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**OPINION – Thomas Newdick**

**There were Doomsday Ships Ready to Ride Out Nuclear Armageddon before there were Doomsday Planes**

Among the U.S. government's ever-evolving plans for what to do in an all-out nuclear confrontation, some of the least known involved highly modified warships that were deployed during one of the tensest periods between the Soviet Union and the United States. Had the Cold War turned hot, the U.S. president likely would have called the shots in the ensuing nuclear exchange from one of these remarkable 'floating White Houses.' These fascinating vessels were in every way a part of the ancestry of today's 'doomsday plane' airborne command posts.

The program was officially known as the National Emergency Command Post Afloat, or NECPA, pronounced 'neck-pa.' It eventually yielded two specially equipped ships, the first of which, USS Northampton, began its new mission in March 1962. The Northampton had been built as an Oregon City class heavy cruiser, four of which were commissioned soon after World War II. The Northampton was completed as a command light cruiser, CLC-1, entering service in 1953 and then serving primarily as a flagship with the Atlantic Fleet. Because of its original role, the warship already featured an

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extra deck for command and control spaces.

Adapted for the NECPA role, the Northampton was reclassified as the first command ship, CC-1, and was based in Norfolk, Virginia, within easy reach of Washington, D.C. Its codename was "Sea Ruler." In times of crisis, the president and their

closest aides would have been whisked by U.S. Marine Corps helicopters to the waters off the eastern seaboard, to board the Northampton. The modifications carried out to prepare the ship for its role in potential Armageddon were extensive, as Garrett

M. Graff observes in his peerless book on the subject of U.S. government Doomsday plans, Raven Rock: The Story of the U.S. Government's

Secret Plan To Save Itself — While the Rest Of Us Die:

More than forty tons of gear, including sixty transmitters and receivers, allowed it to process 3,000 messages a day (considered at the time quite a feat), and the Navy claimed the powerful communications system allowed the ship to set the world record for the fastest around-the-globe message, taking just eight-tenths of a second. A year after the Northampton began its NECPA role, the Navy added a second 'Floating White House' to the fleet — USS Wright, codenamed "Zenith," and also based at Norfolk.

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This warship had been completed as a Saipan class light aircraft carrier that first entered service in 1947 before being decommissioned for the first time in 1956. Although originally earmarked for use as an auxiliary aircraft transport, Wright was instead converted at Puget Sound Naval Shipyard as the second command ship, CC-2.

Even more comprehensively equipped than the Northampton, Graff describes Wright as "the most sophisticated communications platform ever placed at sea" — as of 1963, at least. The former flight deck of the ship became increasingly dominated by aeries, the tallest being a set of 156-foot masts festooned with troposcatter antennas.

...The Wright has the most extensive communications facilities ever put aboard a ship. Its 'Voice of Command' can be heard by ships, aircraft, and stations throughout the world. Wright's command spaces have facilities for theatre-type presentations similar to command

posts ashore, including projection equipment and huge motion picture screens. Overall, there are rooms for war operations, plotting, charts and graphics, emergency action, briefings, and conferences. On the antenna deck are arranged the largest, most powerful transmitting antenna systems ever installed on a naval vessel. An entire room is given to the ship's teletype machines, each of which is capable of receiving incoming messages at the rate of 100 words per minute. The Wright is capable of handling as many messages in a day as many large shore-based communications stations.

The former hangar space below deck was now filled with operations centers, with working areas and accommodation for 200 communications specialists, part of a complement of around 1,000 crew. There was also a team of 17 officers and 22 enlisted personnel from the Joint Chiefs of Staff, who would have managed the 'Floating White House' during an emergency. The crew could also be increased in size if required, to cope with different eventualities.

**The emergency operations center, which normally remained locked, featured the commander-in-chief's desk and personnel could only enter with a security detail. In keeping with the presidential role, the Wright had three "themed" dining halls, where well-trained chefs provided the meals and a roaring log fire added to the atmosphere.**

As for the president, they were provided with what Graff describes as an "elaborate, carpeted stateroom," equipped with "nearly a dozen different color-coded telephones linked to various parts of the country's military command structure." The emergency operations center, which normally remained locked, featured the commander-in-chief's desk and personnel could only enter with a security detail. In keeping with the presidential role, the Wright had three "themed" dining halls, where well-trained chefs provided the meals and a roaring log fire added to the atmosphere.

...There were also plans to convert another Saipan class carrier, the lead ship of that class to NECPA configuration, as CC-3, but these were quickly abandoned and instead, this vessel became a communications relay platform. Thought was also given to another, and even more survivable, NECPA platform, based on the nuclear-powered submarine USS Triton, but this never progressed beyond studies in the mid-1960s.

The Doomsday submarine that never was: the radar picket USS Triton seen in 1959. The operating principle behind NECPA called for one of these two vessels to be permanently at sea, with the ships rotating duty every two weeks. In this way, at least one of the vessels was afforded more protection against a surprise attack from the Soviet Union. In such a scenario, or other times of increased superpower tensions, the president and other national leaders would be transferred to the vessel that was on duty.

In practice, the NECPA ship that was at sea would patrol around the U.S. Eastern Seaboard, generally within an area between Nova Scotia to the north and the Caribbean to the south, but usually operated within reasonable reach from Washington, D.C. During presidential trips to foreign countries, one of the NECPA vessels would frequently trail them, including on President Lyndon B. Johnson's visit to Uruguay in 1967, and to El Salvador the following year.

A letter from President Johnson to the commander of USS Northampton, after an overnight stay in 1966. As Graff points out, while little-known today, the NECPA ships were considered, at the time, to be the most survivable option for an evacuation of the president and their staff, prior to a nuclear strike. Indeed, the two ships seem to have been the Pentagon's first choice for such a scenario all the way from the introduction of the Northampton in 1962 until midway through Nixon's first term, which ran from 1969 until 1974.

USS Northampton passes a fountain decorated with a Polaris missile at the Portsmouth Naval Shipyard

Museum, Norfolk, Virginia, around 1962. It's worth remembering that, to begin with, hardened land-based installations for "continuity of government" were considered fairly survivable, especially since the first atomic bombs were much less powerful than those deployed in the later years of the Cold War. Things changed entirely with the appearance of the first ICBMs, which provided a terrifying combination of speed (reducing warning time to 15-30 minutes) and accuracy, plus the arrival of far more destructive thermonuclear weapons with which to arm them.

In the period in which these command ships were in commission, the other available options for the evacuation of the U.S. leadership involved hardened facilities on land, which could be decimated by a direct strike using thermonuclear ICBMs, or an airborne command post like

**EC-135J Night Watch aircraft conduct aerial refueling. In comparison, the NECPA ships could remain in operation for weeks at sea and offered a high level of survivability.**

the EC-135J Night Watch, which began its mission in 1962, but which could spend only a limited amount of time in the air before it would have to land. At the same time, the growing vulnerability of existing underground facilities did lead the United States to look at building super-shielded bunkers, including the Kubrick-esque Deep Underground Command Center that you can read about in this previous War Zone article.

Former C-135 pilot and War Zone columnist Robert Hopkins explains that the EC-135J, though touted as able to stay aloft indefinitely with air refueling, would begin to run out of engine oil between 72 and 96 hours. Nuclear war planners assumed 72 hours would be the limit. Moreover, the availability of a tanker to actually refuel the jet during a full nuclear exchange must be considered doubtful. "After 48 hours, if not sooner, the crew will run out of food and water (especially) and human survivability after that becomes tedious," Hopkins says.

EC-135J Night Watch aircraft conduct aerial refueling. In comparison, the NECPA ships could remain in operation for weeks at sea and offered a high level of survivability. What's more, they also

offered plenty of space for the staff to manage national security and war-planning, as well as considerable redundancy in terms of communications to maintain a link along the chain of command.

Exactly how survivable the NECPA vessels would have been in an actual shooting war remains somewhat open to question. Certainly, their ability to persist through a nuclear exchange was mainly attributed to the fact that they would be expected to avoid any encounters with a Soviet Navy that was, in this period, still building up its blue-water capabilities. However, the vessels both featured some limited armament. USS Northampton initially packed four of 5-inch dual-purpose guns, but eventually kept only a single aft turret, while the Wright had an array of 40mm Bofors guns to provide anti-aircraft firepower. Some reports state that they also retained their anti-submarine warfare sensors and other support systems that would have provided them with some level of organic situational awareness.

One of the 5-inch gun turrets aboard USS Northampton as of 1962. Seen shortly before decommissioning in 1970, USS Northampton has had its armament reduced to a single 5-inch turret at the rear, due to the requirement for more command and control spaces within an enlarged superstructure. On the other hand, if the Soviet Navy was to track unprotected NECPA vessels, they would have potentially been easy targets for a shadowing submarine. Indeed, Graff notes that there were rumors among crews of the two ships that the U.S. Navy provided one of its own submarines as an escort while deployed at sea.

Thankfully, neither of the NECPA ships were ever used in a full-on nuclear crisis situation, but they

did at least go on alert during times of particular Cold War tensions. The Northampton was placed on alert during the Cuban Missile Crisis in 1962, while the Wright was called upon during the

Pueblo Incident in 1968 when a U.S. Navy intelligence ship was attacked and captured by North Korean forces.

A U.S. Navy SP-2H Neptune flies over a Soviet cargo ship with crated B-29 jet bombers on deck during the Cuban Crisis. Both President John F. Kennedy

and Johnson spent nights aboard the NECPA vessels, during exercises, as well as during the aforementioned foreign tours. Perhaps the most significant event in these ships' fortunes came during President Johnson's return from Uruguay aboard the Wright in 1967. On April 17, Strategic Air Command successfully used an EC-135 aircraft to launch an unarmed Minuteman II ICBM from its silo. This was the first time that this had been achieved and was a sign that the airborne command post was the future for the Domsday command post force.

By the end of the decade, moreover, the advent of Soviet spy satellites meant that the lumbering NECPA ships were no longer safe from prying eyes — their every movement could now potentially be tracked, putting them at the mercy of an ever more capable Soviet Navy's surface warships, submarines, and aircraft. Even ICBMs could have been a risk. The U.S.

Navy abandoned the NECPA program in around 1970 and the two ships were decommissioned the same year before eventually being sold for scrap: Northampton in 1977 and Wright in 1980.

...Commonly referred to as "Domsday Planes," they provide a robust and survivable airborne command post that offers a platform for the President of the United States and the Secretary

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of Defense, via a mechanism known as the National Command Authority (NCA), to initiate a nuclear strike. Like the NECPA ships that preceded them, however, they are also equipped to support a range of other major military operations or the response to other significant contingencies, such as large-scale natural disasters. However, the E-4Bs are now old aircraft, dating back to the 1970s, and are in the early stages of being replaced by a new platform, likely also to be based on the Boeing 747 airframe.

In addition, the Air Force One VC-25As also conduct part of the “continuity of government” mission and is intended to operate in the most demanding situations, including a nuclear apocalypse. Air Force One has been modernized to better maintain communication with anyone on the ground or in the air and to stay abreast of a rapidly unfolding situation. The initiative to make it a more effective command post for the President came after the experience of 9/11, when President George H. W. Bush was aboard it and communications between the aircraft and major players on the ground broke down. The replacement of these aircraft with the VC-25B has led to concern that this mission set will be compromised, at least in part, by the new aircraft’s lack of aerial refueling capability. Currently, both E-4Bs and VC-25As have this capability.

As for the aforementioned E-6B Mercury airborne strategic command aircraft, they too, continue to provide an alternate flying communications link to America’s nuclear-capable bombers, ballistic missile submarines, and ICBM silos. These aircraft, too, are scheduled for replacement.

For the time being, it seems that if nuclear Armageddon does come, the hopes are that the U.S. President will be aloft in a bespoke “Doomsday Plane,” or a VC-25. When considering the critical role of these aircraft, and their planned successors, we should not forget the pioneering part played by their seagoing ancestors.

Source: <https://www.thedrive.com/the-war-zone/>

*39301/there-were-doomsday-ships-ready-to-ride-out-nuclear-armageddon-before-there-were-doomsday-planes?xid=twittershare, 19 February 2021.*

**OPINION – Ryan McMaken**

**Why No State Needs Thousands of Nuclear Warheads**

Last week, the United States signed a five-year extension of the New START arms control treaty with Russia. Russia’s President Putin signed the treaty shortly thereafter. The “Strategic Arms Reduction Treaty” allows Russia and the US to monitor each other’s nuclear forces, facilities, and activities. The idea is to keep track of the relative strength of the two regimes’ respective arsenals and to encourage reductions. The treaty also caps the number of deployed strategic nuclear warheads at 1,550 each. (The total stockpiles for the US and Russia are 4,700 and 4,300, respectively.)

The move is a departure from the Trump administration’s opposition to the treaty. The Trump administration had wanted to renegotiate the treaty, insisting that so-called tactical nuclear

**The Trump administration also insisted that China be added to the treaty. The Chinese declined to participate. President Trump also ended two other arms treaties, the INF Treaty and the Open Skies Treaty.**

weapons—designed for battlefield use—be included. As it is, the treaty focuses only on strategic weapons. The Trump administration also insisted that China be added to the treaty. The Chinese

declined to participate. President Trump also ended two other arms treaties, the INF Treaty and the Open Skies Treaty. These all may sound to many readers like rather momentous changes to policy. But this is all a lot of political theater.

Just as the Trump administration used the abrogation of these treaties as red meat for the “America first” crowd, the Biden administration is surely more than happy to use the treaty to demonstrate how Biden is a departure from Trump. The treaty may even offer military lobbyists the opportunity to point to Russian stockpiles and claim the US must find ways to balance or counter Russian nuclear capabilities. Putin, meanwhile, can say that he signed a treaty limiting the arsenal

of the far-richer American regime, which has a lot more money to spend on nuclear weapons. For Putin, this is important because the Russian state has been looking to economize and has been reducing or moderating military spending in recent years. In short, arms treaties like New START serve a domestic political function. They help politicians take credit for allegedly pursuing peace while also potentially justifying more military spending overall.

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In practice, however, the extension of the treaty does not reduce the risk of nuclear war, and it certainly won't make nuclear arms disappear or even be substantially reduced. It is the presence of the nuclear weapons themselves that has deterred both the US and the Russians—and the Soviets before them—from a nuclear conflict. Moreover, the arms limitations provisions of the treaty won't change the status quo of deterrence. Both nations have more than enough nuclear capability to achieve a deterrent effect, and given the current thinking within each regime, it's a safe bet neither will agree to a treaty which threatened to reduce arsenal levels to anywhere near levels of "minimum deterrence."

**Recent events surrounding U.S. assessments of Iraq's suspected WMD capabilities forcefully demonstrate the challenges of reliable, accurate, and unbiased information. Intelligence regarding where an adversary's nuclear weapons are located and if the state is actually planning to attack could be wrong or incomplete.**

Yet, in practice, both regimes could reduce nuclear spending and nuclear stockpiles far below current levels without sacrificing deterrence. Neither regime, however, is likely to risk making any sizable reductions. The ideal of overwhelming nuclear force still has many friends in both Washington and Moscow.

**The Value of Minimum Deterrence:** Whether or not politicians believe in the use of minimum deterrence has little to do with whether or not it is actually effective, and arms agreements like New START don't do much to push regimes in this direction. In a 1990 essay titled "Nuclear Myths and Political Realities," Kenneth Waltz—perhaps

the most influential scholar of international relations of the past fifty years—outlines how "strategic arms agreements do not have military but economic and political, significance."

Counting up the total number of missiles in these enormous arsenals does little, since, for nations that are already well above the threshold of achieving nuclear deterrence, these treaties don't change the military calculus.

What really matters is the perception that the other side has second-strike capability, and this certainly exists in US-Russia relations. Once each regime knows that the other regime has second-strike capability, the competition is over. Deterrence is established. Waltz notes: So long as two or more countries have second-strike forces, to compare them is pointless. If no state

can launch a disarming attack with high confidence, force comparisons become irrelevant.... Within very wide ranges, a nuclear balance is insensitive to variation in numbers and size of warheads. The focus on second-strike capability is key because pro-arms-race policymakers are quick to note that if a regime is

able (with a first strike) to destroy its enemy's ability to retaliate in kind, then a nuclear war can be "won."

**Second-Strike Capability Evens the Score:** But, as shown by Michael Gerson in *International Security* (2010) establishing second-strike capability—or, more importantly, the perception that a regime has it—is not as difficult as many suppose. Gerson writes:

A successful first strike would require near-perfect intelligence, surveillance, and reconnaissance (ISR) to detect, identify, and track all of the adversary's nuclear forces; recent events surrounding U.S. assessments of Iraq's suspected WMD capabilities forcefully demonstrate the

challenges of reliable, accurate, and unbiased information. Intelligence regarding where an adversary's nuclear weapons are located and if the state is actually planning to attack could be wrong or incomplete, and an attempted first strike based on inaccurate or incomplete information could have far-reaching negative consequences.

This can be countered through a variety of methods, including secrecy and the ability to move weapons delivery systems around. This is why the US, Russian, and Chinese regimes have long been so enthusiastic about the so-called nuclear triad. It is assumed that if nuclear weapons can be delivered by submarine, aircraft, and land, then it would be impossible for an opposing regime to destroy all three at once and achieve first-strike victory.

But even in the absence of a triad, an opposing regime that seeks a total first-strike victory has few grounds for much confidence. As Waltz shows, "Nuclear weapons are small and light; they are easy to move, easy to hide, and easy to deliver in a variety of ways." That is, if a regime manages to move around and hide even a small number of planes, subs, or trucks, this could spell disaster for the regime attempting a successful first strike. Gerson explains: A nuclear first strike is fraught with risk and uncertainty. Could a U.S. president, the only person with the power to authorize nuclear use and a political official concerned with re-election, his or her political party, and their historical legacy, ever be entirely confident that the mission would be a complete success? What if the strike failed to destroy all of the weapons, or what if weapons were hidden in unknown areas, and the remaining weapons were used in retaliation?

Nor must it be assumed that a large number of warheads is necessary to achieve deterrence. Waltz recalls that Desmond Ball—who had advised the US on escalation strategies—convincingly asserted that the nuclear weapons necessary for deterrence numbered "not in the hundreds but in the tens." Ball contended that a

debilitating attack on the US could be achieved with as few as fifty warheads.

Proceeding on the assumption that an enemy has no warheads left following a first strike requires an extremely high level of confidence, because the cost of miscalculation is so high. If a regime initiates a first strike and misses only a few of the enemy's missiles, this could lead to devastating retaliation both in terms of human life and in terms of the first-strike regime's political prospects.

This is why Waltz concludes that a rudimentary nuclear force can achieve deterrence if there is even a small and plausible chance of second-strike capability. A small nuclear strike is nonetheless disastrous for the target, and thus "second-strike

forces have to be seen in absolute terms." Waltz correctly insists that calculating the relative dominance of one arsenal over another becomes a waste of time: "the question of dominance is pointless because one second-strike

force cannot dominate another."

The conclusion is that a small second-strike force is sufficient. Naturally, this can be attractive to smaller or cash-strapped regimes, such as the Soviet Union, which in its final decades found itself devoting ever larger amounts of its GDP to military spending.

**A Minority View:** This remains the minority view. Nikita Khrushchev, for example, faced much opposition to his plans to adopt a minimum deterrence posture in the Soviet Union after 1961. Conservatives in the military and Politburo were vehemently opposed to the plan, in part because it included cutting back on spending on conventional military forces. But the opposition was also due to the fact that the hardliners were quite convinced by the perceived necessity of immense, flexible, and overwhelming force.

In the United States, of course, minimum deterrence has never been very popular, especially among conservatives. For example, spending on the US nuclear arsenal increased 50 percent under Donald Trump from 2016 to 2020. The Pentagon

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and Congress continue to put sizable faith in maintaining a large, diverse, and expensive arsenal.

In any case, the rejection of minimum deterrence achieves a useful political goal, as described by Waltz: The claim that we need a seamless web of capabilities in order to deter does serve one purpose: it keeps military budgets wondrously high. New START isn't likely to change this, and if the treaty presented any real obstacle to military spending or the military establishment, it would be long gone. Yet the US regime could easily slash its nuclear budget and stockpile without sacrificing anything in the way of nuclear deterrence. Although much is being made in recent years of China's growing nuclear stockpile, China's total nuclear arms amount to a mere fraction of the US's deployed warheads. But facts like these have never gotten in the way of the promilitary narrative on Capitol Hill.

*Source: Ryan McMaken is a senior editor at the Mises Institute, <https://www.eurasiareview.com/12022021-why-no-state-needs-thousands-of-nuclear-warheads-oped/>, 12 February 2021.*

**OPINION – Neville Teller**

**Biden's Iran Dilemma**

The Iran issue poses a real predicament for Joe Biden, as he takes up the reins of office. How can he fulfil his election promise of returning the US to the Iran nuclear deal, while avoiding the unfortunate consequences that followed President Barak Obama's original negotiation?

As Obama came into office, he made no secret of the fact that he believed much was wrong with his country. He felt guilty about America's strength and its political record. In a keynote speech in Strasbourg in April 2009 he declared that throughout the nation's existence "America has shown arrogance and been dismissive, even derisive, of others." If only the power of the US

could be reduced, he declared, then America would have the "moral authority" to bring murderous regimes such as Iran into the "community of nations".

His mention of Iran at that early stage was significant. A widely-held view among political analysts is that the "signature issue of Obama's diplomacy", as political scientist Amiel Ungar put it, was to transform US-Iranian relations. If he could bring Shia Iran on side, the presumption goes, he believed it could act as a bulwark against America's real enemies, Sunni Al-Qaeda and Islamic State.

**The inevitable consequence was that by the time Obama left office, the US had lost the confidence, and much of the respect, of its erstwhile allies such as Saudi Arabia, the Gulf States and Egypt, all of whom had good reason to regard Iran as their prime antagonist.**

A vital element in his pursuit of better relations with Iran was the nuclear deal between Iran and the permanent members of the UN Security Council plus Germany, announced in July

2015. This JCPOA is considered by many to represent Obama's most significant foreign policy achievement.

However the deal, with its partial curtailment of Iran's nuclear program, the lifting of sanctions on the regime, the injection of a huge financial "sweetener", and the opening up of Iran to global trade, had the deleterious effect of boosting Iran's power, influence and aggression across the Middle East. The inevitable consequence was that by the time Obama left office, the US had lost the confidence, and much of the respect, of its erstwhile allies such as Saudi Arabia, the Gulf States and Egypt, all of whom had good reason to regard Iran as their prime antagonist. The prestige of the US in much of the Middle East had sunk to a new low.

Did Obama's placatory approach result in any softening of Iran's visceral hatred of the "Great Satan", as its leaders dubbed the United States? Not one jot. "The slogans 'Death to Israel' and 'Death to America'," proclaimed Khamenei, just after the nuclear deal was announced, "have resounded throughout the country.... Even after this deal, our policy towards the arrogant US will not change."

Taking every concession offered in the nuclear deal, and subsequently reneging in several vital respects on the final agreement, Iran's leaders budged not an inch from their ultimate ambition – to become the dominant political and religious power in the Middle East, to sweep aside all Western-style democracies, and to impose their own Shi'ite version of Islam on the world.

As president, Donald Trump had no time for Obama's aim of "reducing America's power" (quite the reverse), nor for the Iranian regime, nor for the nuclear deal that was a keystone policy of Obama's administration. He could not immediately "tear it up", in his own words, since there were five other signatories in addition to the US. But finally, frustrated by Iran's expansion of its missile capability, and by the evidence from Israel's seizure of secret documents that demonstrated Iran's continued adherence to its nuclear ambitions, Trump withdrew the US from the deal in May 2018.

Joe Biden during his presidential election campaign promised to return to the nuclear deal provided Iran returned to full compliance with its provisions. Some observers believed that this meant Biden, on becoming president, would negotiate a speedy US re-entry into the deal. They were to be disappointed. Rejecting much that Trump stood for, Biden could nevertheless perceive the enormous improvement in the US's prestige in the Middle East that he inherited from his predecessor.

Consequently he and his Secretary of State, Anthony Blinken, have adopted a "softly, softly" approach to re-entering the deal. Biden has given no indication of when or indeed if the US might do so, although he has suggested that fairly quick

action could be possible if the Iranian regime returned to the original terms of the JCPOA.

Iran's demand, though, was that all US sanctions must be lifted before it will return to its commitments under the deal. Biden's response was firm. The US will not lift its economic sanctions

on Iran simply to get it back to the negotiating table. Iran must act first, and it must return to full compliance with the terms of the deal.

Is Biden's position as uncompromising as it appears? A far more conciliatory attitude to the idea of reviving the JCPOA can be read into Biden's

selection of Robert Malley, who helped negotiate the original deal, to serve as his envoy on Iran. Blinken has announced that he is "building a dedicated team", to be led by Malley, to tackle Washington's relations with Iran.

Hard-line opponents of the Iranian regime see Malley as a key architect of the JCPOA, and fear Biden might be willing to sacrifice the security of the moderate Muslim world and of Israel to revive the nuclear deal.

Past experience points a way out of Biden's dilemma. Appeasement of the regime is useless. Iran has its own agenda. It is pursuing domination of the Middle East and supports a Shi'ite terrorist network to achieve it. The regime's enmity toward Western democracy in general, and the US and Israel in particular, is fundamental. Equally unshakeable is its intention to acquire nuclear weapons.

Based on these factors, a return to a revised deal is feasible provided it contains in-built guarantees of compliance, and no loopholes permitting Iran the eventual achievement of nuclear arms. First

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indications are that the Biden administration is working along these lines, but there is a long way to go.

Source: <https://www.eurasiareview.com/20022021-bidens-iran-dilemma-oped/>, 20 February 2021.

## NUCLEAR STRATEGY

### INDIA

#### India Committed to NFU Policy Under Nuclear Doctrine': Shringla

India is committed to maintaining a credible minimum deterrence under its nuclear doctrine with a posture of no-first-use, foreign secretary Harsh Shringla said ... while addressing a conference on nuclear disarmament. The country also looks forward to the early start of negotiations on a legally binding instrument on the prevention of an arms race in outer space, Shringla said in his address to the high-level segment of the Conference on Disarmament organised under the presidency of Brazil.

The Conference on Disarmament was formed in 1979 as the world community's single multilateral disarmament negotiation forum. " India, as a responsible nuclear weapon state, is committed as per its nuclear doctrine, to maintain credible minimum deterrence with the posture of no-first-use and non-use against non-nuclear-weapon states," Shringla said.

Describing the prevention of an arms race in outer space (PAROS) as a long-standing item on the Conference on Disarmament's agenda, he said, "India looks forward to an early start of negotiations of a legally binding instrument on PAROS to address pressing issues relating to space security." Reaffirming India's readiness to participate in negotiations on a FMCT at the Conference on Disarmament, Shringla said, "India

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has supported the immediate commencement of negotiations in the CD on a FMCT on the basis of CD/1299 and the mandate contained therein, which remains the most suitable basis for negotiations."

Shringla said India backs a comprehensive and balanced programme of work to enable the Conference on Disarmament to begin negotiations on issues of pressing importance. India is also committed to universal, non-discriminatory and verifiable nuclear disarmament and outlined a step-by-step process for the complete elimination of nuclear weapons through its working paper submitted in 2007, he added. "India has welcomed the extension of the New START Treaty between the Russian Federation and the US. However, much work needs to be done by us in the Conference on Disarmament," he said....

Source: <https://www.hindustantimes.com/india-news/india-committed-to-no-first-use-policy-under-nuclear-doctrine-shringla-101614009090979.html>, 22 February 2021.

### UK

#### Labour Renews Vow to Keep Nuclear Weapons

Labour's support for keeping the UK's nuclear weapons is "non-negotiable," the shadow defence secretary has said. But in a speech, John Healey also promised to "lead efforts to secure multilateral disarmament" if the party wins power. Labour dropped its policy of unilaterally getting rid of the UK's nuclear weapons after then-leader Neil Kinnock lost the 1987 general election. Many on the party's left remain vehemently opposed to that decision.

Former Labour leader Jeremy Corbyn - a long-time opponent of the UK's Trident submarine-based missile system and a vice president of the

**Labour's support for keeping the UK's nuclear weapons is "non-negotiable," the shadow defence secretary has said. But in a speech, John Healey also promised to "lead efforts to secure multilateral disarmament" if the party wins power.**

Campaign for Nuclear Disarmament (CND) - said in 2015 that he would never use it if he became prime minister. Yet maintaining nuclear weapons remained a pledge in the party's 2019 election manifesto.

In a speech to the Royal United Services Institute think tank, Mr Healey emphasised that the party leadership under Sir Keir Starmer is far clearer in its backing of this than Mr Corbyn was. "Labour's support for the UK's nuclear deterrent is non-negotiable. The matter is settled," he said.

He added that Labour wanted to see the UK "doing more to lead efforts to secure strategic arms limitation and multilateral disarmament". Mr Healey also said the party's commitment to the NATO military alliance - which Mr Corbyn said in 2012 should be disbanded, but later argued should focus on reducing "tensions around the world" - is "unshakeable".

This isn't a change in policy, but it's a distinct change in tone. Labour wants to make sure it gets a serious hearing on defence. It knows that it needs its own position to be clear to be able to most effectively challenge the government's decisions (which is particularly important with the Integrated Review due soon).

That means definitively answering some of the questions which have been raised over recent years, especially around NATO and nuclear weapons. Keeping Britain's nuclear weapons system has always been a divisive issue within Labour, but it is party policy.

That didn't change under Jeremy Corbyn, but his lifelong personal opposition to nuclear weapons - and his statement in 2015 that he would never use them - allowed Labour's commitment to be questioned. Stating that it is "non-negotiable" ends that speculation, although it is unlikely to go down well with everyone in the party. ...

Source: Helen Catt, <https://www.bbc.com/news/uk-politics-56198972>, 27 February 2021.

## **USA**

### **Democrats Want Biden to Relinquish Sole Authority for Nuclear Launches**

The president of the United States, always accompanied by a military aide carrying a satchel containing nuclear launch codes, has sole authority to order nuclear warfare or respond in kind to such an enemy attack.

Now, lawmakers of the current president's own party are asking President Joe Biden to surrender that unilateral power. Giving one

person such authority "entails real risks," according to a letter endorsed by 31 Democratic members of the House. "Past presidents have threatened to attack other countries with nuclear weapons or exhibited behavior that causes other officials to express concerns about the president's judgment."

The letter, led by Representatives Jimmy Panetta and Ted Lieu, both from California, calls for officials, such as the vice president and speaker of the House, to concur with a launch order before it can be issued. "My colleagues and I are requesting a straightforward review of our nation's nuclear command-and-control

structure to determine how we can have a safer nuclear weapons launch authority, not to jeopardize but to enhance and bolster our national security,"/ said Panetta in a statement.

... The letter, which was sent to the White House on 22 Feb, "proposes several alternatives to investing the president with the sole, unchecked and final authority to order the use of nuclear weapons," Jeffrey Lewis, a professor and a director at the James Martin Center for Nonproliferation Studies at the Middlebury Institute of International Studies at Monterey, California, told VOA. "Any of the alternatives

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would be better than the current arrangement.”

On January 8, two days after a mob supporting then-President Donald Trump stormed the Capitol, House Speaker Nancy Pelosi told her fellow Democrats she had spoken with the chairman of the Joint Chiefs of Staff “about preventing an unstable president” from ordering a launch of nuclear weapons.

“The situation of this unhinged president could not be more dangerous, and we must do everything that we can to protect the American people from his unbalanced assault on our country and our democracy,” Pelosi said in a letter.

The letter to Biden from the Democratic lawmakers, including two members of the House Armed Services Committee, mentions Trump by name only in the footnotes, as well as referring to concerns about the mental stability of President Richard Nixon shortly before he resigned in August 1974.

“Since there are inherent risks in the present system, as was made apparent by our ex-president, it’s our responsibility in Congress to ensure that the administration conducts this type of review in order to have a safer, more secure nuclear weapons launch authority,” Panetta told VOA.

... The proposed change is being criticized by three prominent Republican members of the House Armed Services Committee. In their statement, Liz Cheney, Mike Rogers and Mike Turner contend “the president of the United States must have the exclusive ability to command and control our nuclear deterrent. Democrats’ dangerous efforts suggesting a restructuring of our nuclear command-and-control process will undermine American security, as well as the security of our

allies.” ...

Source: Steve Herman, <https://www.voanews.com/usa/us-politics/democrats-want-biden-relinquish-sole-authority-nuclear-launches>, 26 February 2021.

## BALLISTIC MISSILE DEFENCE

### CHINA–RUSSIA

#### Chinese-Russian Ballistic Missile Cooperation Signals Deepening Trust

During the annual meeting of the Valdai Discussion Club in October 2019, Russian President Putin announced that Russia and China are cooperating on developing a ballistic missile early warning system (BMEWS). Putin underscored that such

cooperation demonstrates the high level of trust between the two countries.

Beijing’s first efforts to develop and build a BMEWS and anti-missile defence tracking radars were undertaken as part of the abortive Project 640, an attempt to build a Chinese strategic missile defence system that ran in the 1960s–80s. Project 640 resulted in the construction of two

functioning experimental radars: a type 7010 BMEWS radar and a type 110 tracking radar. Both radars were used for some time by the Chinese military.

China renewed its BMEWS development in the 2000s, using some of the experience gained from Project 640. Construction of long-range BMEWS radars started in the 2010s. Experiments with space-based ballistic missile early warning components were also renewed with the launch of test satellites. The Chinese system does not copy any existing Russian system. But the Chinese have approached Russia for expertise in overcoming bottlenecks.

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Russia–China military technical cooperation has always been rather secretive, and the level of secrecy has increased as both countries engage in more direct confrontation with the United States. So far the Russian media has identified just one contract related to the bilateral BMEWS cooperation with China. This contract is for the development of specialised BMEWS software, worth approximately US\$60 million, was awarded to a leading Russian air and missile defence systems corporation.

This is likely not the only defence agreement between the two countries. BMEWS cooperation likely consists of numerous small contracts that address various problems in the Chinese system. These systems are among the most sophisticated and sensitive areas of defence technology. The United States and Russia are the only countries which have been able to develop, build and maintain such systems. Early systems, both land and space-based, were unreliable, leading to several potentially catastrophic incidents during the Cold War after erroneous warnings of enemy attacks.

Technological assistance from Russia will help the Chinese to overcome several issues with their systems. This will decrease the probability of system malfunction, and in turn have a positive impact on global security. Russian companies' involvement in the development of these Chinese ballistic missile early warning systems gives them access to a great deal of data about system capabilities. This demonstrates a high level of trust and puts forward the question of possible integration of Russian and Chinese systems.

**In the event of system integration, stations located in the North and the West of Russia could provide China with warning data. In turn, China could provide Russia with data collected at their Eastern and Southern stations. This would enable the two countries to create their own global missile defence network.**

In the event of system integration, stations located in the North and the West of Russia could provide China with warning data. In turn, China could provide Russia with data collected at their Eastern and Southern stations. This would enable the two countries to create their own global missile defence network. But neither Chinese nor Russian governments have stated their intentions to do this yet.

Missile defence cooperation is in the interests of both countries' militaries. Russia and China

have conducted a number of joint computer-simulated missile defence exercises in recent years. But these only simulated the work of simpler theatre missile defence systems such as the S-400 and HQ-9 systems.

The introduction of the CAATSA — the US law that seeks to punish those who procure arms and defence technology from Russia — led to even greater secrecy surrounding Russia's bilateral arms deals in recent years. Official statements have disclosed at least three new major contracts for the export of Russian arms and technology to China in 2019.

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military alliance, which could be triggered if US pressure goes too far.

At the next Valdai meeting in October 2020, Putin suggested the possibility of a military alliance with China. The Chinese Ministry of Foreign Affairs' reaction to this statement was positive but the Chinese side refrained from using the word

'alliance'. Putin's 2019 statement on BMEWS cooperation, however, was likely made without prior consultation with the Chinese and has caused unease in Beijing.

China-US relations have continued to deteriorate. In January 2020, outgoing US Secretary of State Mike Pompeo accused China of genocide in its Xinjiang Uyghur Autonomous Region. The accusation was later supported by Pompeo's successor Antony Blinken.

Russia-US relations after Biden's accession to power have had one positive development — the United States has agreed to extend the New START for another five years. Despite this, the outlook for Russia-US relations remains bleak. The reality of Russia-China defence cooperation is complicated. A working and effective military alliance can be formed quite quickly if the need arises. But current foreign policy strategies make such a move unlikely unless there is real and imminent danger of military conflict with the United States.

*Source: Vasily Kashin is a Senior Research Fellow in the Center for Comprehensive European and International Studies at the Higher School of Economics, Moscow. <https://www.eastasiaforum.org/2021/02/20/chinese-russian-ballistic-missile-cooperation-signals-deepening-trust/>, 20 February 2021.*

## **ISRAEL-USA**

### **Israel, US to Develop Ballistic Missile Shield**

Israel announced...that it is developing a new ballistic missile shield, the Arrow-4, with the United States, as part of a defensive system built with an eye towards Iran, Reuters reported. Israel's Arrow-2 and Arrow-3 interceptors are already operational as part of a multi-layered system to destroy incoming missiles in the atmosphere and in space.

"The development of Arrow-4 together with our American partners will result in a technological and operational leap forward, preparing us for the future battlefield and evolving threats in the

Middle East and beyond," Defence Minister Benny Gantz said in a statement. Israeli leaders have described Iran's ballistic missile programme as a threat to Israel and the world. Iran says its missile development is defensive and aimed at deterring attack. The Defence Ministry said Israel Aerospace Industries would serve as the prime contractor for the Arrow-4. Boeing and Israel's Elbit Systems are also part of the Arrow defence project.

*Source: <https://www.middleeastmonitor.com/20210218-israel-us-to-develop-ballistic-missile-shield/>, 18 February 2021.*

## **NUCLEAR ENERGY**

### **INDIA**

#### **L&T Construction Gets Contract to Build 2 Units of Kudankulam Nuclear Power Project**

Infrastructure company L&T... said its construction arm has bagged a contract worth up to <sup>1</sup> 2,500 crore for building two units of Kudankulam Nuclear Power Project. "The construction arm of L&T has secured a significant order in the nuclear sector from NPCIL for its heavy civil infrastructure business in India to construct the main plant civil works of the Kudankulam 5 and 6 units," L&T said in a regulatory filing.

The company did not provide the value of the contracts but said the orders fall under the "significant" category, which ranges between <sup>1</sup> 1,000 crore and <sup>1</sup> 2,500 crore, according to the classification of contracts. The Kudankulam Nuclear Power Plant, located in Tamil Nadu, is India's first light water reactor of 6 units with a generation capacity of 1,000 MWe each. L&T said the scope of work includes construction of the reactor building, reactor auxiliary building, turbine building, diesel generator building and other safety related structures in 64 months.

*Source: <https://www.ndtv.com/business/l-t-construction-to-build-two-units-of-kudankulam-nuclear-power-project-2373472>, 18 February 2021.*

**The development of Arrow-4 together with our American partners will result in a technological and operational leap forward, preparing us for the future battlefield and evolving threats in the Middle East and beyond.**

**SPAIN**

**Cofrentes Licence Extension Gets Regulatory Approval**

The Spanish nuclear regulator has approved the renewal of the operating licence for Iberdrola's Cofrentes nuclear power plant near Valencia until the end of November 2030. The 1064 MWe boiling water reactor, which entered commercial operation in March 1985, is then scheduled to be decommissioned.

...The plenary of the Nuclear Safety Council approved a favourable report on Iberdrola's application for the renewal of the operating licence. The report is based on the results of assessments by the CSN, contained in 46 technical reports. Iberdrola said it submitted in March 2020 all the required documentation, identified in the Periodic Safety Review, through which an in-depth and global assessment of the plant's safety status was made, and which served as the basis for the favorable evaluation by the CSN.

The regulator said its decision was based on "the verification of the correct operation of the plant and the maintenance of the appropriate level of security to continue its operation, as well as on the verification of the adequate response of the licensee to the requirements applicable regulations". As a result of the CSN evaluation, various proposals for improving safety have resulted, largely identified in the Periodic Safety Review.

The CSN report will now be sent to the Ministry for Ecological Transition and the Demographic Challenge for final approval of the licence extension. Spain's fleet of seven commercial nuclear power plants generated 55.9 TWh of the country's electricity in 2019, accounting for 21.4% of its total electricity production.

In February 2018, the Spanish government

published a draft energy and climate plan for 2021-2030. This estimates the contribution of different technologies to the country's power system every five years until 2030 and specifies that, at least until 2025, installed nuclear power will remain the same at around 7400 MWe. It will be reduced to 3181 MWe from 2030 onwards. In May 2020, CSN approved a 10-year renewal of the operating licences of units 1 and 2 of the Almaraz plant until 01 November 2027 and 31 October 2028, respectively. In June last year, it approved a 10-year renewal of the operating licence of Vandellos 2 to July 2030.

*Source: World Nuclear News, <https://www.world-nuclear-news.org/Articles/Cofrentes-licence-extension-approved-by-regulator>, 19 February 2021.*

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**USA**

**USA Urged to Adopt Global Strategy on Advanced Nuclear Power**

The Nuclear Innovation Alliance (NIA) and Partnership for Global Security (PGS), two US think tanks...released a joint report defining a comprehensive strategy for the USA to become the global leader in advanced nuclear power. They said the strategy outlines the domestic and international activities that will be required to ensure the USA can lead in the development and deployment of next generation nuclear technologies through collaboration between government, industry, civil society, and other nations.

At the domestic level, the strategy explores how public-private partnerships can drive innovation to commercialise advanced reactor technologies, they said, adding that the Biden Administration and Congress have critical roles to play in leading government innovation efforts and

**Biden Administration and Congress have critical roles to play in leading government innovation efforts and funding demonstration projects. Internationally, the strategy highlights how advanced nuclear energy "can be imbued into US foreign policy and international relations", they added.**

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Organisations that generally endorse the strategy and the importance of advanced reactors include, they said: American Nuclear Society, Bipartisan Policy Center, Center for Climate and Energy Solutions, ClearPath, Energy Innovation Reform Project, Good Energy Collective, Nuclear Engineering Department Heads Organization, and Third Way.

“Clean energy technologies including advanced nuclear energy are essential to meet mid-century emission reductions goals,” NIA Executive Director Judi Greenwald said. “It will take a whole-of-society effort to address climate change and to fulfil advanced nuclear energy’s promise as a climate solution. This report’s high-level recommendations for government, industry and civil society are a starting point.”

Ken Luongo, president of the Partnership for Global Security, added: “The intersection of climate change, nuclear power, and global security is an important and dynamic policy area and this report advances the actions required to manage that nexus. The US must again become a leader in the international nuclear market if it is to ensure that the next generation of nuclear technologies support effective global security by reducing climate impacts, responding to the need for clean energy growth, and ensuring strong global best practices for security and non-proliferation.”

According to the report - US Advanced Nuclear Energy Strategy for Domestic Prosperity, Climate Protection, National Security, and Global Leadership - continued bipartisan efforts are needed to support the domestic industry,

regulatory reform, and global competitiveness. Additional actions are needed to: ensure sufficient appropriations for federal investment and public-private partnerships during the 2020s; continue

executive and regulatory efforts to reduce market barriers and modernise regulation for advanced reactors, while protecting public health, safety, and security; assist entrepreneurs and coordinate their activities with government research; incentivise development of new nuclear fuels while

also addressing legacy uranium mining pollution and nuclear waste issues, including investing in clean-up activities and pursuing consent-based solutions. ...

Source: World Nuclear News, <https://www.world-nuclear-news.org/Articles/USA-urged-to-adopt-global-strategy-on-advanced-nuc>, 16 February 2021.

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## URANIUM PRODUCTION

### USA

#### Uranium Production in the US Was Close to Zero in 2020

**During the fourth quarter of 2020, six U.S. uranium facilities produced uranium, one more than in the third quarter of 2020. This does not mean six facilities were actively operating and producing material during the quarter.**

The US Energy Information Administration (EIA) reported ... that EIA could not publicly release data for US production of uranium concentrate (U3O8) in the fourth quarter of 2020. EIA said that domestic uranium

production has declined considerably in recent years, and activity did not reach a threshold where a specific production figure could be published without violating the protections that EIA has committed to provide.

EIA added that during the fourth quarter of 2020, six U.S. uranium facilities produced uranium, one more than in the third quarter of 2020. This does not mean six facilities were actively operating and producing material during the quarter. It is a count of any facility that packaged material during the quarter though they may not be in active

commercial (injecting solution and drying material) operation at the time.

In 2020, uranium mines in the U.S. produced just 8,098 pounds of U3O8 (reported in Q1 2020), which was negligible amount compared to previous years.

Source: Vladimir Basov, <https://www.kitco.com/news/2021-02-22/Uranium-production-in-the-U-S-was-close-to-zero-in-2020.html>, 22 February 2021.

## **NUCLEAR PROLIFERATION**

### **IRAN**

#### **Iran Halts Implementation of Additional Protocol**

Iran has stopped the voluntary implementation of the Additional Protocol to the NPT as the United States failed to lift the sanctions it imposed on Iran during the Trump administration. Under the Additional Protocol, the IAEA was allowed to carry out short-notice inspections of Iran's nuclear facilities. But...the Agency is no longer allowed to continue conducting inspections as per the Additional Protocol.

Kazem Gharibabadi, Iran's permanent representative to Vienna-based international organizations, announced ... that the IAEA will no longer be allowed to carry out inspections in accordance with the Additional Protocol as of midnight.

"As of 12:00 p.m. local time, we have nothing called obligations beyond the Safeguards Agreement," the ambassador said. "Necessary orders have been issued to nuclear facilities." Speaking on the sidelines of an international conference in Tehran..., Zarif said, "We have officially announced to the International Atomic Energy Agency since 15 February 2021 that

the Parliament's law on this issue will be implemented from the morning of 23 February 2021, and for this reason, the implementation of this law has started this morning."

The nuclear law, officially called "Strategic Action to Lift Sanctions and Protect the Nation's Rights," stipulates that the Iranian government should take certain nuclear measures such as raising the level of uranium enrichment to 20% and suspending the voluntary implementation of the Additional Protocol in few months if the Western parties failed to honor their obligations under the 2015 Iran nuclear deal, formally called the JCPOA.

The sixth article of the law clearly stipulates that if the remaining parties to the JCPOA – Germany, France, China, Russia and the UK – failed to facilitate Iran's oil exports and the return of

Iranian oil revenues in two months, the Iranian government would be obligated to stop inspections beyond the IAEA safeguards, including the voluntary implementation of the Additional Protocol,

which allows unannounced and intensive inspections of nuclear sites.

Zarif also pointed to the recent visit by the IAEA director-general, Rafael Grossi, to Iran, saying that the UN nuclear watchdog chief came to Iran to

make arrangements for the implementation of the nuclear law.

"Mr. Grossi came to Iran to make arrangements for the implementation of the law. We have reached an agreement in this regard, and the principle of this agreement is that the tapes recorded from our

nuclear programs, which were never presented live to the Agency, but were provided on a daily and weekly basis, will be kept from now on and will not be presented to the Agency," the chief Iranian diplomat said, noting that Iran will continue to implement the IAEA safeguards.

**Iran has stopped the voluntary implementation of the Additional Protocol to the NPT as the United States failed to lift the sanctions it imposed on Iran during the Trump administration.**

**Collaborations between Iran and the IAEA, the Agency's efforts to settle the two sides' issues, and the cooperation between Tehran and the UN nuclear watchdog within the framework of the Safeguards Agreement were among the most pressing issues discussed by the Iranian foreign minister and the IAEA director-general.**

...“Collaborations between Iran and the IAEA, the Agency’s efforts to settle the two sides’ issues, and the cooperation between Tehran and the UN nuclear watchdog within the framework of the Safeguards Agreement were among the most pressing issues discussed by the Iranian foreign minister and the IAEA director-general,” Iran’s Foreign Ministry said in a statement following the meeting. During his two-day visit, the IAEA chief struck a deal with Iran on how to continue cooperation between Iran and the Agency in light of the nuclear law.

“Intensive consultations led to a good result. A temporary technical understanding has been reached. The IAEA will continue its necessary verification and monitoring in Iran,” the UN nuclear watchdog chief said in a tweet following his visit to Iran. The IAEA and the AEOI issued a joint statement outlining the content of the understanding moments after Grossi concluded his visit to Iran.

...The statement added, “In view of the above and in order for the Agency to continue its verification and monitoring activities, the AEOI and the IAEA agreed: 1. That Iran continues to implement fully and without limitation its Comprehensive Safeguards Agreement with the IAEA as before. 2. To a temporary bilateral technical understanding, compatible with the Law, whereby the IAEA will continue with its necessary verification and monitoring activities for up to 3 months (as per technical annex). To keep the technical understanding under regular review to ensure it continues to achieve its purposes.”

The deal was reached only two days before Iran started implementing the nuclear law. The deal drew criticism from some Iranian lawmakers who accused the government of circumventing the nuclear law. But the government reassured them that the deal with the Agency was in line with the nuclear law.

“The result of what happened during Mr. Grossi’s

visit between Iran and the International Atomic Energy Agency is a remarkable diplomatic and technical achievement. Dr. Salehi and his colleagues worked hard to move within the framework of the parliament’s binding law. As stated in the joint statement with the IAEA, all that has been agreed is in accordance with parliamentary law,” Saeed Khatibzadeh, spokesman for Iran’s Foreign Ministry, said at a press conference....

Gharibabadi also offered assurances to the lawmakers that the deal is consistent with what the Parliament had enacted. “The Agency will not

**Iran is not after nuclear weapons, but its nuclear enrichment will not be limited to 20 percent either. It will enrich uranium to any extent that is necessary for the country. Iran’s enrichment level may reach 60 percent to meet the country’s needs.**

be given any access beyond the [IAEA] safeguards. The continuation of the Agency’s verification, as per the technical annex to the Joint Statement, is solely for the purpose of maintaining information on certain activities and

monitoring equipment by Iran for three months. The Agency has no access to this information and the information remains exclusively with Iran. If the sanctions are lifted completely within three months, Iran will provide this information to the IAEA, otherwise, it will be deleted forever,” Gharibabadi tweeted. ...

Source:<https://www.tehrantimes.com/news/458489/iran-halts-implementation-of-Additional-Protocol>, 23 February 2021.

### **Iran not after Nuclear Weapons, but won’t Limit Enrichment to 20%: Khamenei**

Iran is not after nuclear weapons, but its nuclear enrichment will not be limited to 20 percent, said Iran’s supreme leader Ayatollah Sayyid Ali Khamenei ... Taking to Twitter, Khamenei said, “Iran is not after nuclear weapons, but its nuclear enrichment will not be limited to 20 percent either. It will enrich uranium to any extent that is necessary for the country. Iran’s enrichment level may reach 60 percent to meet the country’s needs.”

Khamenei also commented about JCPOA commitments with the US and the 3 European countries. "Over the past few days, the US and the 3 European countries have used arrogant, unjust rhetoric regarding Iran. They keep asking why Iran has stopped carrying out its #JCPOA commitments, but they don't mention that they never carried out their own commitments," he tweeted. Khamenei further said that if Iran had any intention to produce nuclear weapons then no one can stop.

Taking to Twitter, he wrote, "That international Zionist clown has said they won't allow Iran to produce nuclear weapons. First of all, if we had any such intention, even those more powerful than him wouldn't be able to stop us." "Second, we are not after nuclear weapons. This is based on Islamic fundamentals and commands that prohibit weapons that are used for killing ordinary people. The one that massacres 220,000 people with nuclear weapons is the US." Khamenei tweeted. ... In January 2021, US Secretary of State Antony Blinken said that the US would reciprocate Iran's resumed compliance with the nuclear deal, but would seek a broader agreement that also covers its missile program.

*Source: [https://www.business-standard.com/article/international/iran-not-after-nuclear-weapons-but-won-t-limit-enrichment-to-20-khamenei-121022300098\\_1.html](https://www.business-standard.com/article/international/iran-not-after-nuclear-weapons-but-won-t-limit-enrichment-to-20-khamenei-121022300098_1.html), 23 February 2021.*

### **Israel Hints it May not Engage Biden on Iran Nuclear Strategy**

Israel held out the possibility...that it would not engage with US President on strategy regarding the Iranian nuclear programme, urging tougher sanctions and a "credible military threat" against its arch-enemy. The remarks by Israel's envoy to Washington came at a touchy juncture for PM Netanyahu. Up for re-election next month (March 2021), he has revived his hard line on Iran while not yet having any direct communication with Biden. The new administration has said it wants a US return to a 2015 nuclear deal with Tehran - which former President Donald Trump quit, restoring sanctions - if the Iranians recommit to

their own obligations. Washington has also said it wants to confer with allies in the Middle East about such moves.

...Netanyahu aides have privately questioned whether engaging with U.S. counterparts might backfire, for Israel, by falsely signaling its consent for any new deal that it still opposes. Israel was not a party to the 2015 deal. It has powerful advocates within the U.S. Congress, however, and Netanyahu's threats to take unilateral military action on Iran if he deems diplomacy a dead end also figure into big-power planning. "We think that if the United States returns to the same accord that it already withdrew from, all its leverage will be lost," Erdan said. "It would appear that only crippling sanctions - keeping the current sanctions and even adding new sanctions - combined with a credible military threat - that Iran fears - might bring Iran to real negotiations with Western countries that might ultimately produce a deal truly capable of preventing it breaking ahead (to nuclear arms)." The Biden administration has said it wants to strengthen and lengthen constraints on Iran, which denies seeking the bomb.

*Source: Writing by Dan Williams, editing by Ed Osmond, <https://www.reuters.com/article/us-iran-nuclear-usa-israel/israel-hints-it-may-not-engage-biden-on-iran-nuclear-strategy-idUSKBN2AG0N6>, 16 February 2021.*

### **NORTH KOREA**

#### **North Korea's Nukes aren't Going Anywhere, and the US Needs to Get Over It**

The Biden administration's departure from Trump's approach to North Korea is a useful change. But Biden's continued insistence on denuclearization is counterproductive, writes Defense Priorities fellow Bonnie Kristian. If the US sets that aside, a multitude of more practical goals become achievable. Observers should not mistake the absence of direct engagement between Washington and Pyongyang for disinterest in the fate of US-North Korea relations, State Department representative Ned Price said in a recent press briefing.

Price stressed that the administration's "strategic

goals" with the Kim Jong Un regime will be "focus[ed] on reducing the threat to the United States and to our allies as well as to improving the lives of the North and South Korean people. And, again, the central premise is that we remain committed to denuclearization of North Korea."

The Biden team's workmanlike approach is an expedient change from their predecessors' photo-op diplomacy. But this continued insistence on denuclearization as the primary goal in US-North Korea engagement is incredibly counterproductive. If Biden and his team are serious about making headway on their first two strategic goals - threat reduction and humanitarian gains on the Korean Peninsula - they must drop the third. For progress with North Korea, forget denuclearization. We can do that safely for three reasons. First, as Price himself noted, "the United States, of course, remains the most powerful and strongest country in the world." Even with nuclear weapons, North Korea's military might is miniscule by comparison. In nuclear and conventional weaponry alike, the US advantage is overwhelming, as the Kim regime well knows.

This is not to say Pyongyang couldn't do real damage. It could - the South Korean capital of Seoul, a city of 10 million, is only 30 miles from the demilitarized zone that separates the two Koreas, well within North Korea's strike range. But Kim is unquestionably aware of the consequences unprovoked aggression against a US ally (let alone the United States proper or our military, which has an extensive South Korean presence) would bring. He would not finish the resultant conflict in power; he might not finish it alive.

That glaringly obvious truth creates a powerful deterrence for the United States, and it is a deterrence which maintaining the nuclear status

quo indefinitely will not obviate. Second, Price repeats the longstanding claim that denuclearization is itself a goal. This is not - or, at least, should not be - quite correct. The proper goal is avoidance of horrific, world-changing, history-altering nuclear war. Denuclearization is one means of accomplishing that avoidance. But it is not the only way, and the mere existence of North Korea's nuclear weapons does not mean they will be used.

The United States is already securely coexisting with a nuclear North Korea. We are stably coexisting with other nuclear powers, too, including several (chiefly China and Russia, but also Pakistan, if conventional wisdom is correct) that are hardly reliably friendly to America. Russia's nuclear arsenal is of a similar strength to our own, and China boasts a far more powerful military and economy than North Korea ever could. Yet complete denuclearization of these countries is not standard US policy, not only because it is an unachievable aim for Washington but because it is not necessary to avoid nuclear war.

We can likewise avoid nuclear conflict involving North Korea without attaining denuclearization - indeed, we have done it for decades. Finally, forgetting denuclearization for now may ultimately get us to denuclearization, and it will certainly help us toward the administration's other two goals of de-escalation and

improved quality of life for the Korean people. If we set aside denuclearization - a concession Pyongyang will not make so long as it perceives any risk of forcible, US-orchestrated regime change like that in Iraq and Libya - a multitude of more practical and feasible goals become accessible to us.

Working-level diplomacy by the Biden administration could accomplish a nuclear freeze, regular inspections of Kim's arsenal, or even some

**If Biden and his team are serious about making headway on their first two strategic goals - threat reduction and humanitarian gains on the Korean Peninsula - they must drop the third. For progress with North Korea, forget denuclearization.**

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reduction of his nuclear stockpile or missile systems. It could produce, seven decades late, a peace treaty to officially end the Korean War. It could bargain for concessions from Pyongyang by offering cessation of US sanctions that harm ordinary North Koreans. It could permit expanded, Korean-directed engagement between North and South Korea, including trade and reconnection of divided families. It could take steps toward making North Korea a far more normal country, opening the "hermit kingdom" to the global culture and economy and giving its people a shot at deprogramming themselves from their government's sadistic brainwashing. And it could ultimately lay the groundwork for a new era in North Korean foreign relations, one which might mature someday, probably long after this administration is over, into a denuclearized and even democratic Pyongyang.

None of that is possible, however, if the Biden administration insists on denuclearization now. A shortsighted demand for Kim to concede what he views as his sole guarantee against American invasion will ensure Biden leaves office just like former President Donald Trump, having moved the needle on US-North Korean relations not an inch.

*Source: Bonnie Kristian is a fellow at Defense Priorities, contributing editor at The Week, and columnist at Christianity Today. <https://www.businessinsider.in/politics/world/news/north-koreas-nukes-arent-going-anywhere-and-the-us-needs-to-get-over-it/articleshow/81128596.cms>, 22 February 2021.*

## **NUCLEAR SAFETY**

### **FRANCE**

#### **France Extends Operational Lifetime of its Oldest Nuclear Reactors**

France's nuclear safety authority agreed...to extend the operational lifetime of the country's 32 oldest nuclear reactors by a decade to as much as 50 years. The public electricity company that

operates the nuclear plants, EDF, is in charge of ensuring the safety of the reactors, which had previously been intended to run for 40 years.

The nuclear authority said in a statement that it finds that measures planned by EDF "open the prospect of continued operation of these reactors for a further ten years. Nuclear energy currently provides about 70 per cent of French electricity, more than in any other country.

**France aims to reduce that proportion to 50 per cent by 2035 while boosting renewable energy. Last year, France shut its oldest nuclear plant in Fessenheim, on the border with Germany, which had been supplying electricity since 1977. The government has outlined plans for 12 more reactor closures.**

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plans for 12 more reactor closures. Most nuclear reactors were built in the 1980s, meaning they could be shut down in the 2030s....

*Source: [https://www.business-standard.com/article/international/france-extends-operational-lifetime-of-its-oldest-nuclear-reactors-121022501552\\_1.html](https://www.business-standard.com/article/international/france-extends-operational-lifetime-of-its-oldest-nuclear-reactors-121022501552_1.html), 25 February 2021.*

### **SRI LANKA-IAEA**

#### **IAEA Discusses Topical Issues of Nuclear Law with Sri Lanka**

The IAEA hosted a virtual national seminar on topical issues of nuclear law for Sri Lanka last month (January 2021). Topics presented and discussed ranged from transparency in nuclear law and the legal provisions for the safety and security of radioactive sources to benefits of the CPPNM, its Amendment and the Joint Convention on the Safety of Spent Fuel and Radioactive Waste Management.

"Over the years, Sri Lanka has benefitted from IAEA legislative assistance through various regional and national activities," said Shanta Thenuwara, Director of the Sri Lanka Atomic Energy Regulatory Council (AERC) and national coordinator. "However, this is the first concrete

step we are taking to involve all stakeholders at national level in starting the process of the implementation of legal instruments, an area of special interest and importance for Sri Lanka."

More than 30 representatives attended the seminar, from the Sri Lanka AERC, Sri Lanka Atomic Energy Board, the Ministry of Foreign Affairs, the Permanent Mission of Sri Lanka to the IAEA in Vienna, the Attorney General's Department, Legal Draftsman's Department, Ministry of Power and the State Ministry of Solar, Wind & Hydro Power Generation Projects Development.

The virtual seminar provided an opportunity to discuss civil liability for nuclear damage and the benefits of the modernized nuclear liability instruments, such as the 1997 Convention on Supplementary Compensation for Nuclear Damage (CSC), which provide a framework for countries in South Asia, including those of the SAARC.

In his concluding remarks, Anthony Wetherall from the IAEA Office of Legal Affairs noted the importance of adherence to and implementation of the international legal instruments. He reiterated the IAEA's readiness to continue to assist the country in this regard and in developing and strengthening its national legal framework.

The seminar, implemented in the framework of the IAEA legislative assistance programme, is one of many activities conducted under the Agency's technical cooperation programme to support Member States in establishing and enhancing their national legal frameworks.

*Source: Drenusha Kilokoqi, IAEA Office of Legal Affairs,*

<https://www.iaea.org/newscenter/news/iaea-discusses-topical-issues-of-nuclear-law-with-sri-lanka>, 23 February 2021.

## **NUCLEAR WASTE MANAGEMENT**

### **JAPAN**

#### **Villages in Japan are Competing to become a Nuclear Waste Site**

Two fishing villages in Hokkaido are vying to host the final storage facility for half a century of Japanese nuclear waste, splitting communities between those seeking investment to stop the towns from dying, and those haunted by the 2011 Fukushima disaster, who are determined to stop the project.

**Since it first began generating atomic energy in 1966, Japan has produced more than 19,000 tons of high-level nuclear waste that is sitting in temporary storage around the country. After searching fruitlessly for two decades for a permanent site, the approaches from Suttsu, population 2,885, and Kamoenai, population 810, may be signs of progress.**

In the middle is a government that bet heavily on nuclear energy to power its industrial ascent and now faces a massive and growing pile of radioactive waste with nowhere to dispose of it. Since it first began generating atomic energy in 1966, Japan has produced more than 19,000 tons of high-level nuclear waste that is sitting in temporary storage around the country. After searching fruitlessly for two decades for a permanent site, the approaches from Suttsu, population 2,885, and Kamoenai, population 810, may be signs of progress. The village has suffered from economic decline and the aging trend that has affected much of rural Japan as young workers migrate to cities.

The towns have focused a debate that has bedeviled an industry some regard as a vital emissions-free energy source and others revile as a dangerous liability. The accidents at Chernobyl in 1986 and Fukushima in 2011 reinforced public skepticism about both the safety of reactors and our ability to safely store their residue for centuries. While new generations of fail-safe reactor designs may eventually help assuage the first concern, the problem of the waste remains. That's where the two fishing villages come in.

**While new generations of fail-safe reactor designs may eventually help assuage the first concern, the problem of the waste remains. That's where the two fishing villages come in.**

Japan's nuclear energy strategy is to reprocess spent fuel to reuse extracted uranium and plutonium, and to seal the remainder in glass, enclose it in steel containers and bury it in bedrock in a "deep geological repository" least 300 meters underground. There the radioactivity would slowly decay, losing 99.9% of its potency in 1,000 years. "It's safer to keep high-level waste underground than storing it above ground, considering the risks of earthquakes, tsunamis, typhoons, fires or terrorism," according to a public release from Japan's Nuclear Waste Management Organization (NUMO).

Japan's 2000 Designated Radioactive Waste Final Disposal Act envisaged a location for the repository would be selected by about 2025, with disposal beginning around a decade later. No municipality applied at the time.

Then came Fukushima and public sentiment turned inexorably against atomic power. The day before the 2011 tsunami and earthquake caused the nation's worst nuclear accident, Japan had 54 reactors operating, generating almost a third of the country's electricity. Only nine have restarted, and the government has scrapped the target date to complete the waste repository after a wholesale review of the industry. PM Suga has said Japan should be carbon neutral by 2050, but it's difficult to see how that goal will be met without getting some electricity from nuclear.

So the radioactive waste continues to pile up, stored temporarily above ground at the giant Rokkasho nuclear power complex in the far north of Japan's main island of Honshu and other plants and research stations around the country. The Rokkasho and Tokaimura nuclear facilities already have about 2,500 blocks of vitrified waste, while another 19,000 tons of spent fuel is scattered around other sites, waiting to be processed.

To find a site that would permanently hold at least 40,000 vitrified blocks, the government in 2017 produced a color-coded map showing suitable locations in green in terms of geology, seismic activity and ease of transportation from power

plants. As the pandemic gutted their economies last year, Suttsu and Kamoenai put up their hands. While authorities in both villages say the decision to apply was not taken because of the recent slump, both have suffered from economic decline and the aging trend that has affected much of rural Japan as young workers migrate to cities.

The potential prize is a share in 3.9 trillion yen (\$37 billion) of investment over three stages. In the first, NUMO would spend two years evaluating the risk using geological maps and scientific papers, which could be worth a subsidy of as much as 2 billion yen. A four-year field survey and drilling would follow, worth up to 7 billion yen. Finally, a test bench would evaluate extracted strata for about 14 years before the final decision.

**Japan's 2000 Designated Radioactive Waste Final Disposal Act envisaged a location for the repository would be selected by about 2025, with disposal beginning around a decade later. No municipality applied at the time.**

For Suttsu, whose regional tax revenue in fiscal 2019 was 244.2 million yen, even stage one is big boost. For Kamoenai, it would be a major windfall. Both communities have struggled with decline.

Japan's non-farmed seafood production has fallen by more than two-thirds since 1985. The Kamoenai government has tried to boost its traditional industry with a project to restore catches. But warming waters, exacerbated by climate change, have taken their toll.

The village's efforts to revitalize the fishing industry "have not been fruitful," Mayor Masayuki Takahashi said at the Japan National Press Club in November. Last year was particularly difficult, he said, as Kamoenai grappled with Japan's economic slump and the coronavirus pandemic.

In Suttsu one suggestion mooted is to use revenue from the nuclear surveys to help fund an offshore wind farm. The town was the site of Japan's first onshore wind plant, which has been an "important financial resource for the municipality," according to five-term Mayor Haruo Kataoka. "Suttsu has a history of more than 30 years of wind-power generation," he said. Suttsu's leap from renewable energy vanguard to potential nuclear waste site is a paradox facing every nation that embraced nuclear power.

...But since Fukushima, many Japanese citizens don't want a nuclear future, especially in their backyard. Hokkaido Governor Naomichi Suzuki objected in October 2020 when Suttsu and Kamoenai applied for the stage 1 survey, citing the prefecture's 2000 ordinance to refuse any high-level nuclear waste. He wrote to METI in November, requesting assurances that no waste would be sent to Hokkaido as part of the surveys. A group of Suttsu citizens called for a referendum on the issue on Oct. 23, which the municipal assembly voted down. Kataoka said an improvised firebomb had earlier been hurled at a window of his home.

Residents say the issue has fractured the town. "Suttsu is a warm local community where children can grow up surrounded by nature," said Nobuka Miki, co-leader of a group fighting the disposal site. "The mayor isn't listening to citizens who will live in Suttsu for generations to come." ...Some geologists are also concerned. Emeritus professor Yugo Ono at Hokkaido University said quakes measuring more than 6 in

intensity – enough to cause considerable damage—have occurred in areas NUMO's color-coded map shades green. NUMO spokesman Takashi Hondo said the review process would ensure the disposal does not affect human health.

Even if the Hokkaido villages pass the tests, there's no guarantee that they will continue to court the nuclear industry for the decades needed to complete the repository. In January 2007, the

10-year mayor of Toyo in Kochi prefecture was the first to apply to host the nuclear waste site. Within three months the city's residents dumped him in a landslide election. The new mayor immediately withdrew the application. But Japan has to put its waste somewhere and to

do that, it will have to overcome people's fear of the industry....

*Source: Erica Yokoyama, <https://www.bloomberg.com/news/features/2021-02-02/covid-hit-japanese-villages-are-competing-to-become-a-nuclear-waste-site>, 03 February 2021.*

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