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OPINION – Thu-An Pham

Reading G20 Reactions to the Nuclear Weapons Ban Treaty

On October 06, 2017, the Nobel Peace Prize was awarded to the ICAN – a young and relatively little-known civil society organization. The Norwegian Nobel Committee selected ICAN as the recipient of the prize, in part, for the campaign’s “ground-breaking efforts to achieve a treaty-based prohibition of nuclear weapons.” The Treaty on the Prohibition of Nuclear Weapons was concluded in July 2017, when 122 countries voted to approve it.

Currently, fifty-six states have signed the treaty, and Guyana, the Holy See, and Thailand have ratified it. The Nuclear Weapons Prohibition Treaty cuts to the core of a long-standing international dispute over progress toward nuclear disarmament. Nevertheless, the immediate responses from the G20 – the world’s wealthiest and most politically influential states – to the treaty were largely muted. This collective silence raises many intriguing questions about the implications of the prohibition treaty for the international politics of nuclear disarmament and non-proliferation.

A Controversial Endeavour: The Treaty on the Prohibition of Nuclear Weapons commits all state

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parties to forswear the development, testing, production, manufacture, acquisition, and possession of nuclear weapons or “other nuclear explosive devices.” States party to the treaty further agree not to transfer or receive nuclear

weapons or control over the weapons either “directly or indirectly.” Ratifying states also consent never to “assist, encourage or induce” anyone to violate the above-listed stipulations of the treaty or to receive any assistance to violate the treaty themselves. Importantly for

states with extended nuclear deterrence protection, countries that accede to the prohibition treaty will not permit nuclear weapons to be placed on their territory or areas

under their “jurisdiction or control.” The other main provisions of the treaty provide for reparations to victims of nuclear testing, repayment for environmental damage caused by testing, and two pathways for states possessing nuclear weapons to disarm and join the prohibition treaty.

Crucially, the Nuclear Weapons Prohibition Treaty emerges against a backdrop of protracted, acrimonious disagreement among and between states that rely on nuclear weapons for deterrence (directly or through allies) and those that do not.

The principal source of strife is the perceived lack of progress on nuclear disarmament by states that possess nuclear arms. This group of states encompasses the five official nuclear weapon states recognized by the 1968 NPT and the four other nuclear-armed states: India, Israel, North Korea, and

Pakistan. Non-nuclear-weapon states that depend on nuclear deterrence extended by allies have taken the side of their nuclear patrons in this dispute, albeit with varying degrees of discomfort. On the other side of the nuclear divide are at least 122 non-nuclear-weapon states and a handful of effective nongovernmental organizations, including ICAN and, of course, the Norwegian Nobel Committee.

Under the “grand bargain” of the NPT, non-nuclear-weapon states agreed not to acquire nuclear weapons in exchange for access to peaceful uses of nuclear energy, and nuclear weapon states pledged to work toward “effective measures relating . . . to nuclear disarmament, and on a treaty on general and complete disarmament.” Increasingly, the overwhelming majority of non-nuclear-weapon states believe that their nuclear-armed counterparts are failing to fulfil these obligations. Many non-nuclear-weapon states further chafe at Western-led efforts to seek toughened non-proliferation rules and procedures that would, for the most part, only

apply to states without nuclear weapons. The ongoing modernization of the nuclear-armed states’ arsenals only lends credence to non-nuclear-weapon states’ perceptions of injustice.

Among The G20, Mum’s The Word: When the present article was first drafted, the 2017 Nobel Peace Prize had not yet been awarded. The prize may or may not enduringly change how the prohibition treaty is regarded internationally. In order to make an assessment about the award’s effect, countries’ responses to the treaty before

and after the Nobel announcement must be compared. This article examines how the world’s most influential countries responded to the prohibition treaty prior to the announcement. The subsequent influence of the internationally prestigious award on these countries’ reactions can

then be isolated and examined separately in a follow-up piece. The membership of the G20 is a helpful proxy for this particular type of study. The G20 countries are a fairly diverse group that comprises the world’s twenty leading political economies (counting the European Union as a single entity). Twelve of the group either possess nuclear weapons or rely on nuclear deterrence extended by allies.

By coincidence, the most recent G20 summit began on the same day—July 7, 2017—that the prohibition treaty was approved by the UNGA. However, it does not appear that the treaty was discussed during this gathering of the G20 heads of state. The public comments made following the treaty’s approval came from lower-ranking officials of states both for and against the agreement.

Against Nuclear Prohibition: Among the G20 countries, the USs, the United Kingdom, and France emerged as the leaders of the treaty’s opponents. All three boycotted the negotiations and final UNGA vote. Shortly after the vote, the US, British, and French foreign ministries published

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statements online that voiced essentially identical criticisms of the treaty. Indeed, the three countries' permanent representatives to the UN issued a joint statement in response to the treaty's approval. The individual press releases for each country reflected almost verbatim the views contained in the joint press statement.

The foreign ministers of the US, the UK, and France have not commented publicly on the treaty. Their subordinates have argued primarily that the document fails to address international security concerns, particularly North Korea's nuclear weapon program and the threats facing NATO member states and US treaty partners in East Asia. The three countries sidestep the risks of humanitarian disaster that nuclear war would pose and instead focus on nuclear deterrence as a vital means of preventing interstate war. The US State Department's press release asserts that "a transformation of the international security environment" is a necessary precondition for nuclear disarmament, which can only be achieved through "consensus-based approaches." The prohibition treaty, according to the State Department, subverts nuclear deterrence and the global nuclear non-proliferation regime.

Although more tempered in the tone of its comments, London repudiated any legal obligations or effect on customary international law stemming from the prohibition treaty, as did Washington and Paris. Reaffirming their support for the NPT, the three called for measured steps within that treaty framework to move toward nuclear disarmament. Yet, the US, the UK, and France have not offered concrete proposals for reinvigorating the step-by-step approach to nuclear disarmament that they claim to favour. Russia,

China, and the four other nuclear-armed states similarly have not advanced any proposals either.

Officials from two US treaty allies that do not possess nuclear weapons—Japan and Australia—

demonstrated solidarity with the American position in their public comments. Speaking to the press in July 2017, then foreign minister of Japan Kishida acknowledged the treaty's existence but insisted that Japan would not sign the

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agreement due to differences in "view" and "approach." Japan's "view and approach," he explained, are aimed at achieving total and general nuclear disarmament through "concrete and practical measures." These measures include working through the existing avenues of the Nuclear NPT and the CTBT as well as finalizing the Fissile Material Cut off Treaty. Acknowledging the frustration of non-nuclear-weapon states with the slow progress on disarmament, Kishida assured reporters that Japan shared those states' hopes for the achievement of "substantial progress quickly" toward nuclear disarmament. To achieve this goal, he urged nuclear and non-nuclear-weapon states to "rebuild their relationship of trust" as a first priority.

It is likely that Japan's unique situation (as well as Kishida's ties to his birthplace, Hiroshima) prompted the foreign minister's public remarks.

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As a reporter pointed out during the question and answer session with Kishida, Japan is both a current beneficiary of the US nuclear umbrella and the lone victim of nuclear weapon use in an act of war. The minister's demurral to comment on this point

illustrates the sensitivity of the prohibition treaty issue and simultaneously the necessity of addressing it. The majority of the Japanese populace opposes nuclear weapons, given the

legacy of Hiroshima and Nagasaki, and remains overwhelmingly pacifistic. Further, the mayors of the two bombed cities as well as the hibakusha, the Japanese survivors of the atomic bombings, publicly and actively supported the prohibition treaty.

Australia's Foreign Affairs and Trade Department website offers a comparatively in-depth discussion of the prohibition treaty. The Australian position reiterates the same

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criticisms expressed by the US, France, and the United Kingdom, but the tone is much more measured and conciliatory in contrast to the aggressiveness of the US-UK-French joint press release. The Australian department acknowledges the dire humanitarian consequences of nuclear weapons and points to Australia's participation in the Humanitarian Impact of Nuclear Weapons (HINW) Conferences. The discussion of the prohibition treaty concludes by proffering an olive branch to the treaty's proponents and reaffirms Australia's commitment to nuclear disarmament: "Australia will continue to push hard to build that political will, and to promote the practical steps that will be necessary to bring about the elimination of nuclear weapons."

The Treaty's Quiet Proponents: Others among the G20 countries strongly promoted and supported the prohibition treaty. However, these states greeted the treaty's approval by the General Assembly without much rhetorical fanfare from their top political leaders. Argentina, Brazil, Indonesia, Mexico, Saudi Arabia, and South Africa voted in favour of the treaty in the General Assembly. Several months passed before Brazil's and South Africa's heads of state made public remarks about the agreement, and

Foreign Minister Ferreira hailed the treaty's approval in celebratory terms, calling it a "victory of humanity in the search for a world free of the absurdity of nuclear weapons." He underscored the "resistance from nuclear weapons states" and the support the treaty enjoyed from the "large majority of the international community."

they simply echoed their ambassadors' support for the treaty.

From this cluster of G20 states that had voted for the prohibition treaty, the only foreign minister who publicly commented on the agreement was

Brazil's in an op-ed in the *Folha de S. Paulo*, a major Brazilian daily newspaper. Foreign Minister Ferreira hailed the treaty's approval in celebratory terms, calling it a "victory of humanity in the search for a world free

of the absurdity of nuclear weapons." He underscored the "resistance from nuclear weapons states" and the support the treaty enjoyed from the "large majority of the international community." Disagreeing with the criticisms levied by treaty opponents, Ferreira argued instead "the new Treaty is an important complement to Article 6 of the Treaty on the Non-Proliferation of Nuclear Weapons, which established the obligation of nuclear disarmament."

Of the treaty's supporters among the G20, only Mexico's ministry of foreign affairs issued a press release about the treaty's passage. The official statement of the Mexican Secretariat of Foreign

Affairs "welcome" the adoption of the treaty by the General Assembly and observed that it is the first treaty ever adopted that globally prohibits nuclear weapons. The statement further noted that the prohibition treaty is consistent with Mexico's historic diplomatic tradition

of supporting nuclear non-proliferation and disarmament. Robles, then Mexico's state secretary in the Secretariat of Foreign Affairs, is often credited as the father of the 1967 Treaty of Tlatelolco, which established world's first nuclear-weapon-free zone over Latin America and the Caribbean.

Most vocal on the issue were the supporting states' representatives to the United Nations.

Immediately after the General Assembly vote, Argentina's representative spoke to a UN reporter and expressed "regret" that the treaty did not mention transportation of nuclear weapons and that nuclear weapon states boycotted the negotiations. The Argentinian diplomat also cautioned against the creation of alternative international authorities on nuclear non-proliferation, emphasizing that the treaty's verification mechanism should rely on the International Atomic Energy Agency and like institutions.

Similarly, Indonesia's representative offered the assessment that "no treaty was perfect" and commended the treaty as a "big step forward" in the pursuit of general and complete disarmament. The ambassador volunteered Indonesia's help "to bring nuclear-weapons States on board" with the agreement. Brazil's UN representative effusively supported the treaty, praising it as "a significant step closer to a nuclear-weapon-free world" and a landmark agreement. He called for the treaty's speedy entrance into force as well as dialogue with nuclear weapon states and others that did not participate in the negotiation or vote. The Brazilian representative also recognized the contribution of civil society during the negotiations and the openness of the drafting conference.

The only defines minister in the G20 to comment on the prohibition treaty was Brazil's. Speaking to a Brazilian news outlet, Defence Minister Raul Jungmann pointed out that the other two types of weapons of mass destruction—chemical and biological weapons—are both banned by international conventions; nuclear weapons, the most dangerous of the three, must also be prohibited. Further, Jungmann stated, "Nuclear

disarmament, rather than a strategic option, is a moral imperative." Notwithstanding his previous comments, Jungmann maintained that "deterrence and cooperation" are crucial to Brazil's defence strategy of protecting "its sovereignty, its heritage, and its interests."

Prior to the Nobel Prize announcement, the overall

picture that emerged following the approval of the Treaty on the Prohibition of Nuclear Weapons was conspicuous, pervasive silence from top-level officials of G20 states, both those supportive of, and those opposed to, the prohibition treaty. Behind this silence is a mesh of competing interests and loyalties.

Treaty proponents portray the conflict over the treaty as a struggle of the majority (non-nuclear-weapon states) against the dominant minority (NWS). But such a view is reductive. US treaty allies that do not possess nuclear weapons, including Japan, South Korea, Australia, and almost all NATO member states, oppose the prohibition treaty.

It is equally untrue to believe that the disagreement is between those who wish to

improve global security (namely, nuclear weapon states) and those who would throw it away for a utopian manifesto (that is, non-nuclear-weapon states), as treaty opponents contend. The risk of nuclear annihilation constitutes an undeniable and serious threat to international

security. However, the leaders of both camps remain notably quiet about the prohibition treaty. This complex state of affairs raises many questions about the future of the prohibition treaty and international nuclear weapon politics....

Source: <http://carnegieendowment.org>, 17 January 2018.

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OPINION – Franz-Stefan Gady

How Should We Write About Nuclear Weapons?

... India test fired a nuclear-capable ICBM reportedly capable of hitting all of China with a 15-250 kiloton nuclear warhead. As usual, *The Diplomat* (yours truly) covered the launch noting that the missile is part of the country's credible minimum deterrence principle (or perhaps credible deterrence), which requires an assured so-called second-strike capability. Of course, what I did not mention (and what a lot of analysts writing on nuclear weapons often fail to mention) is the impact that these weapons have on human beings and the environment.

In that sense I am following the tradition of the mega death intellectual Herman Kahn who wrote in *On Thermonuclear War*: "I will tend to ignore, or at least underemphasize, what people might consider the most important result of a war—the overall suffering induced by ten thousand years of post-war environment." Yet, the omission that these weapons can incinerate millions, destroy entire cities or countries, and kill generations of families in seconds should be, among other things, analytically suspect, even if the threat of precisely such organized mass killings (i.e. nuclear deterrence) has prevented the actual use of nuclear weapons in the past...

[I]f "the concrete melts into the abstract" as George Orwell put it, there is a danger to slip into intellectual insincerity when doing analysis. The overuse of euphemisms and theoretical concepts ("collateral damage" or "nuclear deterrence") often gives "solidity to pure wind" in which we discuss war and national security abstractly (remember the Domino Theory?) rather than in concrete

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terms.

I pointed out that these abstractions could inadvertently lower the threshold for engaging in military conflict... *[S]ocial science neologism by design can detach us from what is most salient when discussing the current crisis on the Korean Peninsula: the appalling enormity of nuclear war.*

For example, using the term "counter value targeting" rather than clearly stating what it stands for in a nuclear conflict, i.e. the killing and maiming of tens of thousands—if not hundreds of thousands—of civilians in cities is an atrocious euphemism (full disclosure: I have used the phrase before) and is open to an Orwellian indictment that it is designed to make "murder respectable."

In other words, professional jargon, while expediting the efficient and coded traffic of certain ideas surrounding nuclear strategy among experts, can have a dehumanizing effect in which the connection between a 60-kiloton warhead and 300,000 incinerated humans becomes a mere abstraction. It is also analytically confining and vicariously perpetuates conventionally thinking....

The Attitude Was: *We are trained scientists. We've studied the situation with detachment and disinterestedness; we have taken nothing for granted, given no hostages to sentiment. And we conclude that the world as it is—in this case, a global rivalry between two nuclear powers in an escalating arms race—is acceptable (...).*

Yet, "acceptable" is precisely the word one probably would not want to use when, as part of an on-going nuclear arms race in South Asia, an ICBM with the power to kill hundreds of thousands of people is being test fired. Relying on professional jargon

often makes a writer implicitly endorse conventional thinking about nuclear strategy. This normalizes the paradoxical logic of nuclear deterrence of which the Indian ICBM tested is an integral part, and encourages the writer to dismiss “thinking outside the box” for the lack of strategic and political realism. These sentiments are then passed on to the reader (often by yours truly).

How then should one combine the human with the abstract when writing about nuclear weapons? It is important— in both the short and long term — to repeatedly emphasize the utter abnormality of the existence of such destructive weapons. In more concrete terms, *ceterum censeo* argumentation should be pursued, which more frequently challenges established political and military thinking on nuclear weapons in countries across the world, whether it is pushing for a global no-first-use policy or a global elimination of land-based ICBMs....

Source: <https://thediplomat.com/>, 19 January 2018.

OPINION – Loren Thompson

Trump’s Nuclear Strategy is Basically the Same as Obama’s

The biggest difference between the Trump administration’s proposed nuclear strategy and that of the Obama administration is that Trump will fund nuclear forces vigorously whereas Obama did so only reluctantly. The details of the new strategy were released by the *Huffington Post* on January 11, including the entire text of a “pre-decisional draft” report laying out administration thinking and priorities on how to

posture nuclear forces. It is a well-crafted, reasonable analysis. What it isn’t a departure from the bipartisan consensus that has driven US nuclear strategy since the early days of the Cold War?

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I used to teach nuclear strategy at Georgetown University, so I have followed the evolution of nuclear plans over time fairly closely. The Trump approach

is simply that an evolution that adjusts the posture in response to recent changes in the threat environment. For instance, the defense department will field low-yield warheads to discourage Russia from contemplating use of similar weapons in an east-west conventional battle, and the energy department, which manages the nuclear weapons industrial complex, will rebuild its capacity to assemble new nuclear cores.

If every facet of the proposed nuclear posture is fully funded, the US will still have a nuclear “triad” of land-based ballistic missiles, submarine-launched ballistic missiles, and nuclear-capable bombers. It will still adhere to the arms limits set forth in the most recent agreements made with Russia. And it will still provide nuclear security guarantees to allies.

But these are not major changes to the nuclear plans that President Trump inherited, and the report correctly labels its proposed “supplements” to the Obama plans as modest. If every facet of the proposed nuclear posture is fully funded, the US will still have

a nuclear “triad” of land-based ballistic missiles, submarine-launched ballistic missiles, and nuclear-capable bombers. It will still adhere to the arms limits set forth in the most recent agreements made with Russia. And it will still provide nuclear security guarantees to allies.

In other words, this is a nuclear posture that President Bill Clinton would have had little trouble supporting, and one that President Obama, a lifelong proponent of nuclear disarmament, would have only had a few quibbles with. You wouldn’t know that from reading some of the commentary that has accompanied *Huffington Post*’s release of the document. Reporters always focus on what’s new and Trump opponents want to believe he is

dangerously out of control, but there isn't much evidence of a change in the new strategy. That is somewhat surprising given the fact that Trump kicked off his presidential bid in 2015 calling for a massive increase in spending on nuclear weapons, but what many people didn't realize at the time was that the Obama administration already had plans to double nuclear outlays so that all three legs of the Cold War triad and related command-and-control networks could modernize. After decades of minimal investment, a major renewal was needed. Obama wasn't happy about it, but the case for modernization was inescapable.

The simple truth is that America's nuclear strategy is dictated by geopolitical and technological circumstances rather than deep reflection on various courses of action. There are at least two countries, China and Russia, that could destroy the US in a day with their own nuclear arsenals, and little Washington could do to limit the carnage. So of course our nuclear strategy has to focus on sustaining a secure retaliatory force that, in the words of the report, convinces enemies "they have nothing to gain and everything to lose from the use of nuclear weapons."

Every president since Dwight Eisenhower has understood this. Trump grasped it intuitively even before he declared his candidacy. Sustaining a secure nuclear deterrent will remain the Pentagon's top priority, including at the regional level where the F-35A fighter will replace Cold War planes in carrying "tactical" nuclear weapons intended to deter local nuclear aggression. In the parlance of Cold War nuclear strategists, the US needs a

credible deterrent at each rung on the "ladder of escalation."

Obviously, there are drawbacks to a strategy that depends mainly on the threat of retaliation to protect the nation against aggression. The strategy might break down if a foreign leader is irrational, or accident prone, or overwhelmed by fear in a crisis. The Pentagon's recently released National Defence Strategy paraphrases President Washington in asserting, "the surest way to prevent war is to be prepared to win one." But nuclear wars aren't like other conflicts, and there is no guarantee that all our elaborate preparations will work once deterrence fails.

One way the Trump administration could bolster the credibility and reduce the danger of an offensively based nuclear posture would be by constructing more

capable missile defences against nuclear attack. If enemies were not certain they could destroy key targets in a surprise attack, they would be less likely to launch their nuclear weapons in a crisis than they might be today.

The US has a modest homeland missile defence capability today called the Ground-based Midcourse Defence that is designed mainly for blunting a North Korean attack. As currently postured, it could not cope with a sizable nuclear attack from China or Russia. If Moscow decided today to destroy America, most of the people reading this commentary would be dead or dying within hours. The

nation's nuclear strategy would be more believable and effective if Moscow had reason to believe it could not reach any target it wished to destroy in America with its nuclear weapons.

Source: <https://www.forbes.com>, 22 January 2018.

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OPINION – Josh Christopher January

Where Canada Stands on Nuclear Weapons

On Jan 25, the Bulletin of the Atomic Scientists' Doomsday Clock moved ahead thirty seconds to two minutes to midnight: the closest humanity has been to extinction, by this measure, since 1953. The change is due to the worsening of the two main threats to human survival — nuclear war and climate change. While the world shudders listening to Donald Trump's bombastic provocations towards an increasingly agitated North Korea, this isn't the first time humanity has grappled with nuclear obliteration.

In 1983, Russian radar officer Stanislav Petrov was on watch one evening when his system displayed six inbound U.S. warheads. Doubting his readings, he refused to give the retaliatory launch order. It turns out Russian satellites had incorrectly identified sunlight reflecting off the clouds as missile trails. Petrov correctly reported a system failure and saved humanity from a nuclear holocaust.

It seems as though we've learned from our mistakes, especially when Justin Trudeau tells the Globe and Mail that "we need to create a nuclear-free world for our children and grandchildren." "We're focused on significant, concrete measures moving forward that will actually include countries that have nuclear weapons," Trudeau said in the same Globe and Mail interview.

But on July 7, 2017, when 122 countries endorsed the UN Treaty on the Prohibition of Nuclear Weapons, Trudeau and Canada refused to participate in any way. Canada did not sign or even vote on the treaty. To date, 56 countries have signed it and four have ratified it in their national parliaments. Once 50 ratify, the treaty will come into force.

No nuclear-weapon-holding states signed the treaty, nor did any country in the U.S.-led North Atlantic Treaty Organization. In fact, every signatory country was from the Global South, except for Austria, Ireland,

Liechtenstein, New Zealand, and the Vatican. For Trudeau and the Canadian government, "concrete measures" could mean erecting defences against a nuclear attack. The Canadian parliament has been debating the installation of a U.S. nuclear missile defence system in Canada despite skeptical testimony on the project to the Canadian Senate in 2014.

The system, called BMD, has been under debate in Canada for several years. A 2014 Senate report stated, "the committee is unanimous in recommending that the Government of Canada enter into an agreement with the United States to participate as a partner in ballistic missile defence."

This would involve installing radar stations and ground-based anti-ballistic missiles, which cost \$75 million each, throughout the country. They are designed to intercept and destroy incoming nuclear missiles by detonating conventional explosives in the vicinity. The Canadian Standing

Senate Committee on National Security and Defence noted Iran and North Korea as the main nuclear threats in the 2014 report, though Iran has no nuclear missiles. These purported threats steal attention from the possibility that BMD may not be able to shoot down incoming missiles.

Dr. Dean Wilkening, a physicist interviewed by the senate, said the missiles in development had "not performed well on the test range." Retired U.S. Army Lieutenant General Robert Gard Jr. testified that the system had an inability to discriminate an incoming warhead from debris created by a partial interception, noting that "radar and infrared are simply incapable" of a high level of discrimination. Despite that, the senate voted unanimously to recommend BMD to parliament.

In September 2016, the House of Commons Standing Committee on National Defence did not rule out BMD. Their report stated that the U.S. had spent \$45 billion to develop an existing arsenal of 30

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interceptors, though the U.S. Government Accountability Office reported in 2014 that \$98 billion had been spent on BMD since 2002. So the cost of the program to Canada would be difficult to predict.

Pursuing an unproven plan to defend against a nuclear attack is preposterous. The safest thing to do is to destroy nuclear weapons before they destroy us. That is why the ICAN advocates for complete worldwide nuclear disarmament. For its efforts, ICAN received the Nobel Peace Prize on Dec. 10, 2017. The Nobel committee's website states that "the organization is receiving the award for its work to draw attention to the catastrophic humanitarian consequences of any use of nuclear weapons and for its ground-breaking efforts to achieve a treaty-based prohibition of such weapons."

Staff and students from the University of Victoria contributed to ICAN's campaign on Sept. 20, 2017 when the Vancouver Island Peace and Disarmament Network (VIPDN) collected petition signatures in front of the McPherson Library. VIPDN chair Dr. David Monk, also a sessional instructor in the Department of Education at UVic, organized the event. "Since January, we've been putting pressure on the Canadian government to sign the treaty," Monk said. "[But] Trudeau isn't wanting to rock the boat with the U.S."

In siding with Canada's nuclear armed allies, Trudeau put political advantage ahead of ensuring human survival in an increasingly volatile world. Murray Rankin, Member of Parliament for Victoria, delivered the VIPDN petitions to the House of Commons on Oct. 20. "These constituents call upon parliament to take a position independent of NATO and the United States and support the treaty to prohibit the development, production, transfer, stationing, and use of nuclear weapons," he told his fellow MPs.

Still, prominent figures in Canada support BMD. In August 2017, Senator Romeo Dallaire, deputy chair of the senate security committee told the Toronto Star, "Canada should join the ballistic missile defence program." Mary-Wynne Ashford is a VIPDN

member and a lifelong nuclear activist. Ashford authored *Enough Blood Shed: 101 Solutions to Violence, Terror and War* and was invited to speak at a nuclear disarmament conference in Moscow in 1987. (The conference was also attended by Justin Trudeau's father, former Prime Minister Pierre Elliott Trudeau.)

She began her nuclear activism in 1984 after she learned about Petrov narrowly averting a nuclear holocaust the year before. And, in an interview with the Martlet, she called BMD "a useless waste of money," due to the extreme likelihood that it will fail to stop a nuclear attack. Trying to intercept an incoming missile, according to Ashford, is "like shooting a bullet with a bullet." Canada, the U.S.,

and NATO are not helping to alleviate nuclear tensions, and the notion that North America can defend itself from a nuclear attack is naive and dangerous. In their most recent statement, the Bulletin of Atomic Scientists wrote that

"humankind has invented the implements of apocalypse so can it invent the methods of controlling and eventually eliminating them."

Source: <http://www.martlet.ca/where-canada-stands-on-nuclear-weapons/>, 26 January 2018.

In siding with Canada's nuclear armed allies, Trudeau put political advantage ahead of ensuring human survival in an increasingly volatile world. Murray Rankin, Member of Parliament for Victoria, delivered the VIPDN petitions to the House of Commons on Oct. 20.

OPINION – Matthew Costlow

Big Fears of Small Nukes Overblown

"Insane." "Deeply dangerous." Raises the risk of "nuclear exchange" and a "new arms race." These are some of the serious accusations leveled against the recently leaked Nuclear Posture Review. Each presidential administration since Clinton has written an NPR, primarily to guide U.S. nuclear policy and priorities, but the 2018 NPR is shaping up to be one of the most contentious and important.

Bipartisan consensus, though increasingly rare in other policy areas, has generally been the norm on nuclear policy as the degree of continuity between policies in previous NPRs demonstrates. The Trump NPR, when it is released, will likely be more of the same with a few tweaks to U.S. capabilities in

response to the worsening international threat environment.

One of the proposed changes, previously reported to have been under consideration by the Trump administration, is modifying a small number of U.S. submarine-launched ballistic missile warheads to lower their yield (the energy released in the detonation of a nuclear weapon). Proponents believe this would be a relatively minor change in U.S. nuclear capabilities that still would send an important deterrent signal to adversaries that they cannot expect to escalate their way out of a failed conventional conflict using limited strikes of their own low-yield nuclear weapons.

Critics of the proposal, however, argue that the lower a nuclear weapon's yield is, the less destructive it is, therefore making it "more usable" and general nuclear war more likely. This is a grave accusation that requires a factual rebuttal.

If low-yield nuclear weapons are more "more usable," we would expect to see a rash of international nuclear crises during the 1970s when the U.S. low-yield tactical nuclear weapon stockpile was at its height. But there was only one such crisis then, the Arab-Israeli War, which was certainly not caused by low-yield nuclear weapons. Despite having reportedly nearly 7,000 low-yield nuclear weapons at their disposal, U.S. Presidents did not seem very tempted to use them.

In fact, the United States eliminated over 90% of its tactical nuclear weapons post-Cold War, so pro-disarmament theory holds that the likelihood of nuclear war should have also receded to a matching degree. Yet the same individuals now say we are closer to war despite these reductions. Critics cannot have it both ways, either the reductions of tactical

nuclear weapons have decreased the chances of war or political factors outside the weapons themselves in isolation determine the likelihood of war. Clearly the evidence favors the latter.

In fact, the United States eliminated over 90% of its tactical nuclear weapons post-Cold War, so pro-disarmament theory holds that the likelihood of nuclear war should have also receded to a matching degree. Yet the same individuals now say we are closer to war despite these reductions.

In reality, the United States has reportedly retained low-yield nuclear weapons in its stockpile for over five decades. Republican and Democratic presidents have historically sought less-destructive nuclear options to make nuclear use less

likely by better deterring nuclear aggression. It's clear the nuclear order is not so fragile as to be shaken by the modification of a few warheads by a responsible nuclear power such as the United States. In fact, there is evidence it could reduce the chances of nuclear war by making aggressive nuclear states like Russia and North Korea think more than twice about escalating a failing conflict.

As STRATCOM Commander Gen. John Hyten has testified, Russia has a "broader range of nuclear employment scenarios" than the United States, based in part on their flawed belief that deliberate nuclear escalation, possibly with a limited number of low-yield nuclear weapons, would weaken or destroy U.S. and NATO resolve in a war.

President Reagan said "nuclear war cannot be won and must never be fought," but that prudent message appears to have been lost on President Putin. Moscow has long been concerned about the balance of forces between itself and the United States. The apparent proposed changes to the U.S. nuclear force structure will send a clear signal of resolve which adversaries can ignore at their own peril.

In order to dissuade such Russian attitudes, the United

States should send an unambiguous message, part of which may be lower-yield nuclear warheads. The chairman of NATO's Military Committee, Gen. Petr Pavel, offered useful insight into the Russian mind when he stated that: "Russia respects power... as Russia keeps this attitude we have to show our determination. We have to show strength. We have to show our resolve to act whenever necessary."

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When the NPR is officially rolled out in coming weeks, the audience will not be just policy wonks inside the Beltway, but determined adversaries hoping to find weakness in U.S. capabilities and resolve. The NPR and the force structure it promotes will go a long way in assuring adversaries and allies alike that America's resolve is unshakeable in the face of growing nuclear threats.

The Pentagon is also planning to develop a new nuclear-armed cruise missile that would also be deployed at sea. That plan would reintroduce a system to the U.S. nuclear arsenal that was retired in 2010.

Source: <https://inohomelandsecurity.com/small-nuclear-overblown/>, 26 January 2016.

NUCLEAR STRATEGY

INDIA

India Successfully Test-fires a Nuclear-Capable ICBM

India successfully launched a long-range ICBM on 17 Jan. The nuclear-capable Agni-V ICBM was fired from Abdul Kalam island off the coast of the eastern state of Odisha at around 9:53 a.m. local time.

India's Defense Ministry said the test was a "major boost" to the country's defense capabilities. The same missile has been tested five times over the past six years, with the most recent test prior to Thursday's launch coming in December 2016. ...

Source: <https://www.cnbc.com>, 18 January 2018.

USA

Pentagon Planning Two New Nuclear Weapons: Report

The US is planning to develop two new nuclear weapons, including a "low yield" warhead, according to a *Wall Street Journal* report. That low-yield warhead would be used with the Trident missile, a rocket deployed on U.S. Navy

submarines, according to the Journal.

The Pentagon is also planning to develop a new nuclear-armed cruise missile that would also be deployed at sea. That plan would reintroduce a system to the U.S. nuclear arsenal that was retired in 2010. The recommendations for the new weapons are laid out in the Pentagon's Nuclear Posture Review, which was commissioned last year by President Trump. HuffPost published an unclassified draft copy of the review, though the Pentagon has said that the draft is "pre-decisional."

Still, the plans to develop the new nuclear weapons come in response to

growing military threats from Russia and China, which the Pentagon says are moving toward an embrace of nuclear weapons in their strategies. ... The review pins the cost of the plan to modernize and operate the U.S. nuclear arsenal at 6.4 percent of the Pentagon's budget, at most, according to the Journal. It currently requires 2 to 3 percent.

Source: Max Greenwood, <http://thehill.com>, 16 January 2018.

BALLISTIC MISSILE DEFENCE

SAUDI ARABIA

Saudi Arabia Intercepts New Yemen Rebel Missile Attack

Saudi Arabia said it had intercepted a fresh attack by Yemeni rebels on the south of the kingdom and renewed its... That arch-foe Iran had armed them. The Huthi rebels said on their Al-Masirah television channel that they had fired two missiles at Saudi border provinces but there was no immediate mention of a second from the Saudi-led coalition that has been fighting them since 2015.

Coalition spokesman Turki al-Maliki said that Saudi air defenses had intercepted one missile over Jizan province on the Red Sea coast. The rebels said they had fired a second at a military

base in Najran province, inland and just across the border from their stronghold of Saada. In a statement on the official Saudi Press Agency, Maliki accused Iran of arming the Huthis "in clear and explicit violation" of UN Security Council resolutions.

Since November, the rebels have fired multiple missiles into Saudi Arabia, all of which Saudi forces say they intercepted. On November 4, Saudi Arabia thwarted a rebel missile attack on Riyadh international airport that Crown Prince and Defence Minister Mohammed bin Salman said "may amount to an act of war" involving Iran.

Riyadh and its allies imposed a crippling blockade on rebel-held ports in retaliation for that missile launch which has been only partially lifted despite a mounting international outcry over the humanitarian consequences. More than three-quarters of Yemenis are now in need of humanitarian aid and some 8.4 million at risk of famine, the UN humanitarian affairs office said. More than 5,000 children have been killed and 400,000 left severely malnourished....

A report by a UN panel of experts earlier in January found Iran in violation of Security Council Resolution 2216, which imposed an arms embargo on rebel leader Abdulmalik al-Huthi.

Source: <http://www.spacedaily.com/>, 17 January 2018.

USAUS Official Defends Early-Warning Systems After Hawaii 'Failure' A top US official defended government early-warning systems after a false missile alert terrified Hawaii, in what a congresswoman called an epic failure that emphasized the need for talks with North Korea. The Pacific archipelago was already on edge over fears of a North Korean attack when the phones of residents and tourists blared the alert just after

The Pacific archipelago was already on edge over fears of a North Korean attack when the phones of residents and tourists blared the alert just after 8:00 am on 13 Jan. Emergency management officials later admitted, "the wrong button was pushed" during a shift change.

The alert, which read "ballistic missile threat inbound to Hawaii. Seek immediate shelter. This is not a drill," sent people rushing for safety, whether in a bathtub, a basement, a manhole or covering under mattresses.

8:00 am on 13 Jan. Emergency management officials later admitted, "the wrong button was pushed" during a shift change. But it took them nearly 40 minutes to issue a corrected message. Hawaii's governor said there was no automatic

way to cancel the false alarm, meaning it had to be done manually. Representative Tulsi Gabbard of Hawaii issued her own advisory of the false alarm much earlier after directly checking with civil defense officials, she told ABC television's "This

Week." "It's an epic failure of leadership," said Gabbard. "It was unacceptable that this went out in the first place, but the fact that it took so long for them to put out that second message, to calm people, to allay their fears that this was a mistake, a false alarm is something that has to be fixed, corrected with people held accountable." The alert, which read "ballistic missile threat inbound to Hawaii. Seek immediate shelter. This is not a drill,"

sent people rushing for safety, whether in a bathtub, a basement, a manhole or covering under mattresses." False alerts undermine public confidence in the alerting system and thus reduce

their effectiveness during real emergencies," said Ajit Pai, chairman of the Federal Communications Commission, which is responsible for Emergency Alert System procedures and is investigating what happened. "It appears that the government of Hawaii did not have reasonable safeguards or process controls in place to prevent the transmission of a false alert".... The erroneous message came after months of soaring tensions between Washington and Pyongyang, which claimed it had successfully tested ballistic missiles that could deliver atomic warheads to the US, including the Hawaiian islands popular with tourists. Homeland Security Secretary Kirstjen Nielsen urged people "not to draw the wrong conclusion" from the Hawaii incident. ...Risk of

accidental war, She said her department is working with state and local authorities "to make sure it doesn't happen again." Vern Miyagi, administrator of Hawaii's Emergency Management Agency, has acknowledged that "we made a mistake," for which he apologized. President Trump recently said that, under the right circumstances, he would be willing to speak directly with North Korean leader Kim, with whom he has traded sharp words over Pyongyang's missile and nuclear tests. The White House said Trump was briefed about the Hawaii incident, but called the alert "purely a state exercise."

Source: <http://www.spacedaily.com>, 14 January 2018.

NUCLEAR ENERGY

UGANDA

Uganda Pushes for Nuclear Energy

President Museveni has said that unless solar becomes a cheaper alternative source of clean energy, Africa and Uganda in particular will have to use nuclear energy to improve the wellbeing of its people. "All rivers in Africa have a potential of about 350,000MW of electricity and yet the population will grow to about 1.2 billion in the next 25 years. The US uses 1.5 million megawatts equivalent to almost five times of all the rivers in Africa. Unless solar is a cheaper alternative, we shall have to use nuclear." "What is important is to master nuclear technology. Already we are training our people in this field," he said. Uganda has already trained 15 nuclear experts headed by Nafuna in the Ministry of Energy and Mineral Development. Museveni was meeting the Director General of the IAEA Amano at State House Entebbe. The two leaders held high-level consultations on activities related to IAEA technical cooperation programme in Uganda ahead of the official commissioning

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of the cobalt 60 cancer machine at the cancer Institute in Mulago.

The meeting was also attended by Abdulrazak the director TCAF, division for Africa in the department of Technical Cooperation, Uganda's Energy state minister Eng. D'Ujanga Simon and the Health minister Dr. Aceng among others. "Vector control and cancer treatment are subsidiary. The main issue is energy resource. Nuclear is clean energy, better than fossil fuels. At policy and strategic level, let us have convergence use. We are ready to work with you. We have no hidden agenda".... The President said there are two confused groups in the use of nuclear.

.... Museveni said even if the cost of solar energy goes down to four cents or even lower, in some parts of Africa because of the cloud cover, they may not be able to use solar unless the batteries improve for storage. "Let's be open minded on this. What we want is electricity for our people's welfare," he said. The DG Amano said as IAEA,

they are doing a lot in making nuclear energy for peaceful use and is already supporting Uganda in implementing projects that use nuclear for peaceful purposes for the wellbeing of the people.

... Amano said they can also using drones to monitor

water levels for pollution for health reasons. He said it is no longer the energy for only developed countries. Despite it requiring a lot of preparations, it is important that the transfer of technology from IAEA to other countries to increase on the welfare of the people....

The minister of State for Energy Simon D'ujanga said the current country programme framework between Uganda and IAEA includes; feasibility studies for nuclear power projects, uranium exploration and evaluation, cancer management, food and agriculture, water resources management and strengthening the national nuclear and radiation safety infrastructure. He said they are also in the process of updating and

upgrading the nuclear law to include nuclear power in accordance to acceptable international laws.

Source: <https://www.newvision.co.ug>, 18 January 2018.

USA

Watershed Year Ahead for US Nuclear Industry

It is critical that we maintain a strong domestic nuclear sector; this begins by keeping our existing plants operating," the NEI's vice-president for policy development and public affairs told the Forum. Much of the action to preserve existing plants will take place at the state level.... New York, Illinois and Connecticut have "shown the way", and other states need to follow. "We're encouraged by the states' recognition of the need to keep nuclear plants open, whether for emissions reduction or energy diversity"....

A failure to value appropriately all the benefits of nuclear power has contributed to an uneven playing field that is forcing nuclear plants to close prematurely, he said. The decision by the US Federal Energy Regulatory Commission (FERC) to terminate proceedings on Energy Secretary Rick Perry's proposed rulemaking on grid resilience and reliability provoked an important conversation about the role of nuclear plants in ensuring a resilient, reliable grid....

Perry's proposed rulemaking, submitted to FERC in September last year, would have specifically recognised the attributes of generation sources able to store fuel on site. The regulator announced its decision on 8 January, after receiving over 1500 submissions on the proposed rule. Instead, it has launched a new proceeding to address resilience in a broader context. At the time, NEI President and CEO Maria Korsnick said the organisation was disappointed that FERC had not taken affirmative

The decision by the US Federal Energy Regulatory Commission (FERC) to terminate proceedings on Energy Secretary Rick Perry's proposed rulemaking on grid resilience and reliability provoked an important conversation about the role of nuclear plants in ensuring a resilient, reliable grid.

action that would preserve the nation's nuclear power plants, but praised Perry's efforts to place the issue on the national agenda. Kotek said the nuclear industry must demonstrate that it can build and complete nuclear plants. He said the decision to proceed with the nuclear construction project at Vogtle in Georgia was significant, offering an opportunity for the US nuclear sector to show it can "successfully" build new reactors.

The US Nuclear Regulatory Commission's recent conclusion that NuScale Power's small modular reactor design can operate safely without the need for so-called 1E electrical power supplies, a key aspect of the design, was

a positive development. He said NRC's approval offered a "new paradigm for regulatory efficiency".

The annual State of the Energy Industry Forum, held to coincide with the first State of the Union

Address of the year, is one of the US Energy Association's flagship meetings, bringing together energy industry associations, lawmakers, regulators, energy industry influencers, diplomats, thought leaders, and journalists to discuss

energy issues facing the US and the world. This was the 14th Forum and was held at the National Press Club, in Washington DC.

Source: <http://www.world-nuclear-news.org>, 22 January 2018.

NUCLEAR COOPERATION

RUSSIA-SRI LANKA

Russia and Sri Lanka Plan Energy Cooperation

The Russian delegation, which was welcomed by Sri Lankan President Sirisena also held talks with the Atomic Energy Board and the Atomic Energy Regulatory Council of Sri Lanka. Rosatom

said the parties had “discussed in detail the whole range of issues related to establishing cooperation between the Russian Federation and Sri Lanka in the peaceful use of atomic energy”, adding that “the dialogue will continue”. Spassky invited the inter-departmental delegation to visit Russia for further talks and see Russian nuclear facilities. They also discussed Sri Lanka’s participation this year in Rosatom’s annual conference and exhibition *Atomexpo*.

In September 2010, the Sri Lankan government commissioned its Atomic Energy Board to conduct a pre-feasibility study on using nuclear energy for power generation from about 2025. In 2011, Sri Lanka announced that it would establish Atomic Energy Regulatory Council to allow for the introduction of nuclear power generation technology in the country, and also to address concerns over the security of radioactive sources and to deal with radiation emergencies.

In February 2015, Sri Lanka and India signed an agreement to cooperate in civil nuclear energy. The accord aims to facilitate cooperation in the transfer and exchange of knowledge and expertise, sharing of resources, capacity building and training of personnel in peaceful application of nuclear energy, including the use of radioisotopes, nuclear safety, radiation safety and nuclear security. It would also facilitate cooperation in radioactive waste management and nuclear and radiological accident mitigation and environmental protection.

The Nuclear Medicine Unit at the University of Peradeniya in Sri Lanka has been supported by the IAEA for over 40 years. The centre, the only one of its kind in the country, uses nuclear medicine to diagnose, treat and manage cancer and other diseases. IAEA support includes the provision of equipment, training and the implementation of safety standards. ...

Source: <http://www.world-nuclear-news.org>, 19 January 2018.

URANIUM PRODUCTION

USA

US Uranium Producers Call for ‘Level Playing Field’

The petition, filed under the Trade Expansion Act of 1962, describes how the loss of a viable US uranium mining industry would have a “significant detrimental impact” on the country’s national, energy and economic security and its ability to sustain an independent nuclear fuel cycle. Imports from Kazakhstan, Russia and Uzbekistan now fulfil nearly

40% of US demand.... Such imports of uranium and nuclear fuel, produced by enterprises that are state-owned and state-subsidised, have “in large part” been responsible for a decrease of domestic US uranium production to “near historic” lows in 2017. Production is likely to be even lower this year....

Further pressure will be placed on US uranium producers from China, which has significantly grown its state-owned enterprises and announced its intention to enter the US nuclear fuel market in direct competition with US miners, the companies said. The expiry in 2020 of the US-Russia Antidumping Suspension Agreement, which limits US imports of uranium from Russia, will add further pressure. A healthy uranium mining industry is vital to US national security both to supply fuel for nuclear power plants and to support national defence, the companies said. The DOC in 1989 launched a Section 232 investigation, at the request of the US Department of Energy, because of concerns that uranium imports exceeded 37.5% at that time. “The problem is far worse now”....

According to the 2017 edition of the US Energy Information Administration’s annual uranium

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According to the 2017 edition of the US Energy Information Administration’s annual uranium marketing report, 11% of the 50.6 million pounds U3O8 purchased by the owners and operators of US nuclear power plants in 2016 was of US origin.

marketing report, 11% of the 50.6 million pounds U3O8 purchased by the owners and operators of US nuclear power plants in 2016 was of US origin. Uranium originating in Kazakhstan, Russia, and Uzbekistan accounted for 38%, with uranium of Australian and Canadian origin accounting for 40%. The remaining 22% originated from Brazil, Bulgaria, China, the Czech Republic, Germany, Malawi, Namibia, Niger, South Africa, and Ukraine. "Today's extreme dependence is not a matter of foreign competition legitimately under-pricing domestic production. It is the result of certain foreign state-subsidy policies that undermine US companies who could otherwise compete fairly on a global basis"....

The remedies sought under the petition would set a quota to limit imports of uranium into the US, effectively reserving 25% of the market for domestic production. It also suggests that federal utilities be required to buy US uranium in accordance with President Trump's 'Buy American' policy. These remedies are expected to result in US utilities purchasing about 12 million pounds U3O8 per year from domestic production, creating a "healthy" US uranium mining industry, bolstering national defence and improving diversity of supply.

Production would come from existing US producers, other US producers that are currently on standby because of low uranium prices, and new producers. "US uranium producers will continue to compete with global uranium producers, but on a more level playing field".... The price of US uranium would be expected to increase through domestic competition to levels more consistent with unsubsidised global uranium production costs, but modelling has shown the average price impact to consumers will be negligible.

"There can be no certainty of the outcome of the investigation or the recommendation of the Secretary, and therefore the outcome of this process is uncertain. Section 232 of the Trade Expansion Act of 1962 authorises the Secretary of Commerce to conduct comprehensive

investigations to determine the effects of imports of any article on the national security of the US. Once the DOC initiates an investigation, the secretary has 270 days to prepare a report to the President, who then has 90 days to act on the secretary's recommendations.

Energy Fuels Inc. and Ur-Energy are both based in Denver, Colorado. Energy Fuels' uranium production includes the country's only currently operating conventional uranium mill, White Mesa Mill in Utah, the Nichols Ranch in-situ leach facility in Wyoming, and the Alta Mesa ISL project in Texas, which is currently on care and maintenance due to low uranium prices. Ur-Energy operates the Lost Creek ISL facility in Wyoming.

Source: <http://www.world-nuclear-news.org>, 17

The MoU aims to promote cooperation between Russia and Argentina in uranium exploration and mining, with a particular focus on the in-situ recovery (ISR) method of uranium extraction.

January 2018.

RUSSIA-ARGENTINA

Russia to Assist Argentina in Uranium Mining

The MoU was signed in Moscow during the first official visit by Argentine President Mauricio Macri, during which he met with Russian President Vladimir Putin. The agreement was signed by Argentine Foreign Minister Jorge Faurie on behalf of Lino Baraño.... It was also signed by Uranium One Group President and CEO Vasily Konstantinov and by the president of exploration company UrAmerica Argentina SA, Omar Adra.

The MoU aims to promote cooperation between Russia and Argentina in uranium exploration and mining, with a particular focus on the in-situ recovery (ISR) method of uranium extraction. ISR mines pass a leaching solution, such as oxygen with sodium carbonate, through buried sand containing uranium, dissolving it on the way. The solution is then pumped to the surface. The uranium is removed from the solution using an ion-exchange process and the barren solution is re-fortified with oxidant and complexing agent before being returned to the well field via the injection wells. However, a small flow (about 0.5%) is bled off and is treated as waste.

This wastewater contains various dissolved ions from the orebody and is reinjected into approved disposal wells in a depleted portion of the orebody. This bleed of process solution ensures that there is a steady flow into the wellfield from the surrounding aquifer, and serves to restrict the flow of mining solutions away from the mining area.

In a statement, Argentina's Ministry of Foreign Affairs said ISR is "the most efficient method due to its low costs and minimal environmental impact, given that it does not require soil removal". It added that, under its agreement with Uranium

One, "Argentina would thus pioneer its application in Latin America". "The signing of the memorandum seeks to position Argentina as a global uranium producer in the region and to fully satisfy Argentine demand for this metal from now on, until UrAmerica starts its own production and our country gradually becomes self-sufficient in uranium"....

It noted that planned investment in the project - which will create an estimated 500 jobs - totals \$250 million. UrAmerica is a private uranium exploration company based in Buenos Aires. The company has focused its efforts on developing the properties it has successfully consolidated in the Province of Chubut in Argentina, surrounding known high-grade deposits and historical mines. In a press statement following talks between Putin and Macri, Putin said: "Rosatom is proposing a nuclear power plant of Russian design in Argentina based on the latest and safest technological standards."

In April 2015, Russia and Argentina signed a MoU establishing a "framework for cooperation" for construction of a 1200 MWe VVER unit in the South American country. JSC RUSTom Overseas and Nucleoeléctrica Argentina SA also signed a preliminary project development agreement on

construction of the country's sixth reactor.

Russia and Argentina signed an intergovernmental agreement in July 2014 on cooperation in the peaceful use of atomic energy. That agreement replaced an earlier one that expired in December 2012 and expanded areas of cooperation. These areas included design, construction, operation and decommissioning of nuclear power plants and research reactors, including water desalination facilities. They also included support of the nuclear fuel cycle, radioactive waste

management, and isotope production.

Source: <http://www.world-nuclear-news.org>, 24 January 2018, 14 January 2018.

The signing of the memorandum seeks to position Argentina as a global uranium producer in the region and to fully satisfy Argentine demand for this metal from now on, until UrAmerica starts its own production and our country gradually becomes self-sufficient in uranium.

NUCLEAR NON-PROLIFERATION

GENERAL

UN Chief: Threat from Nukes, Other Weapons, Gathers Force

Russia's foreign minister warned that a failure of the Iran nuclear deal, especially as a result of action by the Trump administration, would send

"an alarming message" to North Korea and impact all international agreements. Sergey Lavrov took aim at President Trump at a UN Security Council meeting on confidence-building measures to tackle the

proliferation of weapons of mass destruction, saying, "we cannot for the benefit of political agendas of certain countries abandon a genuine achievement of international diplomacy."

Trump kept alive the Iran agreement, which has won international praise including from US allies, by extending sanctions waivers. But the president warned that the US would pull out in a few months unless "terrible flaws" in the deal are fixed. Lavrov

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and others worry that an US pull-out from the 2015 deal could mean that Washington cannot be trusted to keep agreements, which could harm any future efforts to get North Korea to abandon nuclear weapons. Secretary-General Guterres opened Thursday's meeting warning that the threat from weapons of mass destruction "seems to be gathering force."

He urged expanded diplomatic efforts to tackle what he called the greatest security challenge in the world today, North Korea. The international community must build on the "small signs of hope" from the recent contacts between the two Koreas to pursue diplomacy and denuclearize the Korean Peninsula, the UN....

"Global anxieties about nuclear weapons are the highest since the Cold War," Guterres said. "I remain deeply concerned over the growing risk of military confrontation and the unimaginable consequences that would result." China's deputy UN Ambassador, Wu Haitao, urged all countries to "reject Cold War mentality" and commit to peaceful solutions, including on the Korean Peninsula where he pointed to "some positive changes" emerging. ...The council meeting was organized by Kazakhstan, which holds the council presidency in January and which after the 1991 breakup of the Soviet Union decided to relinquish the world's fourth-largest nuclear arsenal.

President Nazarbayev, who chaired the council meeting, called on North Korea's leaders to follow his country's path. "We have built and strengthened our independent country, achieved its high international reputation by renouncing nuclear weapons and obtaining non-aggression safeguards from nuclear powers".... Nazarbayev called for the five nuclear powers, the US, Russia, China, Britain and France to give North Korea security guarantees "as an important condition

China's deputy UN Ambassador, Wu Haitao, urged all countries to "reject Cold War mentality" and commit to peaceful solutions, including on the Korean Peninsula where he pointed to "some positive changes" emerging.

North Korea poses the greatest threat to nuclear proliferation and is continuing "its reckless pursuit of nuclear weapons ... while its people starve and to threaten other nations while intimidating its own citizens.

for creating an atmosphere of trust and Pyongyang's return to the negotiation table." He said the issue of North Korea's pursuit of nuclear weapons "can be resolved by restoring trust among the US, Russia and China."

Guterres also expressed concern that trust between Moscow and Washington "continues to

ebb" on nuclear and other issues including "vital strategic arms reduction measures established during and after the Cold War." But, there was no sign of warming relations between the US and Russia

during the meeting. US Ambassador Haley told the council the regimes that most threaten the world today with weapons of mass destruction - North Korea, Iran and Syria, which all have good relations with Moscow also deny their people human rights, promote conflict and regional instability and "aid terrorists and militant groups."

North Korea poses the greatest threat to nuclear proliferation and is continuing "its reckless pursuit of nuclear weapons ... while its people starve and to threaten other nations while intimidating its own citizens".... As for Iran, Haley said, "the regime in Tehran is the leading cause of instability

in an unstable part of the world." She pointed to its support for "terrorists, proxy militants and murderers like Bashar Assad," the Syrian president.

Haley said the international community must respond to Iran's "dangerous violations" of its obligations in the UN resolution endorsing the nuclear deal, "not because we want the nuclear deal to fail, but because we want the cause of non-proliferation to succeed." By contrast, Kazakhstan's Nazarbayev and China's Wu touted the Iran nuclear deal as a model for future agreements. And Russia's Lavrov said its failure "would be an alarming message for the entire international community architecture

including the prospects for dealing with the nuclear problem on the Korean Peninsula." The US and Russia also sparred over chemical weapons in Syria. Haley accused Russia of vetoing three council resolutions and preventing the Organization for the Prohibition of Chemical Weapons from holding Assad's government accountable for the use of chemical weapons in Syria.

Lavrov accused the US and some other Western nations of "advancing baseless accusations

against Damascus" and blocking Russian resolutions "to condemn specific instances of chemical terrorism in Syria." He said Russia is "gravely concerned about the growing threat of chemical terrorism in the Middle East, specifically on the territories of Iraq and Syria" which can spill over beyond the region. "Militants not only are using processed chemicals but they also have their own technological and manufacturing capacities to synthesize full-fledged military toxic substances." ...

Source: <https://www.apnews.com>, 18 January 2018.

NUCLEAR PROLIFERATION

GENERAL

'Doomsday Clock' Ticked Forward 30 Seconds to 2 Minutes to Midnight

The risk to global civilisation is as high today as it has ever been in the face of twin threats, nuclear weapons and climate change, a group of leading scientists has announced, putting a significant share of the blame on the Trump administration. The Bulletin of the Atomic Scientists moved its symbolic Doomsday Clock

Russia is "gravely concerned about the growing threat of chemical terrorism in the Middle East, specifically on the territories of Iraq and Syria" which can spill over beyond the region. "Militants not only are using processed chemicals but they also have their own technological and manufacturing capacities to synthesize full-fledged military toxic substances.

forward 30 seconds, to two minutes to midnight, in a reflection of how the scientists view the dangers facing the world.

The only other time the clock was set so close to catastrophe in its 71-year history was in 1953, after the US and the Soviet Union detonated their first thermonuclear bombs. In the immediate aftermath of the cold war, the clock was set back to 17 minutes to midnight, but optimism about humanity's future has steadily eroded since then. "To call the world's nuclear

situation dire is to understate the danger and its immediacy," said Rachel Bronson, the bulletin's president and CEO, told journalists in Washington.

In explaining their decision, scientists from the bulletin's widely respected science and security board said that they were disturbed by the rising tensions on the Korean peninsula, the increasing emphasis and expenditure on nuclear weapons by major powers, the absence of arms control negotiations around the world, and the wavering political will to combat climate change.

Source: <https://www.theguardian.com>, 25 January 2018.

NORTH KOREA

President Trump's Nuclear Button Boast the 'Spasm of a Lunatic'

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North Korean state media called President Trump's boast of having a bigger nuclear button than its leader Kim the "spasm of a lunatic." *Rodong Sinmun*, the ruling Workers' Party's newspaper, spoke out in an editorial after Trump tweeted on 3 January 2018 "North Korean Leader

Kim just stated that the "Nuclear Button is on his desk at all times." Will someone from his depleted

and food starved regime please inform him that I too have a Nuclear Button, but it is a much bigger & more powerful one than his, and my Button works!" Trump's tweet came a day after Kim said in a speech: "The US should know that the button for nuclear weapons is on my table," according to the Associated Press. Kim claimed the weapons were capable of reaching the entire US mainland. The comment followed an escalating war of words between Trump and Kim, amid global concerns that nuclear war could break out.

The US and Canada host a meeting Tuesday in Vancouver aimed at raising pressure on North Korea to give up its nuclear weapons program.

Foreign ministers and officials from the US and 19 nations that fought on its side during the 1950–1953 Korean War attended the meeting, hosted by Secretary of State Rex Tillerson and his Canadian counterpart, Chrystia Freeland. The meeting was announced after Pyongyang tested its biggest intercontinental ballistic missile in November. Delegates were discussing ways to ensure enforcement of United Nations sanctions, including limiting North Korea's access to refined petroleum products, crude oil and industrial goods, Reuters reported. The gathering comes after North Korea recently restored a suspended military hotline, held face-to-face talks with South Korea for the first time in two years and agreed to take part in February's Winter Olympics in South Korea. Japan's national broadcaster NHK alert saying, North Korea had launched a ballistic missile aimed at the nation. The error message, which was quickly retracted, came days after an emergency missile alert was accidentally sent to residents in Hawaii.

Source: <https://www.UStoday.com>, 17 January 2018.

NUCLEAR SAFETY

GENERAL

What Should You Do If a Nuclear Bomb is Heading Your Way?

Today, nuclear threats are more likely from rogue states and terrorists, not the Soviet Union. But we should still be worried about nuclear threats we're facing — and, with a president promising to rain down "fire and fury," the threats we're making. So if an attack is imminent, what do you do?

On Jan 13, the state of Hawaii spent 38 minutes in terror after a text alert mistakenly warned of an incoming nuclear missile attack. If you heard about the mistake and wondered what you would or should do if you learned a nuclear bomb was heading your

way, you're not alone.

It has been more than 30 years since schools in the United States had "duck and cover" drills for schoolchildren, and preparing for a nuclear attack isn't something most people are familiar with. Today, nuclear threats are more likely from rogue states and terrorists, not the Soviet Union. But we should still be worried about nuclear threats we're facing — and, with a president promising to rain down "fire and fury," the threats we're making. So if an attack is imminent, what do you do?

Don't stand there and look dumbfounded because you may have about 10 to 15 seconds to do something. And what you do in that 10 to 15 seconds may actually save your life.

If you're unlucky (or lucky) enough to be at Ground

Zero, your troubles would be over almost instantly. Anyone at or near the center of a nuclear explosion would be killed immediately by the fireball, searing radiation or the blast wave. Otherwise, what you should do depends on how far away you are from the explosion.

"If you see a flash that's brighter than anything else that you've ever seen and it feels like the sun, that's probably a nuclear explosion. There aren't that many things that fit that category," says nuclear historian Alex Wellerstein of the Stevens Institute of Technology. "Don't stand there and look dumbfounded because you may have about 10 to 15 seconds to do something. And what you do in that 10 to 15 seconds may actually save

your life.”

According to the Department of Homeland Security, if you can see the nuclear flash or if you have enough warning beforehand, take shelter immediately. Even a blast shelter would not be able to keep you safe from a direct hit by a nuclear weapon. But if you’re far enough away from the center of the explosion, sheltering in place can keep you shielded from flying glass or falling objects. If you’re not in immediate danger, Wellerstein says the next thing to do is to move to a sheltered space or as far underground as you can, because after the explosion comes the fallout.

During a nuclear explosion, dirt, debris and other particles are forced upward into the atmosphere in a giant cloud. As wind pushes the cloud away from the blast site, radioactive ash falls out of the cloud. Fallout can arrive at Ground Zero within an hour, and it’s most dangerous within the first 48 hours of detonation. But its radiation decays exponentially, which means it loses its intensity fairly rapidly. After two weeks, the radiation from the explosion is about 1 percent of its initial level. It’s important to take shelter immediately to keep yourself from being exposed to high doses of radiation at the beginning of the explosion.

When most people think about a nuclear explosion, they probably imagine a global wasteland and the end of life as we know it. If one, or even two nuclear bombs were to be detonated in the United States, it would be one of the worst things to happen to this country — but it could still recover. Government response would look a lot like the natural disaster response you see from FEMA, which is what the office of Civil Defense Administration from the 1950s was folded into.

Source: Daron Taylor, www.washingtonpost.com, 26 January 2018.

UK

UK Offers Early Engagement on Nuclear Safeguards

The NS Regulations will create the legal framework for a new domestic nuclear safeguards regime to operate in the UK following the country’s withdrawal from European Atomic Energy Community (Euratom). Publication of the pre-consultation drafts is timed to accompany the report stage of the NS Bill 2017 to 2019, which takes place on 23 January. In explanatory notes to

the two documents, BEIS said that during the House of Commons Committee Stage of the NS Bill in November last year, Richard Harrington, BEIS minister for energy and industry, had made a commitment to publish a pre-consultation draft of the regulations at the report stage.

“Although good progress has been made with the two

sets of regulations, they are still being developed with the Office for Nuclear Regulation (ONR). Some elements are dependent on external issues, and some require further policy development,” BEIS said. “As such, the regulations are likely to change in response to this early engagement with Parliament and stakeholders and views received will inform the on going development of the regulations, prior to formal public consultation, which is currently planned for Spring 2018” Following this the government currently aims to lay draft regulations before Parliament before the end of this year.

IAEA and Euratom Treaty: The UK has in place two safeguards agreements with the IAEA - a Voluntary Offer Agreement (VOA) and an Additional Protocol to the VOA. These are trilateral agreements between the IAEA, the UK and Euratom, BEIS noted. The UK’s current safeguards obligations are primarily fulfilled through its membership of the Euratom Treaty and associated regulations, notably the European Commission

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Regulation (Euratom) No 302/2005 on the application of Euratom safeguards, it added. "As a result of the UK's intended withdrawal from Euratom the UK's current trilateral agreements with the IAEA, the VOA and the AP, will become ineffective. As a result, the UK will need to conclude new bilateral safeguards agreements with the IAEA, in connection with the Treaty on the Non-proliferation of Nuclear Weapons, which detail the UK's future safeguards obligations"....

The UK has committed to ensuring that domestic nuclear safeguards arrangements can be put in place following withdrawal from Euratom and that those arrangements will be "robust and as comprehensive" as those of the existing Euratom regime, and go beyond international standards .

"The new NS Regulations will enable the UK to give effect to its obligations under new bilateral agreements with the IAEA and under any relevant other international agreements on civil nuclear activities which may be concluded with other states before the NS Regulations are made, including on the subject of nuclear research and development. The NS Regulations will then be amended to list those international agreements which are entered into after the NS Regulations are made"....

Acting on the basis of the technical characteristics, the ONR may impose particular safeguards provisions on an operator in relation to a qualifying nuclear facility.

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Powers: The NS Bill also enables the Secretary of State to give the ONR additional powers to take on certain responsibilities in connection with the UK's international safeguards and nuclear non-proliferation obligations including, for example, with the IAEA under the new VOA and AP agreements which are in the process of being negotiated. The domestic safeguards regime will primarily involve reporting and verification processes, which will enable the UK to demonstrate to the international community that

civil nuclear material is not diverted into military or weapons programmes....

The NS Regulations place legal obligations on UK operators of qualifying nuclear facilities and,

together with many of its existing enforcement powers in the Energy Act 2013, provide power to the ONR to enforce these obligations, it said. Nuclear safeguards are distinct from nuclear safety (the prevention of nuclear accidents) and nuclear security (physical protection

measures), which are the subject of their own regulatory regimes.

The majority of the NS Regulations will come into force on the same date. However, it is currently anticipated that the commencement date for certain regulations may be later to allow operators and the ONR to develop suitable approaches to delivering and enforcing new requirements that go beyond the safeguards obligations currently in operation. The policy on this is being developed.

Operators: An operator will be required to declare the basic technical

characteristics to the ONR using the questionnaire set out in the NS Regulations, and to provide the ONR with an annual outline of its programme of safeguards-relevant activities for the upcoming year. "Acting on the basis of the technical characteristics, the ONR may impose particular safeguards provisions on an operator in relation to a qualifying nuclear facility"....

An operator will be required to maintain a system of accountancy and control of qualifying nuclear material, which includes keeping accounting, and operating records and providing reports to the ONR. The schedule concerning the accountancy and control system "draws upon, but will not totally replicate", it said, the European Commission recommendation of 11 February 2009

on the implementation of a nuclear material accountancy and control system by the operators of nuclear installations.

An operator will be required to send accounting reports to the ONR, including an initial book inventory and an inventory change report. In the case of a qualifying nuclear facility, which includes a reactor, the inventory change report must include information on nuclear transformations. In addition, an operator will be required to provide the ONR with a material balance report in respect of each material balance area, and a physical inventory listing. An operator will be required to submit a special report to the ONR in the event of an unusual incident or a change in containment or where, following exceptional circumstances or an incident, an operator has been informed that qualifying nuclear material may have been lost.

International Agreements:

It is anticipated that, in addition to new Safeguards Agreements with the IAEA, the UK will also enter into new bilateral nuclear co-operation agreements with other States, which will include nuclear safeguards obligations, including, for example, with Australia, Canada, Japan and the US.

It is intended that the Nuclear Safeguards (Civil Activities, Fissionable Material and Relevant International Agreements) Regulations will list those international agreements, which have already been entered into before those regulations are made and that those regulations will be amended, as appropriate, to include any relevant international agreements which are entered into by the UK in the future....

These international agreements may impose safeguards obligations on the UK in relation to the supply of qualifying nuclear material. As a result, the ONR may need to share certain information, which it receives from operators, not just with the IAEA, but also with certain other

States, it added. "It is anticipated that the NS Regulations will enable the ONR to do this by requiring operators to provide information relevant to these additional obligations alongside the information already required by the NS Regulations to be provided, in respect of qualifying nuclear material, in the initial book inventory, inventory change report, material balance report and physical inventory listing and in respect of intended imports and exports"....

The NS Regulations will also set out the weight units and categories of qualifying nuclear material

to be used in the notifications which are required under the regulations; provide for the removal of any derogation applied to any qualifying nuclear material when it is stored with any qualifying nuclear material which does not benefit from a derogation; require an operator to provide the ONR with advance notification of exports and shipments; require an operator which is an ore

producer to comply with certain reduced safeguards requirements and to inform the ONR of ore exports; and require an operator to submit an initial stock list and accounting records for waste and to inform the ONR of transfers of conditioned waste. They will also prohibit an operator from withdrawing qualifying nuclear material from civil activities except with the previous written consent of the ONR.

Role of the ONR: The NS Regulations provide for the regulatory role of the ONR in nuclear safeguards. In general, the Energy Act 2013 governs their activities, but the regulations set out some additional provisions including inspections, publication of information, provision of information to the IAEA, communication with the IAEA on the issue of derogations, and the characterisation of material, for example, as waste. The ONR said that it has worked with BEIS in the development of the draft regulations, and will continue to do so as the regulations are

Regulations will enable the ONR to do this by requiring operators to provide information relevant to these additional obligations alongside the information already required by the NS Regulations to be provided, in respect of qualifying nuclear material, in the initial book inventory, inventory change report, material balance report and physical inventory listing and in respect of intended imports and exports.

developed further. ONR said it would engage with stakeholders to discuss the operation of the future domestic safeguards regime in the coming months.

Source: <http://www.world-nuclear-news.org/>, 22 January 2018.

NUCLEAR WASTE MANAGEMENT

CANADA

First Borehole Drilled in Canadian Repository Site Search

Canada's Nuclear Waste Management Organisation (NWMO) has completed drilling the first borehole near Ignace to a depth of about one kilometre. It is one of five sites in Ontario to be investigated for the siting of a deep repository for the long-term management of the country's used nuclear fuel.

Drilling began on 6 November in a rock formation known as the Revell Batholith about 35km west of Ignace, Ontario. The hole was drilled using a skid-mounted diamond drill rig. NWMO announced that drilling of the first borehole was completed on 16 January.

According to NWMO, it is anticipated that the deep geological repository in the type of geology found in the Ignace area (crystalline rock) would be developed at a depth of some 500 metres below ground surface. NWMO anticipates drilling three initial boreholes, one after the other. Eventually, more extensive borehole drilling may be undertaken in a location identified together with people in the area as a preferred potential repository site.

Further activities to analyse the core samples and explore the borehole at depth are now under way,

NWMO said. Geoscience, environmental, engineering and repository safety specialists will continue to work through this year to complete the borehole analyses, interpret data and share the findings with an expert group for peer review. Once that is complete, NWMO will share findings with the community. The findings, along with those from earlier studies, will guide the NWMO in working with communities in planning any future study activities.

Mahrez Ben Belfadhel, vice president of site selection at NWMO, said: "Completing the drilling of our first borehole to obtain initial core samples and provide access to the geological conditions at depth marks another significant milestone in Canada's plan for the safe, long-term management of used nuclear fuel."

NWMO is searching for a suitable site for the repository through a long-term process called Adaptive Phase Management, launched in 2010. The process is progressively narrowing down study areas from a list of communities that registered interest. The preferred site must have a suitable rock formation in an area with an informed and willing host, and the project will only move forward in partnership with First Nation and Métis peoples and surrounding communities.

Twenty-one communities, all in Ontario or Saskatchewan, initially requested preliminary assessments. Of the 11 areas selected for Phase 2 studies, five in Ontario now remain: Ignace; Hornepayne; Huron-Kinloss; Manitouwadge; and South Bruce. NWMO said it expects to be able to select the preferred site for detailed site characterisation by around 2023.

Source: *World Nuclear News*, 18 January 2018.

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UK

Communities Offered £1m a Year to Host Nuclear Waste Dump

Local communities around England, Wales and Northern Ireland will be offered £1m a year to volunteer to host an underground nuclear waste disposal facility for thousands of years, as part of a rebooted government programme. The financial incentive is one way the government hopes to encourage communities to host the £12bn facility, after previous efforts failed in 2013 when Cumbria county council rejected the project.

Under new plans published, a test of public support will be required for the scheme to go ahead, which could include a local referendum. The only areas to explore the idea last time round were Copeland and Allerdale borough councils in Cumbria, and Shepway District Council in Kent.

This time, interested communities that explore hosting the facility will also receive £1m a year, which officials say could be spent on developing skills locally or apprenticeships. The payments, which could rise to £2.5m annually as a

community considers whether to proceed, are expected to last for around five years.

The geological disposal facility (GDF) is seen by experts as the best long-term solution to storing the estimated 750,000 cubic metres of waste generated by half a century of nuclear power and defence, which would fill three quarters of Wembley Stadium. It also includes the radioactive material created by potentially five new plants that the government expects to be built, including Hinkley Point C, which EDF Energy is constructing in Somerset.

The Institute of Directors said storing waste deep underground would be cheaper than storing it above ground, as it is at present at around 30 sites. "Running costs for a geological disposal facility storing the waste 1,000 metres below the surface would be significantly lower," the business group said. ...Nuclear waste is currently stored at about 30 sites, but predominantly at ground level at Sellafield in Cumbria. The GDF project is expected to cost £12bn, spread over a century.

Source: <https://www.theguardian.com>, 25 January 2018.

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Centre for Air Power Studies

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