

2021

MOVE THE MONEY FROM MILITARY TO SOCIAL PURPOSES

IPB





About the publication

This brochure is based on different reports (e.g., ICAN's 2021 report, SIPRI Yearbook 2021, the research of the Bulletin of the Atomic Scientists, etc.) in order to provide an overview of the use of nuclear weapons by the World Nuclear Forces. Although the brochure is intended to be informative, the data is used to emphasize the need of reallocating economic resources spent on military and nuclear developments to invest them into social purposes.

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INTRODUCTION

According to the Stockholm Peace Research Institute (SIPRI), about 1.981 billion US dollars were spent on military and armaments worldwide in 2020. That is about \$241 per capita of the world's population, or 66 cents per day for every man, woman, and child on the planet. By comparison, the United Nations World Food Program has raised \$8.471.801.083 as of July 2021. With these funds, the organization supported 97 million people in 88 countries. Nevertheless, 690 million people worldwide go hungry, and two billion suffer from malnutrition.

Some 3.1 million children under the age of 5 die of hunger each year, and a child starves to death every 10 seconds. The UN World Food Program could feed one of these children for an entire day for 40 cents. That would cost \$452.6 million a year. If we calculate more generously with an amount of 10 US dollars per day per child, this would cost 11.315 billion US dollars per year.

That is just 1/169th of the 1917 billion US dollars spent on armaments and the military worldwide. For \$10 a day, a child might then even be able to attend school and find medical help in an outpatient clinic if he or she got sick.

Nuclear weapons instead of "public health"

Country Spending On Nuclear Weapons In 2020		
 The United States	\$37.4 billion ⌚ \$70,881 / minute	
 China	\$10.1 billion ⌚ \$19,149 / minute	
 Russia	\$8 billion ⌚ \$15,222 / minute	
 The United Kingdom	\$6.2 billion ⌚ \$11,769 / minute	
 France	\$5.7 billion ⌚ \$10,786 / minute	
 India	\$2.48 billion ⌚ \$4,567 / minute	
 Israel	\$1.1 billion ⌚ \$2,059 / minute	
 Pakistan	\$1 billion ⌚ \$1,968 / minute	
 North Korea	\$667 million ⌚ \$1,265 / minute	
 2020 Total	\$72.6 billion ⌚ \$137,666 / minute	

In 2019 nine states worldwide spent \$71.2 billion on nuclear weapons. In 2020 this amount increased to a total of \$72.6 billion. That is about \$137,000 per minute and \$1.4 billion more than in 2019. Isn't it absurd to spend \$137,000 every minute on weapons that could cause catastrophic human harm instead of spending it to protect the health of citizens? Aren't they (governments) ignoring their duty to protect their people?

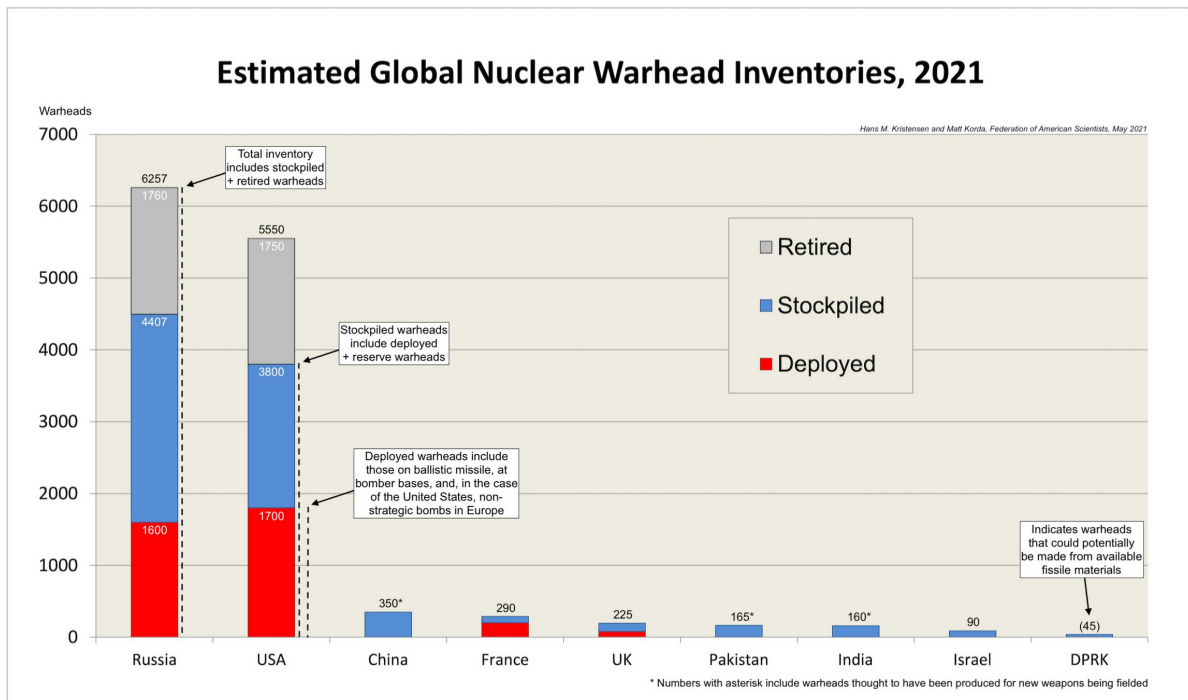
With this brochure we want to give an overview of the costs of nuclear armament of all nine nuclear powers and clarify the amount of resources that are wasted on the possible destruction of life on our planet.

Source: ICAN, Complicit: 2020 Global Nuclear Weapons Spending.

We want to make it clear that nuclear disarmament is a necessary step towards a much needed social-ecological peace transformation.

Politicians must act - worldwide, in every single country, and especially in the nuclear weapons states, the “nuclear sharing” countries and the “nuclear umbrella” countries.

The peace movement and trade unions are called upon to help greatly increase social pressure on the need to abolish all nuclear weapons.



Source: Hans M. Kristensen & Matt Kord, Status of World Nuclear Forces (2021)

I.China's nuclear power: A general overview



Number of Nuclear Warheads	Nuclear Weapons Costs	Military Expenditures
350 (2021)*	\$10.1 billion (2020)**	\$252 billion (2020)***

*Hans M. Kristensen & Matt Korda, 2021

** ICAN, 2021

*** SIPRI, 2021

The Bulletin of Atomic Scientists has estimated that China has a stockpile of around 350 nuclear warheads, with about 272 assigned to delivery by over 240 operational land-based ballistic missiles, approximately 48 sea-based ballistic missiles, and 20 nuclear gravity bombs assigned to bombers. The remaining 78 warheads are intended to arm additional land- and sea-based missiles that are in the process of being fielded. Nevertheless, the Pentagon's 2020 report affirms that China's operational warheads are in the low-200s. The lack of public information provided by the Chinese Government makes it difficult to assign specific numbers, but some estimation methods have provided figures.

China's nuclear-capable missile arsenal is very varied, it includes Intercontinental Ballistic Missiles (ICBMs) such as: silo-based, liquid fuelled DF-5A (CSS-4 Mod 2), DF-5B (CSS-4 Mod 3) and DF-5C (CSS-4 Mod 4) ICBMs; solid-fuelled, road-mobile DF-31 (CSS-10 Mod 1), DF-31A (CSS-10 Mod 2) and DF-31AG (CSS-10 Mod 2) ICBMs; and limited-range DF-4 (CSS-3) ICBMs. China also possesses short-range, solid-fuelled DF-15 (CSS-6) and DF-31 (CSS-10) missiles mounted on mobile launchers, among others.

Nuclear strategy and policy

The Chinese Government declares that China's nuclear strategy is based on self-defense and no-first-use. This means that the national strategy is based on deterrence, and the nuclear arsenal will potentially be used in case China receives a nuclear attack. However, research has shown that China is modernizing and diversifying its nuclear forces as part of a long-term program to develop a more survivable and robust deterrence posture.

Cost of nuclear weapons

According to ICAN 2021's report, China spent four percent of total military spending on nuclear weapons in 2010. This is equivalent to \$10.1 billion. Although the estimated costs result from seriously considered methodologies, it is important to highlight that China's official defense budget does not include all its military-related expenses.

II. French Nuclear Forces: Modernisation of its Nuclear Arsenal



Number of Nuclear Warheads	Nuclear Weapons Costs	Military Spending
290 (2021)*	\$5.7 billion (2020)**	\$52.7 billion (2020)***

*Hans M. Kristensen & Matt Korda, 2021

** ICAN, 2021

*** SIPRI, 2021

Overview

France's nuclear arsenal consists of approximately 290 warheads, of which some 280 are deployed. The warheads are earmarked for delivery by 48 submarine-launched ballistic missiles (SLBMs) and 50 air-launched cruise missiles (ALCMs) produced for land- and carrier-based aircraft, as shown in the graphic below (Table 10.5). Thus, France considers its entire nuclear arsenal to be strategic, even though the weapons carried by the airborne component of its nuclear forces have characteristics (i.e., a limited range and yield) that other nuclear-armed states consider to be tactical.

Table 10.5. French nuclear forces, January 2020

Type	No. deployed	Year first deployed	Range (km) ^d	Warheads x yield	No. of warheads
<i>Land-based aircraft</i>					
Rafale BF3 ^b	40	2010–11	2 000	1 x [up to 300 kt] TNA ^c	40
<i>Carrier-based aircraft</i>					
Rafale MF3 ^b	10	2010–11	2 000	1 x [up to 300 kt] TNA ^c	10
<i>Submarine-launched ballistic missiles^d</i>					
M51.1	16	2010	>6 000	4–6 x 100 kt TN-75	80 ^e
M51.2	32 ^f	2017	>9 000 ^g	4–6 x 100 kt TNO	160
M51.3 ^h	0	[2025]	>[9 000]	[up to 6 x 100 kt] TNO	0
Total					290^f

Source: SIPRI Yearbook, 2020

As highlighted by SIPRI in its last report, the main component of France's nuclear forces is the Strategic Oceanic Force (Force Océanique Stratégique, FOST). The arsenal consists of four Triomphant class nuclear-powered ballistic missile submarines (SSBNs) based on the Île Longue peninsula near Brest. The submarines were put into operational service in 1997, replacing six older redoubtable class SSBNs. The French Navy has maintained a continuous at-sea deterrent posture.

France continues to modernize its nuclear arsenal. In 2018 the French Navy completed work to modify the Triomphant class submarines to carry the M51 SLBM, which replaced the M45 missile. The M51 is currently deployed in two versions. The M51.1 is capable of carrying up to six multiple independently targetable re-entry vehicle (MIRV) TN-75 warheads, each with an explosive yield of 100 kilotons. It is being replaced by an upgraded version known as M51.2, with a more considerable range and improved accuracy.

Nuclear strategy and policy

On 7 February 2020, in his speech at the École de Guerre, French President, Emmanuel Macron, reaffirmed France's traditional position since General de Gaulle: "Our nuclear deterrent force remains, as a last resort, the keystone of our security and the guarantee of our vital interests." He added the following new element: "Our nuclear forces strengthen Europe's security by their very existence and in this respect have a genuinely European dimension."

By defending this "European dimension," he is taking a dangerous step towards a new horizontal proliferation of nuclear weapons; he also underlines that the French deterrent force fits NATO's strategic concept. Like NATO, Macron calls for substantial increases in military budgets in Europe. He confirmed France's willingness to pursue its programme of "modernization" of its nuclear arsenal.

Finally, he indicated that the use of French nuclear weapons was possible, even in the event of a non-nuclear threat, stating that deterrence was aimed at "any threat of state origin against our vital interests, wherever it comes from and whatever its form." He added that to preserve its vital interests, France might have to issue "a single, non-renewable nuclear warning."

Cost of nuclear weapons

For the years 2014 to 2019, € 23.3 billion were allocated to nuclear deterrence. Later, the law on military planning from 2019 to 2025 gave € 37 billion to maintain and modernize France's nuclear forces and infrastructure.

For the first time since the 1980s, the defense budget will reach a total of € 39.2 billion in 2021, i.e., an increase of 1.7 billion euros, which is 4.5% more than in 2020. The 2017 defense budget allocated € 3.2 billion for nuclear forces; it increased to € 4.7 billion in 2020 and will reach around 6 or 7 billion euros per year in the coming years. Thus, over 15 years, at least € 100 billion will be devoted to nuclear weapons in the defense budget alone (research spending comes under a different budget and is difficult to determine).

III. India's nuclear policy: status of its nuclear warheads



Number of Nuclear Warheads	Nuclear Weapons Costs	Military Spending
160 (2021)*	\$2.48 billion (2020)**	\$72.9 billion (2020)***

*Hans M. Kristensen & Matt Korda, 2021
** ICAN, 2021
*** ICAN, 2021

Overview

As of March 2021, India was estimated to have an arsenal of approximately 160 nuclear weapons. According to The Bulletin of Atomic Scientists, India operates eight nuclear-capable systems: two aircraft, four land-based ballistic missiles, and two sea-based ballistic missiles. Reports indicate that at least three more systems are in progress. Furthermore, some estimations suggest that India has produced approximately 600 kilograms of weapon-grade plutonium, sufficient for 150–200 nuclear warheads.

India's nuclear weapons are believed to be single-stage plutonium-based implosion designs. The plutonium was produced at the Bhabha Atomic Research Centre (BARC) in Trombay, Mumbai, and it has been reported that there are plans to build a new 100 MW(t) reactor near Visakhapatnam in Andhra Pradesh.

India has four types of operational land-based missiles: the short-range Prithvi-II and Agni-I, the medium-range Agni-II, and the intermediate-range Agni-III. Reports also inform that at least two other longer-range Agni missiles are in development and nearing completion: the Agni-IV and Agni-V. In addition, India is developing a ground-launched cruise missile.

Additionally, India operates a ship-launched, nuclear-capable missile. Furthermore, it develops two submarine-launched ballistic missiles for eventual deployment on a small fleet of nuclear-powered ballistic missile submarines.

Nuclear strategy and policy

India has declared a policy of no-first-use of nuclear weapons. However, research has shown that India is expanding the size of its nuclear weapon stockpile and its infrastructure for producing nuclear warheads. Moreover, normative concerns about nuclear weapons have been raised in India. Many of India's prime ministers from the Congress Party were deeply ambivalent about the nuclear weapons approach.

Tensions with Pakistan have played a significant role. These two nuclear-armed countries are engaged in open hostilities. While India's primary deterrence relationship is with Pakistan, nuclear modernization shows that it is probably focusing on its future strategic relationship with China. For example, all the new Agni missiles have ranges that indicate their primary target is China.

The defense minister Rajnath Singh has publicly questioned India's future commitment to its no-first-use policy by tweeting in August 2019 that "India has strictly adhered to this doctrine. What happens in the future depends on the circumstances". However, some scholars believe India appears to be in a doctrinal drift away from its NFU policy and strategic restraint.

Cost of nuclear weapons

According to ICAN's last report (2021), India spent around \$2.48 billion on nuclear weapons in 2020. No official data has been publicly disclosed.

IV. Israel's nuclear forces: overview



Number of Nuclear Warheads	Nuclear Weapons Costs	Military Spending
90 (2021)*	\$1.1 billion (2020)**	\$21.7 (2020)***

*Hans M. Kristensen & Matt Korda, 2021

** ICAN, 2021

*** SIPRI, 2021

Determining the extent of Israel's nuclear arsenal has been extremely difficult due to a lack of information. Recent estimations claim that it has approximately 90 nuclear warheads: 30 aircraft, 50 land-based Jericho ballistic missiles, and 10 cruise missiles. Nevertheless, this information has never been confirmed by the Israeli Government. Furthermore, it is believed Israel has produced enough plutonium for 100-200 weapons. As mentioned by the Arms Control Association, "it is assumed by some analysts that Israel has a uranium-enrichment program, although there is not enough evidence to support a credible estimate of how much highly enriched uranium (HEU) Israel might have produced."

Nuclear strategy and policy

Israel is considered a *de facto* nuclear-weapon state. It is not a State Party to the NPT. Israel's nuclear policy is ambiguous, as the Government neither affirms nor denies the possession of nuclear weapons. Since 1963 Israel's official declaratory policy has stated that "Israel will not be the first country to introduce nuclear weapons in the Middle East." Therefore, experts think that Israel's policy of opacity could change if another country in the Middle East acquires nuclear weapons. In 2018, Israel admitted that its fighter jets bombed the al-Kibar nuclear facility in Deir al-Zour, Syria, on September 6th, 2007.

Cost of nuclear weapons

The latest data sources provided by ICAN establish that Israel spent around \$1.1 billion on nuclear weapons in 2020. This number represents five percent of Israel's military expending.

V. North Korean nuclear forces : overview



Number of Nuclear Warheads	Nuclear Weapons Costs	Military Spending
40 (2021)*	\$667 million (2020)**	Around \$3.7 billion (2017)***

*Hans M. Kristensen & Matt Korda, 2021

** ICAN, 2021

*** US State Department, 2019

North Korea is estimated to have a nuclear stockpile of around 40 warheads. This is based on calculations of the amount of fissile material, plutonium, and highly enriched uranium (HEU), that North Korea is thought to have produced for use in nuclear weapons. Other factors, such as assumptions about weapon design and manufacturing capabilities, are also considered.

The Bulletin of the Atomic Scientists states that by 2018 North Korea had detonated six nuclear devices and test-flown a variety of new ballistic missiles that potentially put the United States and Europe within range.

Moreover, according to a report produced by Seoul-based Asan Institute for Policy Studies, North Korea's nuclear arsenal will continue to increase in the next years, possibly reaching up to 242 nuclear warheads and dozens of intercontinental ballistic missiles by 2027.

Nuclear strategy and policy

Experts affirm that North Korea's nuclear weapons program has made considerable progress over the years, including a wide variety of ballistic and powerful nuclear tests. Nevertheless, the lack of public information and resources obscures the possibility of establishing real data and North Korea's nuclear strategy. However, analyzing official North Korean statements, the nuclear policy could be defined as a regime of survival aiming to deter military aggression. For example, in a speech before a military parade in October 2020, the North Korean leader Kim Jong Un said that the country's military forces were meant as a deterrent and were not aimed "at anyone specific."

Cost of nuclear weapons

ICAN's report says that North Korea would have spent about \$667 million on its nuclear programme in 2020. The 2019 World Military Expenditures and Arms Transfers, published by the US State Department, estimates that North Korea spent between 21.9% and 24.4% of GDP (between US\$3.7 billion and US\$4.2bn in 2017) annually on the military between 2007 and 2017.

VI. Pakistan's nuclear weapons: policy and developments



Number of Nuclear Warheads	Nuclear Weapons Costs	Military Spending
165 (2021)*	\$1 billion (2020)**	\$10.4 billion (2020)***

*Hans M. Kristensen & Matt Korda, 2021
** ICAN, 2021
*** SIPRI, 2021

Overview

According to the Federation of American Scientists, as of March 2021, Pakistan's nuclear arsenal consists of approximately 165 nuclear warheads. The study suggests that Pakistan is expected to gradually increase its military fissile material, including weapons-grade plutonium and highly enriched uranium. Likewise, Pakistan is expanding its nuclear-capable ballistic missile arsenal, consisting of short- and medium-range systems. It currently deploys the Abdali (also designated Hatf-2), the Ghaznavi (Hatf-3), Shaheen-I (Hatf-4), and Nasr (Hatf-9) solid-fuelled, and road-mobile short-range ballistic missiles. Specialists project that it may have the 5th most significant stockpile by 2025 with 220-250 nuclear warheads. Pakistan has also been working toward a sea-based deterrent arsenal. A nuclear-capable submarine-launched cruise missile was tested from a submerged platform twice in January 2017 and in March 2018. Hans Kristensen and Robert Norris explain that Pakistan has "the world's fastest-growing nuclear stockpile."

Nuclear strategy and policy

Recent studies claim that Pakistan is modifying its nuclear posture with new short-range, nuclear-capable weapon systems to counter military threats. Current efforts to create a full-spectrum deterrent are perceived as a way to counter a conventional military incursion by India into Pakistan.

The aforementioned situation has created serious concerns in the International Community. Indeed, on February 3rd, 2021, Pakistan tested a short-range ballistic missile capable of carrying a nuclear or conventional warhead over 289 kilometers (180 miles). Later, on February 11th, according to the Pakistan Army, a training launch of a cruise missile in the Arabian Sea with a range of 450 km (280 miles) was conducted.

Costs for nuclear weapons

ICAN's last report estimates that Pakistan spent approximately \$1 billion on its nuclear capabilities in 2020. Moreover, Pakistan is expected to spend \$48.5 billion on defense over 2020-2024 to manage internal instability and bolster its defense capabilities concerning India. Nevertheless, there is no official information to picture the amount of money spent on defense or nuclear weapons entirely.

VII. Russian nuclear weapons : overview



Number of Nuclear Warheads	Nuclear Weapons Costs	Military Spending
4,500 (2021)*	\$ 8 billion (2020)**	\$61.7 billion (2020)***

*Hans M. Kristensen & Matt Korda, 2021

** ICAN, 2021

*** SIPRI, 2021

Based on the 2021 report of the Federation of American Scientists, Russia has a stockpile of approximately 4,500 nuclear warheads assigned for use by long-range strategic launchers and shorter-range tactical nuclear forces. This number is higher than 2020 (when Hans M. Kristensen estimated a military stockpile of around 4315 nuclear warheads) due to the addition of the fourth Borei-class nuclear-powered ballistic-missile submarine (SSBN) and an increase in nonstrategic warheads. Approximately 1,600 strategic warheads are deployed: More than 800 in land-based ballistic missiles, around 624 in submarine-launched ballistic missiles and 200 in heavy bomber bases. Additional 985 strategic warheads are stockpiled combined with approximately 1,912 non-strategic warheads.

Nuclear strategy and policy

Hans M. Kristensen explains that Russia is in the middle of a decades-long modernization of its strategic and nonstrategic nuclear forces to replace ancient weapons with newer systems. Among the priorities of the state's armaments program is the development of strategic missile forces, which will start to receive the latest Sarmat and Rubezh intercontinental ballistic missiles. However, On April 8, 2010, Russia and the United States signed the New Strategic Arms Reduction Treaty (New START). This treaty requires both sides to limit the number of deployed strategic nuclear warheads to no more than 1,550. These limitations appear to have forced Russia to reduce the number of warheads on some of its missiles to less than the maximum capacity. However, Russia does not release official statistics for specific New START accountable delivery systems.

According to expert analysis, Russia's nuclear modernization program is motivated by a strong desire to maintain overall parity with the United States. President Vladimir Putin affirmed that Russian nuclear forces are meant to keep pace with competitors: "It is unacceptable to stand idle. The pace of change in all areas that are critical for the Armed Forces is unusually fast today. It is not even Formula 1 fast – it is supersonic fast. You stop for one second, and you start falling behind immediately", he said.

Cost of Russia's nuclear weapons

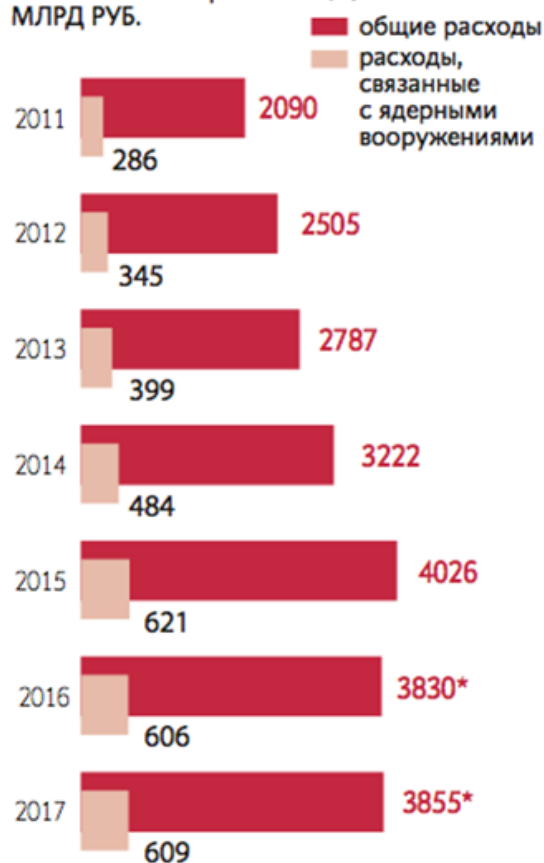
According to ICAN, Russia spent \$ 8 billion on nuclear weapons in 2020.

The Russian Federation Ministry of Defense has affirmed that a total of 20 trillion rubles are provided for the implementation of the state armament program for 2017 - 2027. Nineteen trillion of this is designated for the purchase, repair, and development of weapons and military equipment. Another 1 trillion rubles have been provided for synchronization - that is, the creation of the infrastructure necessary for equipment supplied to troops.

Over the past decade, military spending has increased by about 1.8 times, while spending on nuclear weapons has increased by 2.1 times, as we can see in the graphic below.


Russian military spending in billions of Rubles


Военные расходы России МЛРД РУБ.



Notes

1 Euro = 90 Rubles

 = General Military Spending

 = Nuclear Weapons Spending

* без учета расходов на досрочное погашение долгов перед банками по гособоронзаказу

ИСТОЧНИК: JULIAN COOPER, THE FUNDING OF NUCLEAR WEAPONS IN THE RUSSIAN FEDERATION

VIII. The UK's nuclear weapons system: Trident and its replacement



Number of Nuclear Warheads	Nuclear Weapons Costs	Military Spending
195 (2021)*	\$ 6.2 billion (2020)**	\$59.2 billion (2020)***

*Hans M. Kristensen & Matt Korda, 2021

** ICAN, 2021

*** SIPRI, 2021

Overview

Recent developments show that the UK is working to replace its current nuclear weapons system – Trident – in different stages, with the government controversially announcing in March 2021 that it would increase the number of warheads in its arsenal for the first time since the Cold War.

Trident, Britain's nuclear weapons system, consists of four nuclear submarines carrying up to eight missiles each. In addition, each rocket can carry up to five nuclear warheads, each of which is approximately eight times more destructive than the bomb that leveled Hiroshima in 1945.

The government's Integrated Review of Security, Defence, Development and Foreign Policy, 'Global Britain in a Competitive Age,' published in March 2021, included a commitment to increase the number of nuclear warheads in the UK's arsenal. Furthermore, as explained by CND, the document shows a change in use posture. Effectively, it states that: "The UK must improve its ability to detect, understand, attribute and act in response to aggression across the range of state threats, whether in the physical domain or in cyberspace, and whether military or non-military in nature".

Serious concerns have been raised since the government announced in 2021 its intentions to no provide public information about "operational stockpile, deployed warhead or deployed missile numbers." Hans M. Kristensen and Matt Korda explain that this creates difficulties in terms of nuclear transparency and researchers' capacities to make accurate nuclear forces estimations.

UK's security policy and strategy

Based on CND findings, in terms of the UK's national security, nuclear weapons are irrelevant. Moreover, the Covid-19 pandemic has revealed some problems regarding authorities' responses. For instance, the UK government's 2015 National Security Strategy and Strategic Defence and Security Review highlighted pandemics as a tier-one threat. Nevertheless, when Covid-19 hit, there were not enough ventilators or personal protective equipment for hospital staff and patients.

The 'Integrated Security Review' identified security threats based on a judgment of the combination of both likelihood and impact.' Other tier-one hazards listed include terrorism and cyber-attacks. However, this analysis is not reflected in the government's policy for spending priorities. For example, authorities claim that having nuclear weapons is vital for UK security. Nevertheless, they are useless for such threats. Based on these findings, it appears that in terms of security policy, the UK government has not assessed the challenges of the 21st century. Aspects such as climate change, for instance, have not been prioritized on the security agenda.

Cost of Trident

CND has calculated that replacing Trident will end up costing at least £205 billion. This calculation does not consider the most up-to-date cost of manufacturing new warheads, as more details are needed.

Concept	Cost
Manufacturing four Successor submarines	£31 billion
Contingency fund	£10 billion
Missile life extension programme	£350 million
Replacement warheads	£4 billion
Infrastructure capital costs	£4 billion
In-service costs	£142 billion
Conventional military forces directly assigned to support Trident	£1 billion
Decommissioning	£13 billion
TOTAL	£205 billion

It is a matter of concern that the UK government continues to invest significantly in the Atomic Weapons Establishment (AWE). CND has pointed out that recently it was revealed that spending on the AWE sites has doubled from a budgeted £2 billion to almost £4 billion in a single year.

IX. The US nuclear weapons systems – 2020 till 2030: new, new and new again



Number of Nuclear Warheads	Nuclear Weapons Costs	Military Spending
5,550 (2021)*	\$37.4 billion (2020)**	\$778 billion (2020)***

*Hans M. Kristensen & Matt Korda, 2021

** ICAN, 2021

*** SIPRI, 2021

Overview

As reported by the Arms Control Association, the United States of America maintains an arsenal of about 1,650 strategic nuclear warheads distributed among Intercontinental Ballistic Missiles (ICBMs), Submarine-Launched Ballistic Missiles (SLBMs), and Strategic Bombers and some 180 tactical nuclear weapons at bomber bases in five countries in Europe.

The Congressional Budget Office (CBO) released a report in October 2017 estimating that the nuclear weapons spending plans will cost taxpayers \$1.2 trillion between the fiscal years 2017 and 2046. When the effects of inflation are included, the 30-year cost will approach \$1.7 trillion, according to a projection by the Arms Control Association.

US Nuclear military spending

The Department of Energy's National Nuclear Security Administration (NNSA) and the Department of Defence divide responsibilities for US nuclear weapons. The NNSA is responsible for the research, development, production, and dismantlement of the nuclear warheads themselves, while the Department of Defence manages the development of warhead delivery systems, such as missiles, aircraft, and submarines. Additionally, the Department of Defence manages the deployment of nuclear weapons once they are fully produced.

The Congress allocated \$319 million to the Defence Department's request in the 2019 National Defence Authorization Act, bringing enacted Defence Department spending on nuclear weapons to \$24.3 billion. Therefore, a total of \$35.4 billion was spent on nuclear weapons by the United States in 2019. This is approximately five percent of total US military spending in 2019. In other words, the United States spent \$67,352 on nuclear weapons during every minute of 2019. This compares with \$29.6 billion spent on nuclear weapons by the US in 2018.

The fiscal year 2021 projects \$505 billion in spending, after inflation, on NNSA efforts related to sustaining and modernizing the nuclear warhead stockpile over the next 25 years, as reported by the Arms Control Association. Moreover, the Congressional Research Service, in a report released in 2021, indicates that “NNSA’s budget request for FY2022 seeks \$15.5 billion for Weapons Activities, an increase of 0.9% over the enacted funding of \$15.3 billion in FY2021”.

Nuclear Modernization

To sum up, the modernization of the nuclear triage means:

- Modernized Strategic Delivery Systems like Minuteman III, ICBM, and Trident2 SLBM, new submarines;
- Refurbished Nuclear Warheads;
- Modernized Production Complex;
- Upgraded Command and Control Systems;
- A Nuclear Force Improvement Program;
-

In this regard, the following is a status update of the existing Program to enhance the US nuclear stockpile and modernize the delivery systems that make up each element of the nuclear triad:

1. Intercontinental Ballistic Missiles

Costs: 30 billion during the next ten years;

2. Ground-Based Strategic Deterrent

Costs for new Minuteman missiles: about 345 Billion;

3.W 78 and W87 Warheads

Costs: 50 million;

4.Submarines and submarines- launched SLBMs

Costs: 128 Billion;

5.Trident 2

Costs: 1, 23 Billion;

6.B-52.Bombers

Costs of upgrades: 1,1 Billion

NUCLEAR DISARMAMENT FOR HUMAN NEEDS

The COVID-19 pandemic has created new challenges for societies globally, especially in those countries dealing with existing humanitarian crises. The World Health Organization has reported that in 2020, tens of millions of people were at risk of falling into extreme poverty, while the number of undernourished people was estimated at nearly 690 million. Despite the existence of these problems, some countries have prioritised the acquisition of nuclear weapons and the 'modernisation' of nuclear devices and the military over environmental and human needs. Several reports have revealed how these resources could be used to support health care and social protection, as shown in the figures below.



The purchase of 45 nuclear-capable F-18 fighter aircraft costs approximately 7.47 billion euros



- 100,000 beds in intensive care **PLUS**
- 30,000 ventilators
- 60,000 nurses
- 25,000 doctors

Source: Bund für Soziale Verteidigung, 2021



The annual cost for french nuclear weapons is €4.55 billion



- 100,000 intensive care beds **PLUS**
- 10,000 ventilators
- 20,000 nurses
- 10,000 doctors

Source: ICAN, 2021



The annual cost for UK nuclear weapons is £7.2 billion



- 100,000 intensive care beds **PLUS**
- 30,000 ventilators
- 50,000 nurses
- 40,000 doctors

Source: ICAN, 2021



The US budget for the development and maintenance of nuclear weapons programs in the next 10 years is approximately of \$1 trillion



- 280 billion feeding 780 million malnourished people in the world for 10 years.
- 200 billion building 2-100 million houses.

Source: Move the Nuclear Weapons Money

Furthermore, these economic resources could be reallocated to the implementation of Sustainable Development Goals and the fight against climate change. The \$1981 billion of total military expenditure worldwide (2020) could be used to invest in different areas of sustainable development in order to solve social and environmental issues, such as:

Gender equality



\$1,000,000 can on average provide 7.633 girls with a quality primary education in low-income countries.



\$1,000,000,000 can be invested to realize systematic and sustained resourcing and deployment of gender and WPS experts in missions and at UN Headquarters (UNHQ).



\$100,000,000,000 will cover universal, fee-free primary and secondary education for all for 2.5 years.

Source: Women's International League for Peace and Freedom (WILPF)

Clean Energy and Environment



\$30 billion could provide solar panel systems for 3 million homes.



\$30 billion could provide 1 million wind turbines.



\$300 billion could be used to stop the rise in greenhouse gases. According to United Nations Climate Scientists, this is the money needed to buy up to 20 years of time to fix global warming.

Poverty



Jeffrey Sachs, expert on economic development and the fight against poverty, suggests that the cost to end poverty is \$175 billion per year for 20 years. This yearly amount is only four times the United States' military budget for one year.

CONCLUSION

*"I do not know with what weapons World War III will be fought,
but World War IV will be fought with sticks and stones."*
Albert Einstein

Every day, the world sits on a live nuclear powder keg. The new generation of nuclear weapons being developed by all nuclear weapons countries increases the danger of nuclear war by command, by accident, or by technical failure. NATO's policy of confrontation with Russia and China, which includes the possibility of a first use of nuclear weapons as a NATO doctrine, increases the dangers of the nuclear annihilation of humanity.

The Cuban Missile Crisis of 1962 showed us that our survival so far has not been ensured by such a policy. Rather we have survived more by luck than by judgement. This cannot last forever. Therefore, the basic idea of the probably most important peace manifesto, the Russell-Einstein Manifesto of 1955, remains as correct and current as it was in 1955: either we abolish nuclear weapons, or they abolish us.

Perhaps the most important first step toward a world without nuclear weapons is the strengthening of the Treaty on the Prohibition of Nuclear Weapons (TPNW), which entered into force in January. It bans nuclear weapons, but it needs broader and more diverse support. It is now in force politically as a UN accord through ratification by more than 50 countries. It is a hugely important sign of the will of the people of this planet and many of their governments and parliaments. The first review conference of the Treaty in January 2022 will give it new strength, reinforce its overriding importance, and help intensify the struggle for a world without nuclear weapons.

The visionary goal of the elimination of all nuclear weapons and a world free and clear of all destructive weapons of mass destruction remains.

The financial and material resources that flow into nuclear weapons and armaments in general (almost 2 trillion dollars in 2021) are irresponsible, even criminal, in a world that is full of hunger, poverty, and gigantic social and ecological distortions. The necessary socio-ecological peace transformation is unthinkable without major steps towards the abolition of all nuclear weapons.

The high, and in some cases exorbitant, costs of nuclear weapons are a significant burden on national budgets and prevent the strengthening of welfare systems and social development in the nuclear weapon countries, as well as endangering the environment and destroying the hopes of millions of people for peaceful, cooperative development.

The absolutely necessary end to the nuclear age is a question of power; nuclear disarmament must be enforced against the wishes of the industrial and political profiteers. Without massive actions by civil society and social movements, especially the peace movement, we will not reach the vitally important goal of a world without nuclear weapons. The anti-nuclear weapons movement has changed many things; it has sensitized humanity, repeatedly achieved important steps towards disarmament, and now has decisively advanced and secured the treaty banning nuclear weapons. The peace movement represents the will of the vast majority of people for a world free of nuclear weapons and expresses it again and again through actions large and small.

Together, especially with trade unions, faith-affiliated organizations, and the environmental movement, it is the forces that can ensure the survival of mankind and enable the vision of a world without nuclear weapons to finally become a reality.

As the Russell-Einstein Manifesto states: "Remember your humanity and forget everything else! If you are able to do this, then the way to a new paradise opens. If you cannot, then death threatens you all."

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