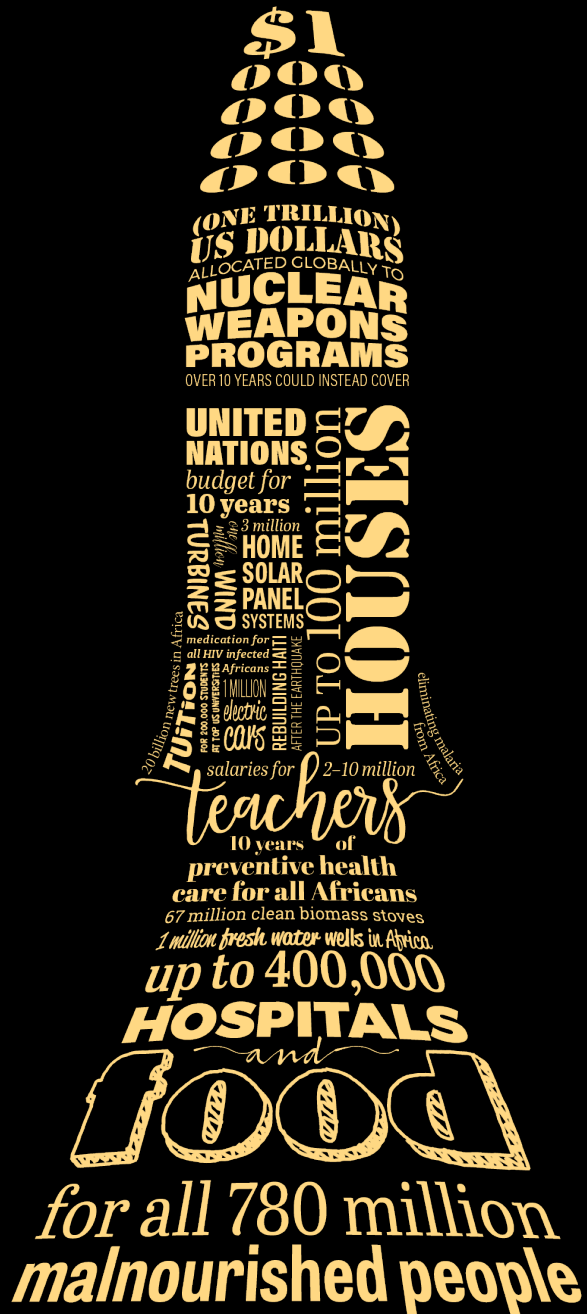
In 2019, the nine nuclear-armed countries [spent a combined \\$72.9 billion](#) on nuclear weapons-related expenditures. That's almost \$140,000 every single minute, and \$7.1 billion more than was spent the previous year. It's a staggering amount of money that could literally feed, house, clothe, and care for hundreds of millions of people globally. It's also around half the amount of money Elon Musk added to his net worth in 2020 alone. This problem is systemic, with wide-ranging costs that go far beyond questions of money and the mere redistribution of government funding.

### Opportunity costs of nuclear-weapons programs:

In the next 10 years, \$1 trillion USD will be invested globally into the development and maintenance of nuclear-weapons programs.

This money could instead cover all the following:

- Feeding all 780 million malnourished people in the world for 10 years;
- Building 2–100 million houses;
- Building 400–400,000 hospitals or clinics;
- Yearly salaries for 2–10 million teachers;
- Preventive health care for all Africans, reducing infant and maternal mortality by 80%;
- UN budget for ten years;
- 3 million home solar panel systems;
- 1 million wind turbines;
- 1 million electric cars;
- Tuition for 200,000 students for 5 years each at top U.S. universities;
- 10 years of ART drugs for all 28 million HIV infected people in Africa;
- Rebuilding Haiti after the earthquake;
- 67 million clean biomass stoves saving 4 million lives per year;
- Planting and growing 20 billion trees in Africa;
- Eliminating malaria in 10 years saving half million lives per year; and
- 1 million fresh water wells in Africa.



## Looking Beyond Monetary Costs

Not all opportunity costs can, or should, be considered in monetary terms. Environmental and human costs have already been incurred that will last decades and generations. These costs were often incurred through deliberate choices over impacted areas and peoples with no voice and no power to object.

Some places on Earth are so toxic due to nuclear testing or meltdowns that all our leaders can think to do is place a concrete dome over the top and hope for the best. There is widespread agreement that the surrounding areas and all those storage and production sites around the world with “low-level” contamination can and should be cleaned of the most contaminated materials and allowed to heal over time through rewilding. The risk and fears attached to such sites make human exclusion an easy case to make; the resulting expansion of wild ecosystems would significantly contribute to carbon sequestration and biodiversity protection globally.

Evidence for this can be found in the Chernobyl Exclusion Zone (CEZ) in Ukraine, established following the devastating nuclear meltdown in 1986. The CEZ has become something of an accidental experiment in rewilding and nature’s capacity to heal. The results are mixed but promising. The United Nations Environment Program reports that the lack of human activity, the rewilding of mono-cropped pine forests, and relative safety from hunters have made Chernobyl something of a haven for wildlife, with large populations of lynx, elk, and wolves at the apex of a biodiverse ecology. However, evidence of negative impacts on fertility, population numbers, and genetic mutations in areas of high contamination has been found. While rewilding can help the environment decontaminate an area, the risk remains for individual organisms and species particularly affected by the consequences of radiological exposure.

Numerous indigenous communities around the world whose land was used for uranium mining, the production and storage of nuclear materials, and nuclear bomb tests have experienced increased rates of cancer, leukemia, and birth defects. In Nevada, the Western Shoshone remains the single most bombed nation on Earth, where there have been over 900 nuclear tests conducted on their stolen land. In Kazakhstan, where the Soviets detonated over 450 nuclear weapons, people continue to experience serious health consequences.

From Africa to the South Pacific to Latin America, hundreds of indigenous communities whose health and lives have been sacrificed and whose opportunity costs cannot be quantified. However, we do know that the only way they can be remedied is through water and land sovereignty, compensation, and a broad and comprehensive effort to clean up areas of high contamination that continue to threaten the lives of millions of people and animals around the world.

Ultimately, the greatest opportunity cost associated with nuclear weapons is one that few would live to see: the opportunity for intelligent life to continue to evolve as a productive, functioning civilization. Who knows what we could be capable of if those in power finally stepped back from the brink and undid the damage already caused.

## Why haven't these arguments succeeded?

Expensive, tactically useless, politically untenable, ecologically and physiologically dangerous, a legacy of toxic waste at best, and mutually assured destruction at worst:

nuclear weapons were and remain a terrible idea. And that's before one considers the increasing threat of climate change, mass extinction, pandemics, and the already dangerously high levels of inequality. Despite generations of academics and activists, the world over repeating these arguments, nuclear weapons development continues, and tens of thousands of nuclear warheads still exist.

Presenting the cost of nuclear weapons in a monetary or budgetary framing appears to engage with decision-makers in language and rationale that will resonate with them. The economic philosophy behind the argument has now been proven to be inaccurate. As Modern Monetary Theory shows, the U.S. and other sovereign currency nations can and do literally create money out of thin air as fears about resulting hyperinflation have so far proven to be unfounded. This means there has never been a choice between nuclear weapons or schools and hospitals. Nuclear-armed states are quite capable of doing both simultaneously *should they wish*. In particular, the U.S. and UK continue to spend billions on such weapons whilst also cutting social welfare spending and dragging their feet on effective COVID-19 relief.

Moreover, the opportunity costs of nuclear weapons are not only financial but also include:

- the human intelligence, expertise, and research efforts wasted when focused on these death machines vs. working to discover, design, develop elements/projects/processes that contribute to human/planetary well-being
- the physical and rare metals, resources that are diverted to create death machines rather than being used for the projects and processes that contribute to social well-being.
- the deadening of the social spirit that amplifies fear of others and clings to such omnicidal weapons as a form of security, rather than fostering mutual social support and uplift.

The thought processes and dynamics involved in nuclear policy aren't derived through consistent logic but rather the product of ideological and institutionalized beliefs many decades in the making. Profit-motives, corruption, reputational and economic dependencies, and the generations of propaganda used to justify and celebrate nuclear weapons have created a cultural force that drives development and deployment onward, even against mounting global opposition.

**"When you spend 90 times more on the Department of Defense than you do on the Centers for Disease Control, we're doing it wrong."**

Rep. Mark Pocan, co-chair, Congressional Progressive Caucus

## Where do we go from here?

Like climate change and mass extinction, denuclearization is a systemic challenge that will not be solved by appealing to facts and reason. Instead, we must treat the problem as a *system*, find the weak points, and pressure them repeatedly until the system itself is forced to change.

Many of the corporations involved in the production and maintenance of nuclear weapons make most of their revenue-producing non-nuclear products. The private sector represents a weak point in the system, with economic motives and interests that can be exploited. The combination of public criticism, divestment, boycotts, and direct actions to increase the economic and reputational costs of doing business can be highly effective. Should a corporation conclude that continued profiteering from nuclear weapons threatens the whole company's financial well-being, they may decide the contract for that one particular component isn't worth the risk.

Though these are not new ideas, the capacity for such a campaign to explode into life and be effective has never been greater. Effective global campaigns that directly target those companies and directors implicated in the nuclear weapons industry and their customers

are emerging, such as [Don't Bank on the Bomb](#). Efforts must continue building the tools and doing the research that similar campaigns will need. The causes of those fighting injustices associated with nuclear weapons, especially indigenous communities around the world fighting to win back, protect, and repair their sullied and stolen lands must be supported!

Multifaceted, organic, and cellular strategies could advance the goal of denuclearization in the U.S, UK, and France. For the remaining nuclear powers, nuclear weapons programs are more strongly associated with national pride and identity. Yet, we shouldn't discount the possibility that the harder and more expensive it becomes to maintain nuclear arsenals, the greater the incentive nuclear states will have to pursue total disarmament.

In the face of a global campaign, there will be significant opportunity costs involved for nations dragging their feet in ridding the world of this monstrous threat.

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## Steps We Can Take

**Distribute information and artwork**, such as the downloadable image (featured above) of the [Move the Nuclear Weapons Money](#) campaign, which illustrates the opportunity costs of nuclear-weapons programs around the world.

**Calculate the Monetary Cost** to you and your communities to cover U.S. nuclear weapons programs expenditures.

**Boycott & Divest** - Annual [Don't Bank on the Bomb](#) (DBOTB) reports contain information on the private companies involved in the production of nuclear weapons and their financiers, as well as profiles of institutions that limit or prohibit any financial engagement with companies associated with the production of nuclear weapons.

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This powerful video features the spoken word poem, "[Anointed](#)," by Marshall Islander Kathy Jetñil-Kijiner. The poet tells ancient stories and reflects on some of the innumerable impacts of nuclear weapons to the Marshall Islands. We see communities of people in Enewetak Atoll who have returned home after three decades displacement. Their community is just 15 miles downwind from the infamous radioactive waste site on Runit Island. This passionate poet takes brave steps physically and through her art to share their unimaginable experience with the world, and sends a plea to support the Treaty on the Prohibition of Nuclear Weapons (TPNW).



*"To get to this tomb take a canoe. Take a canoe through  
miles of scattered sun. Swallow endless swirling sea.  
Gulp down radioactive lagoon...  
You were a whole island, once...  
then you became testing ground...  
Here is a story of a people on fire – we pretend it is not  
burning all of us...  
Who anointed them with the power to burn?"*

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## Learn More

["World nuclear arms spending hit \\$73bn last year – half of it by US"](#) (May 13, 2020) *The Guardian*

["Weapons, Opportunity Costs, COVID19 and Avoiding Nuclear War"](#) (May 11, 2020) *Stanford University*

["Surging U.S. Nuclear Weapons Budget a Growing Danger"](#) (March 19, 2020) *Arms Control Association*

["Enough is Enough: Global Nuclear Weapons Spending 2019"](#) (2020) *International Campaign to Abolish Nuclear Weapons (ICAN)*

["Beyond the Bomb: Global expulsion of nuclear weapon producers"](#) (2019) *ICAN and PAX*

["Your retirement account probably funds nuclear weapons — here are the top 20 biggest companies and investors"](#) (March 2018) *Business Insider*

["Nuclear Weapons: Who Pays, Who Profits?"](#) (May 12, 2017) by William Hartung, *Arms and Security Project, Center for International Policy*

["The opportunity cost of world military spending"](#) (April 5, 2016) *Stockholm International Peace Research Institute*

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[Physicians for Social Responsibility - Iowa Chapter](#)



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