

NEWSROOM

JUNE 2018

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NEWSROOM

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FOREWORD

No "business as usual"



By Lassina Zerbo
Executive Secretary
of the CTBTO

WHAT IS NEWSROOM?

NEWSROOM is a periodical produced by members of the CTBTO Youth Group (CYG) in which to inform and argue for the CTBT's entry into force – and to explore how to frame and enlarge the debate about nuclear non-proliferation and nuclear disarmament.

Surprisingly, given their existential nature, astronomical costs and current rising tensions, public discussion about nuclear weapons tends to be tongue-tied.

The CYG newsroom project and its production of this magazine can make a difference by exploring ways to spark and sustain public conversation about the importance of the CTBT in addressing nuclear dangers.

The CTBTO serves not only as a model for arms control. By providing a platform, such as Newsroom, for the young women and men in its Youth Group it is promoting greater understanding of nuclear risks, dangers and the remedies available to meet them, amplifying their voices to be heard around the world.

It is an old cliché that young people are the leaders of tomorrow. In fact, they are already the leaders of today, taking matters into their own hands, leading the way into a future they would like to inherit.

This realization led me in 2016 to establish the CTBTO Youth Group – a network of engaged and interested young academics, scientists, diplomats, and journalists who all share a common desire to see a world free from nuclear tests – and hopefully free from nuclear weapons – in their lifetime.

This network has grown over the past two years to over 400 participants from all regions of the world. Youth Group members participate in and support CTBTO events, they lead policy discussions, organize workshops, raise awareness in their communities, interact with senior experts, and publish their thoughts and proposals in various media channels. They are the embodiment of the old saying "think global, act local".

With so much at stake – the future of our planet, no less – we cannot afford to

continue with "business as usual" but need to break free of the constraints of the current debate. We need the passion and energy of our young leaders to inject new ideas and new life into the global effort to ban nuclear tests for ever, an effort that has been in a holding pattern for too long, and is certainly affecting any progress in disarmament.

I am inspired by these young people who so passionately and eloquently make a case for our joint cause: a legally binding global ban on nuclear testing. Their dedication

makes me hopeful that we will prevail in the end, that they will finish what we started and achieve the ultimate goal: a nuclear weapons free world.

**Think global,
act local.**



IRAN I

Eroding trust
in multilateral
arms control

Implications of US withdrawal from the Iran deal



By **Névine Schepers**
Research analyst at the
International Institute for
Strategic Studies (IISS)
London

On 8 May 2018, President Trump withdrew the United States from the Joint Comprehensive Plan of Action (JCPOA), more commonly known as the Iran nuclear deal. This follows months of uncertainty regarding the deal's future, when US allies on both sides of the spectrum have tried to convince Trump of either the merits or shortcomings of the agreement. Ultimately, keeping a campaign promise proved to be the winning driver of his decision.

In response, Iran's President Rouhani has stated Iran will remain, for now, a party to the agreement while emphasising that the remaining signatories need to clarify their positions and guarantee that Iran's interests are secured. This puts the ball firmly in Europe's court with a fast approaching deadline. The United States will begin reimposing secondary sanctions on non-US companies that engage in trade with Iran taking effect on 6 August or 4 November (2018) depending on the type of activity.

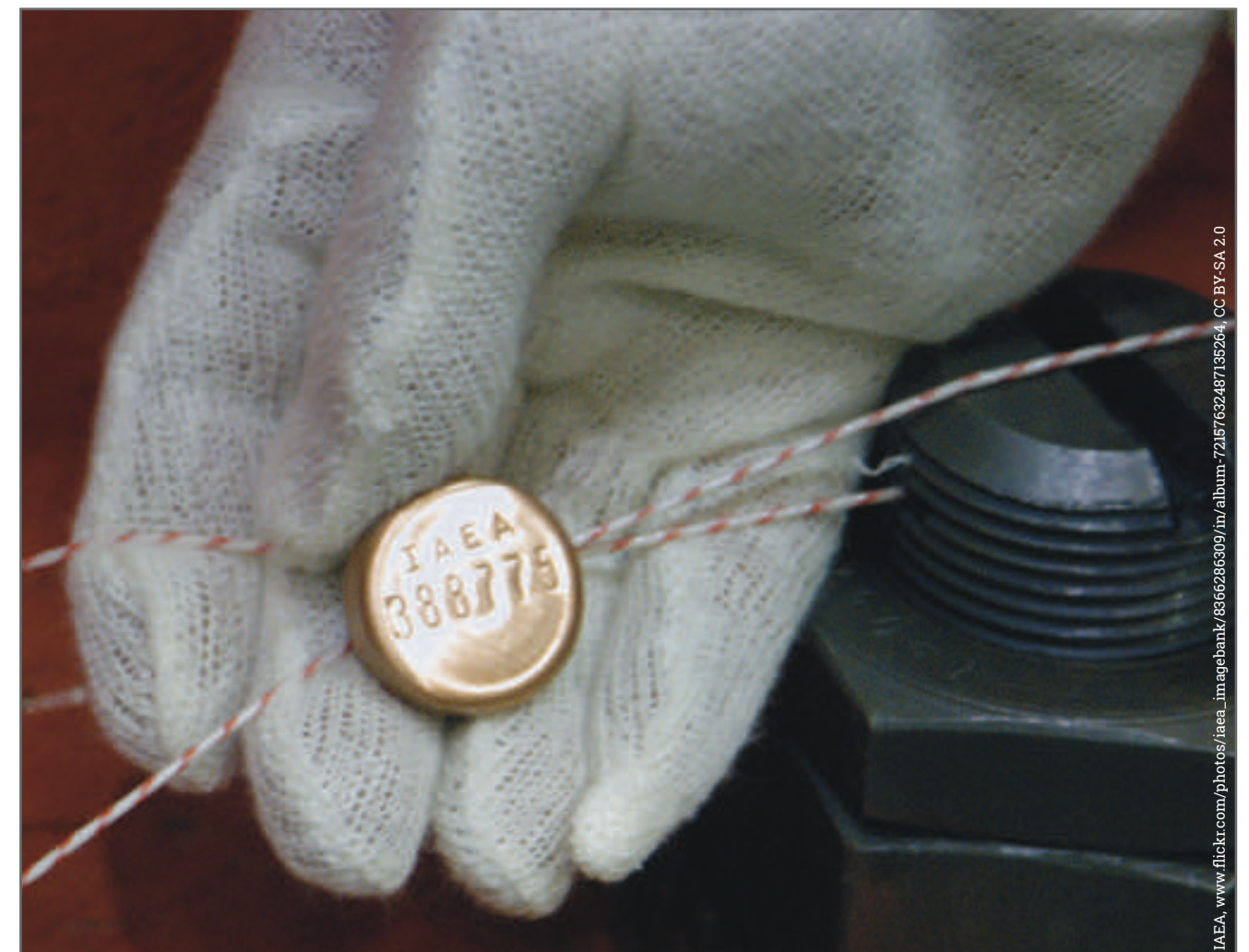
As a result, Europeans will need to take steps to protect their companies

currently doing business with Iran from hefty American fines while encouraging further trade and investment with Tehran, without which Iran would have no reason to remain in the agreement. These measures include negotiating exemptions for EU companies, providing alternatives to US dollar financing and enforcing blocking regulations to counter US sanctions' extraterritorial reach.

The next few weeks will therefore be key in determining what direction Iran will take. While conservative voices in the Islamic regime have been emboldened by Trump's decision and public opinion is calling for retaliation, Iran's economy would suffer greatly if Iran responded to the US violation of the JCPOA in kind. Already, inflation, unemployment and currency instability are taking their toll on the Iranian population.

Ensuring that Iran continues to benefit from the JCPOA might be enough to safeguard the agreement, but these benefits will be slow to materialise and may not be sufficient to appease conservative factions for whom the US withdrawal is a clear win. President Rouhani is already facing a backlash from hardliners who

IAEA: STRICT VERIFICATION AND MONITORING MEASURES



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HE HAS PLACED THE BALL IN EUROPE'S COURT

never supported the deal and have now every incentive to ensure it does not last for much longer.

By withdrawing from the agreement, thereby becoming the first party to violate the JCPOA, President Trump has cast a lot of uncertainty on the future of multilateral arms control, especially on the role played by the US in leading such efforts. His decision undermines the credibility and legitimacy of the US as a champion of non-proliferation causes.

The JCPOA's effectiveness at limiting Iran's nuclear programme is only possible because of strict verification and monitoring measures exercised by the International Atomic Energy Agency (IAEA). As far as arms control agreements go, the JCPOA's verification regime is solid. More importantly though, it was meant to serve as a building block to establish trust between all signatories. Even if the JCPOA survives, trust will be much harder to restore, both between negotiating parties and in multilateral arms control.

Siegfried Hecker of the Center for International Security and Cooperation at Stanford University cited the example of previous nuclear negotiations with North Korea to illustrate this concern: "When President George W. Bush walked away from what he considered a deeply flawed Clinton administration nuclear deal with North Korea in late 2002, his administration was not prepared for the consequences," he said. The resulting breakdown of negotiations led to the development, full-speed ahead, of North

Korea's nuclear and missile programme with which the current administration is dealing today.

Scuttling the JCPOA will also impact on Iran's involvement in other arms control agreements. Further initiatives to encourage Iran to take a more active part in international non-proliferation efforts will be difficult. This includes signing and ratifying the Comprehensive Test-Ban Treaty, for which Iran is an Annex 2 State, meaning it is one of 44 states whose signature and ratification is needed for the treaty to enter into force.

Repairing the damage done to international non-proliferation efforts will take years.

Furthermore, given the current expansion programme of the Bushehr nuclear power plant, it is important to note that Iran is still not a signatory to various nuclear safety and security instruments such as the Convention on Nuclear Safety, the Nuclear Terrorism Convention or the Convention on the Physical Protection of Nuclear Material and its amendment. The European Union has been actively engaging Iran in matters of civil nuclear cooperation, committing five million euros for various nuclear safety projects.

The future of such efforts and for greater nuclear cooperation in the region is also at stake. If the deal falls apart, not only will the IAEA be restricted in its access to existing facilities, but any attempts at making the Iranian civil nuclear program safer and more secure would likely be suppressed.

For now, the JCPOA still stands and the task of ensuring it continues to stand largely falls on European states' shoulders. Solving the more pressing issues affecting the Iranian economy could secure its survival, but repairing the damage done to international non-proliferation efforts will take years. Beyond the immediate diplomatic crisis Trump's decision has caused, the US withdrawal from the JCPOA has eroded the trust in multilateral arms control solutions.

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IRAN II

Why the United States **should** return to the JCPOA



By Joel Obengo
Administrator at
Kenyatta University
Nairobi, Kenya

The development of civilian nuclear technology in Iran started in 1957 under US President Dwight Eisenhower's Atoms for Peace initiative with the intention of providing energy security and freeing up its oil for export. It was believed that under the programme, countries could accelerate their industrialization. However, the dual use nature of nuclear technology later led to the suspicion that Iran may have been using it to pursue military aims, leading western countries to isolate Iran internationally.

Driven by domestic and international politics in western capitals and in Iran, efforts were made by the US, Europe, Russia and China to persuade Iran to join an independent and verifiable monitoring framework. On 14 July 2015, China, France, Germany, the Russian Federation, the United Kingdom, the United States of America, together with the High Representative of the European Union for Foreign Affairs and Security Policy (a group also known as E3/EU+3), and Iran agreed on the Joint Comprehensive Plan of Action (JCPOA), which has the sole aim of rolling back Iran's nuclear enrichment programme.

Why the USA could not honour the JCPOA

Even though US President Donald Trump assumed office at a time of serious threat to the global nuclear non-proliferation

"I think the president has to say that this deal remains a strategic mistake for the United States."

John Bolton

regime, particularly on the Korean Peninsula and in the Middle East, the fate of the JCPOA hangs in the balance following his memorandum of 8 May 2018, announcing US withdrawal from the agreement.

Recent appointments of Mike Pompeo and John Bolton to key positions in the US administration, with responsibility for driving the country's national security agenda, had already pointed to a policy change in Washington with regard to the agreement. Both John Bolton and Mike Pompeo had publicly advocated for tearing it up and at times have called for regime change in Tehran.



TEAR IT UP, BOLTON SAYS.

On one such occasion, at a “Free Iran” gathering in Paris in July 2017, Bolton reportedly said in a speech: “This deal is not a treaty, but in treaties often there’s a provision for a 90-day or 180-day notice of withdrawal. [...] I think the president has to say that this deal remains a strategic mistake for the United States, it was a bad deal when we entered into it, it’s a bad deal today, we should get out of it.”

Likely regional fallout

The new US defence strategy of 2017 identifies the Middle East as a region faced with the resurgence of competition between the great powers – the key players being the US, Russia and China. It identified Iran as the greatest threat to the US and her allies in the region. China competes in the sphere of commerce; Russia and the US in the domain of geopolitics; and Iran engages in a charm offensive for “near abroad influence.” A ballistic missile capability is seen as a tool to secure influence.

The US and Iran are involved, either directly or by proxy, in conflicts in Middle Eastern countries, such as Syria and

Yemen. Iran possibly is realigning itself with Russia and China to frustrate western interests in the Middle East and beyond. Among other charges, it is accused of antipathy towards Israel; support for groups, such as Hamas and Hezbollah, categorized by the US as terrorist organizations; the mistreatment of critical voices in its society; and of supporting the Assad regime in Syria.

Should there be a direct military confrontation between the US and Iran, it may draw in Russia, NATO countries, as well as Israel and Saudi Arabia. This will lead to turmoil in the entire region, with the net effect of disrupting key shipping routes, the proliferation of terrorist sanctuaries from which attacks can be launched, a complication of the security situation, and an economic crisis on a massive scale. The possibility of war is implied in the presidential memoranda instructing the US Defense Department and other relevant agencies to prepare for regional contingencies.

The Democratic People’s Republic of Korea (DPRK) factor

The US president and his DPRK counterpart will meet in Singapore in mid-June for discussions in which the denuclearization of the Korean peninsula will take centre stage. Since the US has shown that it can tear up any agreement it wants, the DPRK’s trust and confidence in this bilateral process may be eroding, with the result that it may use the meeting to buy time and later revert back to its nuclear activities.

It is assumed that the US cannot attack the DPRK on account of the latter possessing nuclear weapons. Therefore, the only way Iran can force the US to the negotiating table would be to pursue ballistic missile technology. This may lead to an arms race in the region.

The way forward

The US time and again has outlined the shortcomings of the JCPOA and advocated for its terms to be renegotiated or terminated altogether on the basis of such claims. The US alludes to this despite the latest report on *Verification and monitoring in the Islamic Republic of Iran in light of United Nations Security Council resolution 2231 (2015)* by the International Atomic Energy Agency (IAEA) from February 2018, confirming Iran’s full compliance with its nuclear-related commitments as stipulated in the JCPOA.

In light of this, President Trump should reconsider US withdrawal from the agreement and approach the Joint Commission – a body created by the JCPOA – with his proposals for possible consideration. Some of the issues raised by the US can also be addressed better if and when countries embrace the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which will make it hard for Iran to develop and test nuclear weapons.

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NORTH KOREA’S DENUCLEARIZATION DECLARATION: REASON FOR CAUTIOUS OPTIMISM?

On 20 April 2018, the Democratic People’s Republic of Korea (DPRK) [announced unilaterally it was suspending all nuclear testing and shutting down the Pung-gye-ri test site](#) where the country had conducted six nuclear tests.

This was a historical move, in particular considering the sensitivity of the situation on the Korean peninsula since the 1953 armistice and the bellicose exchanges since President Donald Trump assumed office between Washington D.C. and Pyongyang.

There was outright skepticism from many quarters over the DPRK declaration by President Kim Jong Un, with many [op-eds from prominent columnists](#) and security experts expressing little optimism over the euphoria generated by the move.

Much of this skepticism was well founded. For years, the DPRK’s actions in response to perceived American aggression had sent shockwaves across the Asia Pacific region.

The issue of denuclearization needs to be approached cautiously given that decisions about testing and the development of nuclear capabilities are [based upon a host of factors](#), including domestic politics, deterrence and the regional situation.

Whether or not the decision to refrain from nuclear testing is a publicity stunt or a calculated decision remains debatable. And yet, there are solid reasons to believe that the decision is more than the former even though it may represent an eternal doctrine.

The [historic 2018 DPRK-US summit](#) scheduled to take place in Singapore in June shows that events are moving in a positive direction. The decision by President Trump to send [Secretary of State Mike Pompeo to the DPRK, and his return with three released American prisoners](#), has nullified much of the criticism directed at the DPRK.

Catering to American demands to release its prisoners indicates DPRK domes-

tic politics were definitely not in play despite its reputation as being one of the most despotic regimes in the world. The gains for the US as North Korea’s adversary were massive.

At the same time, realism in international relations also invites skepticism and allows emerging scholars, analysts and experts to view events from a regional perspective. China, Russia and the United States who are currently at loggerheads over the situation in Syria, seem to have found a common understanding over the North Korean issue.

Even Japan, one of North Korea’s most ardent critics, is now party to the [historic trilateral summit](#) with China and South Korea. The agenda of the summit, which also includes such issues as economics, disaster management and the promotion of linkages between the three countries, focuses on following up on the DPRK’s decision to denuclearize.

Talks about pushing for incremental economic assistance in exchange for a phased denuclearization as proposed by China, or a possible long-term economic plan to relieve the DPRK from its economic woes, have already taken place. The optics

are certainly positive, even in terms of the regional situation.

At the same time, realism is based on the belief that states are rational actors whose aim to maximize their self-interest is of paramount importance for the international system.

North Korea has a history of viewing international initiatives that dictate its [course of action with hostility and suspicion](#). The trilateral summit during which the country’s future will be discussed by Japan and South Korea may prove to be counterproductive, promoting animosity and instability on the peninsula and in the region.

If North Korea is not considered a legitimate stakeholder in its own economic and nuclear future, a sustainable peace may remain elusive.

It will be critical to see whether the Singapore Summit and subsequent events allow the DPRK a voice in providing its narrative, or whether its narrative will be muted for the ‘greater good’ of the country.

States less integrated into the international order such as the DPRK or Iran, which have a history of bearing with sanctions, also make their national sovereignty, territorial integrity and national security a top priority. However, for those optimistic about DPRK’s denuclearization declaration, this may be a moot point.

As a paradigm the declaration can be viewed as a model of realism that cannot be met with outright skepticism or dismissal. Cautious optimism is the need of the hour.

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By Hamzah Rifaat Hussain
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Time for North Korea to join the CTBT

By Ahmed Amponsah Fordjour

For over a decade North Korea has been pursuing the development of nuclear weapons and missiles. More importantly it has also been conducting nuclear weapons and ballistic missile tests indiscriminately.

In 2017 it conducted its fifth nuclear test alarming international organizations, such as the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) and the United Nations (UN).

North Korea, the Democratic People's Republic of Korea (DPRK), has faced harsh sanctions from the UN and other organizations over years. It was labelled one of the most ruthless countries for its nuclear activities on the Korean Peninsula. International organizations such as the UN attempted to open dialogues with the DPRK, but were not successful.

The CTBTO also has been trying hard to convince the DPRK to join the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and to stop nuclear testing.

On 21 April 2018, the leader of the DPRK, Kim Jong Un, called off nuclear testing saying that his country's quest to develop nuclear weapons was complete and it no longer needed to test its weapon capability. The shutdown of the Punggye-ri nuclear test site, its only known test range, was also announced.

In addition, it announced its intention to begin dismantling the nuclear test site in a ceremony set to take place between 23 and 25 May 2018 according to US media. The ceremony will occur just weeks before Kim Jong Un meets President Donald Trump in Singapore for a historic summit on 12 June.

This is a perfect opportunity for the CTBTO to convince the DPRK to formally join the Treaty and permanently end nuclear testing. The CTBT is an international treaty forbidding all nuclear explosions on the ground, in the sea and in space. It was formally opened for signature in September 1996.

The Treaty's Annex 2 consists of 44 countries, of which 36 have signed and ratified the Treaty; the remaining eight, China, Egypt, India, Iran, Israel, Pakistan, North Korea and the US, must ratify the Treaty before it can enter into force.

This is a perfect opportunity for the CTBTO to convince the DPRK to formally join the Treaty and permanently end nuclear testing.

This is an indication of the significance of North Korea's action to the CTBTO and the world at large. If North Korea were to sign and ratify the Treaty, it would be a major step forward and could convince remaining Annex 2 States to follow suit.

CTBTO Executive Secretary Lassina Zerbo has applauded North Korea's decision, but he also emphasised that it should sign and ratify the Treaty in order to solidify the testing moratorium.

During his stewardship of the CTBTO, Zerbo has explored diplomatic means to bring the Treaty into force. Such means include organizing CTBTO conferences and symposiums which invite diplomats from all over the world, particularly from the remaining Annex 2 States, to understand the essential need for ratification of the Treaty.

Moreover, Zerbo also conceived of the idea of engaging youth to help support ratification, establishing the CTBTO youth group which currently has more than 300 members from diverse backgrounds with a common goal to support the Treaty.

Youth members from around the world are invited to conferences and symposiums to meet one another, teach and learn from each other. At such events CYG members also meet diplomats, academics and specialists to gain understanding of the diplomacy of nuclear issues in support of the Treaty.

Ahmed Amponsah Fordjour is a graduate of Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, where he received a Bachelor of Science in geological engineering. After graduating, he worked at the National Data Centre in Ghana where he learned about the CTBT. He continued his studies with an online course by William Perry at Stanford University on the threat of nuclear terrorism.

Winning North Korean trust: Ratification of the CTBT by Washington and Pyongyang

Champagne corks popped when western media spread word of Kim Jong Un's willingness to denuclearize North Korea. One of North Korea's test sites was to be closed to show the genuine intentions of the regime.

It was indeed a dramatic development after the exchange of nuclear threats between US President Donald Trump and North Korean Supreme Leader Kim Jong Un during December 2017.

However, from close observation of South Koreans, one might wonder why they were not as excited as the rest of the world, but instead were relatively reserved. Aren't South Koreans the main beneficiaries of the removal of nuclear weapons? Aren't they eager to finally achieve reunification?

There are several reasons why South Koreans are keeping their hopes low. This is not the first time leaders of the Koreas have shaken hands. Surprisingly, it is not the first time North and South Korea made statements of good will to pursue denuclearization of the Korean Peninsula either. Overlooked is that there was a previous disarmament agreement between the US and North Korea. And so far such efforts have not borne the fruit of permanent peace. So, although the recent development is positive, it is naïve to expect such a gesture alone can guarantee a final result.

This time things should be done differently to achieve a meaningful outcome and execution of a treaty. All those handshakes, meetings, and joint statements will lose meaning if the current momentum is not used to seal the deal.

In that context, the signing of the peace treaty between the North and South is possibly the most valuable short-term outcome of the current talks. However, it will not automatically solve the decades long problem overnight.

The international community, South Korea, and most importantly, the US, need to convince North Korea that any deal will be honoured and regime security will be protected without nuclear weapons.

Objectively speaking, both the US and North Korea have not lived up to their

commitments in the past. For instance, the agreed framework, the deal struck between the US and North Korea to block the latter's nuclear programme in 1994, was not honoured by both parties.

The US did not deliver the promised crude oil and the bill for constructing civilian nuclear power

reactors was not passed in the US Congress. After suspending nuclear testing for 10 years, North Korea eventually broke out of the agreement.

If a new deal is concluded, carrying out negotiations and eventually achieving denuclearization of the Korean Peninsula represents a rocky road.

Therefore, the importance of building trust cannot be exaggerated, especially after US withdrawal from the so-called Iran deal, the JCPOA. Convincing North Korea that a new agreement will be honoured and maintained will be difficult.

Additionally, Libyan leader Muammar Gaddafi's fate at the hands of NATO backed opponents 10 years after agreeing to give up his nuclear programme, offers a good lesson for Kim Jong Un not to trust the US and the international community.

Extraordinary measures will be needed to ensure North Korea trusts its counter-

parts and begins gradually to remove its nuclear weapons.

Kim Jong Un has made efforts to show willingness already by accepting the talks and halting nuclear tests.

Now is the time for the international community to assure North Korea it can return to the non-proliferation regime it turned its back on.

A major step towards building trust would be for the US and North Korea together to ratify the Comprehensive Nuclear-Test-Ban Treaty (CTBT).

A joint US North Korean commitment to stop testing, instead of expecting North Korea to act alone, would also be a concrete achievement towards universal nuclear disarmament.

Let us use current momentum to bring about real change in the situation between the two Koreas.

Songyi Koo graduated from the Johns Hopkins University SAIS and is currently enrolled at the diplomatic academy of Vienna. She has expertise on nuclear disarmament and her article on North Korea's nuclear disarmament was selected as a cover story for Polemics magazine. She is an editor of the CTBTO Youth Group Magazine and working as a project coordinator in Atomic Reporters.



By Songyi Koo
Student at the Diplomatic Academy
Vienna and CTBTO Youth Group
magazine editor
Vienna, Austria



U.S. Department of State, www.flickr.com/photos/statephotos/15860885135

ANALYSIS

The JCPOA and CTBT – an in-depth primer



By Daria Shumilova
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In July 2015, the P5+1 group, the United States, Russia, China, France, the United Kingdom, and Germany, signed a historical nuclear non-proliferation agreement with Iran, the Joint Comprehensive Plan of Action (JCPOA). Its aim, to ensure Iran's status as a non-nuclear weapon state (NNWS) in exchange for the gradual lifting of sanctions.

The JCPOA is considered one of the most successful and verifiable non-proliferation agreements, being compared with the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which is the blueprint for modern arms control agreements.

Both multilateral agreements established technically sophisticated verification and monitoring regimes, creating a well-balanced relationship between science and diplomacy. In pursuing non-proliferation and disarmament, without robust verification mechanisms, diplomatic efforts do not have enough strength. Science has to play a significant role.

Speaking on the side-lines of the Nuclear Non-Proliferation Treaty (NPT) Preparatory Committee meeting in Geneva in April 2018, Lassina Zerbo, Executive Secretary for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), said that to advance ratification of the Treaty and to encourage other Annex 2 States to ratify it, Iran in particular, the US needed to ensure its trust in the JCPOA and make all efforts to preserve it. Similarly, the speaker of the Iranian parliament also said that Iran could not consider CTBT ratification with-

out having confidence in the JCPOA. Iran is among eight states preventing the CTBT from entering into force.

On 16 January 2016, the “Implementation Day” of the JCPOA, the International Atomic Energy Agency (IAEA) confirmed Iran's compliance with its terms and the process of lifting EU and US sanctions began. However, in January 2018 US President Donald Trump refused to re-certify the agreement and said the US would withdraw from the accord unless it was “fixed.” The deadline for his ultimatum was 12 May 2018.

The position was not supported by the other parties to the JCPOA, or its main watchdog, the IAEA. At the meeting of its Board of Governors in March 2018 in Vienna, Yukiya Amano, Director General of the IAEA, said: “If the JCPOA were to fail, it would be a great loss for nuclear verification and for multilateralism.” Despite all the objections, on 8 May 2018, Donald Trump officially announced US withdrawal from the JCPOA and reinstatement of sanctions on Iran.

The withdrawal decision does not automatically terminate the agreement since other parties remain committed to their obligations.

However, it does undermine its prospects and effectiveness. Why then is it important to keep the Iran Agreement in force?

Verifiable non-proliferation and disarmament agreements

In domestic affairs, states ensure the reliability of domestic rules and regulations. However, in international affairs there is

no higher authority with ultimate enforcement mechanisms and thus, states interact with each other, based on the principles of their sovereignty and independence in all matters, including issues related to nuclear disarmament and non-proliferation.

One of the main questions to address in nuclear disarmament and non-proliferation is how to actually ensure the gradual disarmament of nuclear-weapon states (NWS) and how to curb nuclear proliferation among current non-nuclear-weapon states (NNWS).

Although there is almost universal endorsement of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the diplomatic commitments of Member States can still lack credibility and confidence. Sceptics argue that the achievement of a world free from nuclear weapons through nuclear disarmament and non-proliferation is highly unlikely.

This thesis stems from an idea that there is a general rule of distrust and self-help in the international arena making states doubt each other's intentions. Therefore, there is a permanent condition known as “security dilemma” when countries feel constantly insecure and seek ways to enhance their security.

However, building confidence based on robust verification and monitoring regimes is a viable solution. States can agree on effective verification and monitoring measures that promote trust and build confidence, thereby reducing the impact of their “security dilemma”.

The conclusion of the negotiations for the CTBT in 1996 to provide an effective technical means for monitoring any nucle-



WATCHDOG AT WORK

ar testing activities followed this rationale. In short, if there is no teacher in the class during a test, there will always be at least one student willing to cheat on the test. If the teacher is present and ensures effective monitoring such intentions are less likely to occur. Reliable verification and monitoring mechanisms are essential for disarmament and non-proliferation agreements to make them viable and ensure the adherence of all parties.

The JCPOA

Historically, the verification of nuclear non-proliferation has proven to be significantly complicated. First and foremost, it is not always possible to provide full verification of states' activities regarding development of nuclear programmes.

The verification authority of the IAEA has its limits and restrictions regarding inspections. If a country has not signed the Additional Protocol to the Comprehensive Safeguards Agreement, the IAEA can monitor only those facilities that were previously officially declared by this country. Only additional protocols give the Agency broader competencies regarding each particular country and can provide for greater transparency and verification capabilities. However, they are concluded between states and the Agency on a voluntary basis.

This is where the JCPOA differs. It combines Iran's compliance with its Comprehensive Safeguards Agreement, signed in 1970, an Additional Protocol, as well as other restrictions, such as enriched uranium stockpiles and a cap on the number of operating centrifuges, to which Iran agreed in the framework of this multilateral accord.

In essence, it contains by far the strictest terms for nuclear non-proliferation verification and monitoring, making it a very strong nuclear non-proliferation deal that sends a positive signal to other countries. For this reason, the JCPOA is a crucial element of the nuclear non-proliferation regime. The accord, though imperfect, presents an effective verification mechanism with a well-agreed timeline and procedures according to the status of being one of the most successful non-proliferation agreements in the history of the NPT regime.

Apart from the US, all the other parties to the JCPOA agree that renegotiation of the deal or withdrawal from it would be a reck-



2003 NUCLEAR INSPECTIONS: NO LIGHT AT THE END OF THE TUNNEL FOR IRAQIS

less and dangerous move. Russia's Foreign Minister, Sergey Lavrov, has reaffirmed the Russian stance on the agreement and commitment to its preservation and has highlighted its relevance for international peace and stability.

In a February 2018 statement, he said: it is "necessary to fully implement the Joint Comprehensive Plan of Action (JCPOA)

and it would be extremely dangerous to break the deal. If there is a desire to discuss some issues concerning Iran in the same format that coordinated the JCPOA, or some other format, it should be done with the obligatory participation of Iran and on the principle of consensus, not ultimatums." In this sense, the Russian position is also supported by the EU.

For the JCPOA to remain in force, all parties to the agreement, as well as the international community as a whole, need to take an approach towards Iran that will not humiliate it. The current US attitude, critics say, can be summarized as "we still do not trust you no matter what you claim". In essence, it is a counter-productive and also potentially dangerous position.

In his book "The Age of Deception: Nuclear Diplomacy in Treacherous Times" Mohamed El Baradei, former Director-General of the IAEA, recalled his experience regarding the dismantlement of the Iraq WMD programme: "Although the IAEA's successful dismant-

ling of Iraq's nuclear programme silenced many of its critics and detractors and was a testimony to the Agency's effectiveness, from an Iraqi standpoint, the inspection process had culminated in Desert Fox,

sending them a harsh message. To them, the Americans were not interested in the elimination of Iraq's nuclear programme. The Iraqis understood that there would be no light at the end of the tunnel, no matter what they did. Desert Fox convinced some that the goal was not WMD disarmament, but rather regime change... their distrust of the inspection process only grew."

His conclusion was that the undermining of the IAEA inspection process and the ongoing US treatment of Iraq as a defeated nation ultimately resulted in a total lack of confidence towards the US, as well as the resentment of US policies among the population of Iraq.

Current concerns about the future of the JCPOA and the failure to establish cooperation with Iran could possibly lead to the same mistake as the one made in the 1990s with Iraq. Despite current compliance, Iranian authorities have threatened that in case the deal collapses, Iran will resume uranium enrichment to levels sufficient for nuclear weapons.

US responsibility regarding the JCPOA lies not only with the agreement itself but also with its faith in the international non-proliferation regime under the NPT. The US withdrawal risks doing substantial harm to the global non-proliferation regime as a whole.

In this regard, the connection of the JCPOA with the CTBT is also important. As already mentioned, the lack of trust in the JCPOA for Iran also poses questions about trust in other comprehensive disarmament and non-proliferation agreements, the CTBT first of all.

One more reason for preserving the JCPOA is its relation to the non-proliferation and disarmament efforts in the Middle East. During the 1995 NPT Review Conference, one of the conditions for the indefinite extension of the Treaty was the obligation to negotiate a nuclear-weapons-free zone (NWFZ) in the Middle East.

For the zone to be finally established, all the countries of the region, first of all Iran and Israel, need to have confidence in each other's intentions. For this reason, ro-

bust verification in the Middle East is the key element in the process, and the JCPOA is an essential part of the verification and monitoring regime in the region.

The failure to agree on a final document during the 2015 NPT Review Conference and the ever-widening gap between nuclear-weapons states (NWS) and non-nuclear-weapons states (NNWS) reflects the current stalemate of the NPT agenda - of particular concern in the 2020 review cycle.

The Treaty to Ban Nuclear Weapons (TPNW), concluded in 2017, is one of the signs of this stalemate, representing a call by the NNWSs to advance disarmament efforts. In the existing NPT crisis, it is essential to ensure the effectiveness of the NPT regime and prove that the dialogue on nuclear non-proliferation and disarmament is viable.

The CTBT is one of the central elements of the regime and its entry into force is the only logical step in the current situation. However, the rejection of the JCPOA, distrust and disrespect in the international arena serve as obstacles on this path. Therefore, the preservation of the JCPOA and continuation of productive and transparent dialogue with Iran should be a priority for the US administration.

In his book, Mohamed El Baradei pointed out that "nuclear diplomacy is a hands-on discipline requiring direct engagement, restraint, and long-term commitment." The JCPOA survives as long as all the actors involved in the process remain engaged and ensure dialogue between each other.

Although the JCPOA is not a perfect agreement, it was carefully negotiated and currently proves to be effective, remaining one of the most successful achievements of modern multilateral nuclear diplomacy. Failure to keep the JCPOA in force would be a severe setback to the NPT, undermining the whole nuclear non-proliferation and disarmament regime.

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A vital role for the CTBT: Preventing another Semipalatinsk



By Marzhan Nurzhan
CYG Member and Convener of
Abolition 2000 Youth Network
Astana, Kazakhstan



SEMPALATINSK'S LEGACY

Second CYG Astana Conference: trip to ground-zero

This year the CTBTO Youth Group (CYG) will hold its second international conference in Kazakhstan. This will provide a great opportunity for CTBTO youth to build a deeper understanding of the impact of nuclear tests and the imperative for nuclear disarmament.

The role of young people in peace and security is important, particularly their participation and involvement in the area of nuclear issues. Youth and future generations are impacted by the legacy of nuclear tests and the threat from nuclear weapon policies, and so their voices must be included. This is rightly highlighted by the CTBTO Youth Group. I was honoured to participate in the First CYG Moscow conference in 2017, where I had an opportunity to contribute to the initiative of a youth diplomacy pledge.

However, youth also need to learn from our elders who have experience, knowledge and skills that can be transferred. There currently appears to be an intergenerational gap, a lack of communication between youth and seniors, which must be filled and bridged with a common ground, interest and [interaction](#). We as youth must use the platform provided by the upcoming conference in Astana on 28-30 August.

This international meeting between the CTBTO Group of Eminent Persons (GEM) and CYG members will be a place to collaborate and learn from each other, especially drawing from the experience, expertise and knowledge of seniors in regard to nuclear-related issues. The conference will include an unique opportunity for participants to visit the Semipalatinsk test site and to witness first-hand the risks of nuclear testing and reflect upon them.

These efforts of Kazakhstan will have a positive impact on the present generation to work on building a world free of nuclear weapons and contribute to the entry into force of the CTBT in the near future.

Marzhan Nurzhan serves as Coordinator for CIS countries for Parliamentarians for nuclear non-proliferation and disarmament (PNND). She also represents the Abolition 2000 Youth Network as Convener. She is an active member of the CTBTO Youth Group and the International Student/Young Pugwash movement (ISYP).

I am from Kazakhstan, a country which inherited around 1,500 nuclear weapons from the Soviet Union making it the fourth biggest nuclear arsenal in the world. For almost half a century, from 1949 until 1989, the Soviet Union conducted 456 nuclear tests above and underground at the Semipalatinsk Nuclear Test Site, known also as Semey polygon, in the eastern part of [Kazakhstan](#). The energy the tests released was roughly equal to the capacity of 2,500 Hiroshima atomic [bombs](#).

The radioactive fallout from these nuclear explosions has resulted in widespread contamination of the Semey area causing catastrophic humanitarian and environmental consequences. Almost two million people have already been affected, suffering severe health problems, cancer, birth deformities and death, which will continue for many generations to [come](#).

I believe that the CTBTO is vital and instrumental in banning nuclear tests everywhere in this world forever, in order to prevent further damage to human health and the environment.

Kazakhstan: From nuclear victim to disarmament champion

The experience from the Soviet era nuclear tests led to strong public opposition to nuclear weapons in Kazakhstan, supported by Kazakh leaders. A civil society movement “Nevada-Semipalatinsk” (Nevada-Semey) guided by Olzhas Suleimenov led to the closure of the nuclear test site on 29 August 1991, preventing any further nuclear tests in [Kazakhstan](#).

Following independence in December 1991, the new government of Kazakhstan, led by the President, made the historic

Kazakhstan has continued to play a key role for global nuclear nonproliferation and disarmament.

Treaty (NPT) as a non-nuclear-weapon State.

Since then, Kazakhstan has continued to play a key role for global nuclear non-proliferation and disarmament. In addition to supporting and promoting the CTBT, Kazakhstan played a leading role in establishing the Central Asian Nuclear Weapon Free Zone. The CANWFZ treaty

includes an obligation of all five member states to adhere to the [CTBT](#).

Other key initiatives of Kazakhstan include proposing a Universal Declaration for a Nuclear-Weapons-Free World which was adopted by the UN General Assembly, launching the ATOM Project which highlights the humanitarian impact of nuclear tests through the voices of victims and survivors, and organizing a special session in January 2018 of the UN Security Council focused on confidence building and nuclear [disarmament](#).

International Day Against Nuclear Tests

Given its experience as the most affected country in the world by nuclear test explosions, Kazakhstan successfully motioned the United Nations General Assembly to establish the International Day Against Nuclear Tests (IDANT) on 29 August, which carries special significance due to the symbolic date that coincides with the first nuclear test conducted in Kazakhstan and also the date of the closure of the Semey polygon in 1991.

The experience of Kazakhstan and other countries that have suffered from nuclear tests can be used to encourage Annex 2 States of the humanitarian and

security benefits of joining the CTBT. IDANT is a good opportunity to publicize this on 29 August.

Kazakhstan commemorates the day annually, often through international conferences hosted in Astana and field trips to ground zero in Semey. In 2016 I had the opportunity to help organize the

conference “Building a nuclear-weapon-free world” in Astana, co-hosted by Parliamentarians for nuclear non-proliferation and disarmament ([PNND](#)). Our visit to ground zero was particularly poignant for me and for other conference participants.



SEMPALATINSK AS IT ONCE WAS

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Photo courtesy of Yuri Kudrin, www.cis-1.org/nuclear-testing/the-effects-of-nuclear-testing/the-soviet-unions-nuclear-testing-programme

The beginning of a living hell

Jack W. Aeby, https://commons.wikimedia.org/wiki/File:Trinity_shot_color.jpg, CC BY 2.0

HISTORY

The victims of nuclear testing

Trinity, the test of the world's first atomic bomb, was conducted on 16 July 1945 in the United States. But it was not until nearly fifty years later, in 1990, that the US Department of Justice enacted legislation to compensate the victims of the Trinity test for their losses, describing the law as "closure on a unique chapter of our history."

With a history marred by over 1,000 nuclear tests, the US certainly possesses a deep responsibility when it comes to closing the chapter on nuclear testing. Yet true closure cannot be achieved without ratification of the Comprehensive Nuclear-Test-Ban Treaty (CTBT).

Civilian impact

To a younger generation in the United States today, nuclear testing may seem removed and faraway. But for an earlier generation, it carried tangible human impacts. In projects spanning nearly two decades, the US conducted atmospheric nuclear tests both in the Pacific and on its own soil, in Nevada, New Mexico and Colorado.

According to unreleased federal studies, nuclear fallout could be responsible for more than 11,000 cancer deaths in the United States. "I have a list of 279 people from the Tularosa area that I know or knew that have had cancer, died of cancer, or are cancer survivors," writes a survivor living near the Nevada Test Site, "How many people do you know?"

Many of those impacted by radioactive fallout from tests were civilians living in the US southwest, unaware of the government's plans to test weapons in the region. At the time of the tests, they were not told about what was happening, they were not evacuated, and they were not saved from the effects of fallout.

Reading transcribed oral histories, the tragedy gains focus as survivors describe



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whole families dying of cancer around them, mass sterility, children dying of stomach cancer, babies born with cancer, babies born without eyes, and other horrific memories.

To say this tragedy was a gross chapter in US history seems too kind. What the US government still treats as a historical

military breakthrough was the beginning of a living hell for these survivors. And that suffering continues; as one survivor living downwind of the Nevada Test Site writes, "It's not a matter of if you get cancer; it's a matter of when."

An incomplete solution

The Partial Test Ban Treaty (PTBT) banned atmospheric nuclear tests in 1963, testing went underground, but the possibility of humanitarian and environmental dangers remained.

Although underground testing mitigated the problem of radiation doses from short-lived radionuclides, large amounts of radioactive isotopes are still released underground. Exposure beyond the test site may occur if radioactive gases leak or are vented through "accidental atmospheric contamination."

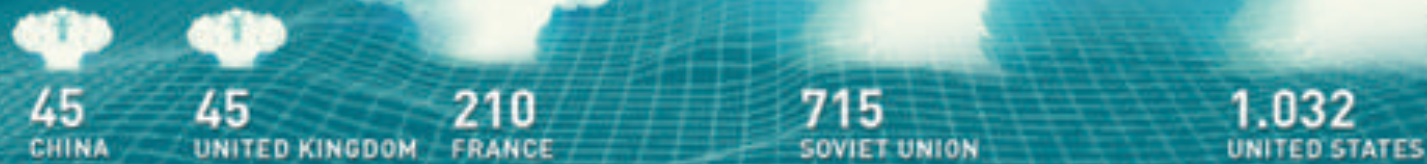
It is estimated that venting released significant quantities of the radionuclide iodine¹³¹ into the atmosphere at the 32 known cases of underground tests performed on the Nevada Test Site. Additionally, geological stress from underground testing may lead to the collapse of test sites and further radioactive leaking, as demonstrated from the partial collapse of the Punggye-ri test site in North Korea.

Legal battles for justice

Not only do nuclear tests result in environmental and health impacts, but they also generate complicated legal issues. Those injured by the effects of nuclear

NUCLEAR TESTS

1945-1996



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testing may have legal standing, either before a domestic or international court, to receive redress.

For example, in the case of *Bulloch v. United States*, sheep farmers whose herds had been devastated by radioactive fallout sued the United States government for financial losses. While the farmers ultimately lost their case, the litigation costs for both parties were steep.

To avoid burdensome class action lawsuits, the US government finally enacted the Radiation Exposure Compensation Act, apologizing to, and compensating those affected by atmospheric nuclear testing. To date, over 43,000 claims have been filed under the Act, costing the US over \$2 billion.

Yet even with this staggering financial number, the law's scope has been criticized as overly narrow. Even today, the "Downwinders" of Tularosa Basin, New Mexico—a consortium representing families living downwind of nuclear test sites—continue their fight for improved legislation in the US Congress, spending time, energy and funds to advocate for compensation.

A resumption of nuclear testing—even underground nuclear testing—could result in accidental atmospheric contamination and the US government should look to its history and recognize the legal and financial burdens associated with such activities.

The CTBT: A new chapter

The US is not alone in its history of nuclear testing. For example, in 2009, the French parliament approved legislation providing care and compensation to people exposed to radiation during France's nuclear testing. Announcing the bill, the defence minister of France said, "thirteen years after the end of the tests in the Pacific, the bill I am presenting today is to allow our country to serenely close a chapter of its history."

While the US has matched these words, it has not matched the corresponding action by France, which ratified the CTBT in 1998.

The diplomatic and security rationales behind supporting the CTBT, a key step towards realizing the goals of the NPT, are manifest.

But in addition to these rationales, the United States has a separate obligation to ratify: to avoid repeating its historical mistakes and to recognize those who continue to suffer the horrific consequences.

Ratification of the CTBT would not just represent true closure on a dark chapter of US history; it would mark the beginning of a new chapter towards healing and restorative justice.

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SOUTH ASIA I

An absence of awareness and the persistence of nuclear dangers

By Rizwan Asghar

May 2018 marks the 20th anniversary of the 1998 underground nuclear tests by Pakistan and India. As expected, politicians and military officials can be found from both countries making tall claims about how nuclear weapons have not only created more peace in South Asia, but also bolstered the defence of their respective countries.

Indian and Pakistan media are drowning in this cacophony of jingoism. However, clearly missing is a genuine and open debate about the threats posed by the continued vertical proliferation of nuclear weapons in the region.

The general public remains largely unaware of how unstable is the nuclear balance between these two neighbours. Unfortunately, the South Asian region is no exception. A review of survey data collected over many years bears out the sorry truth that people in other nuclear states consistently display a profound ignorance of nuclear threats.

This absence of knowledge about the challenges of the nuclear arena is worrisome and a major reason why we need to pay more attention to nuclear weapons and the efforts to stop their proliferation. In order to make progress, we will have to address this indifference and lack of awareness.

55 tests a year

Since the advent of the nuclear age, nuclear weapons have been tested in all environments. The world witnessed 55 nuclear tests on average every year during the period from 1955 to 1989. In October 1961, the Soviet Union detonated the most powerful nuclear weapon ever with a blast yield of 57 megatons of TNT, 1,500 times more powerful than the weapons dropped on Hiroshima and Nagasaki.

In 1962 alone, more than 175 nuclear tests were conducted. In addition to their effects on the health of ecosystems, nuclear tests helped states qualitatively advance weapons systems. And they also provided information about how much damage a nuclear strike will cause under various conditions.

Over the past two decades, the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), and the nuclear test ban treaty driving it, have emerged as

Politics, not technical issues

We are living in a very dangerous world. Every nation has an interest in maintaining peaceful relations with other nations. Every country needs to play a role in creating a world devoid of nuclear threats. Nuclear testing needs to be made an issue of wider public concern to persuade the governments of the eight hold-out states to take the necessary steps to ratify the Treaty. This requires an understanding of the fact that the CTBT is a political issue and not a technical one.

Even on the floor of the US Senate, when it rejected the Treaty in 1999, partisan and personal rivalries played an important role in undermining the Treaty.

Security concerns had a limited role in voting the CTBT down. US ratification of the CTBT would have been a landmark step against the qualitative and quantitative spread of nuclear weapons.

Efforts to put the nuclear genie back in the bottle must continue until global disarmament goals are achieved. By keeping the spotlight on nuclear threats and the role of the CTBT in preventing the proliferation of nuclear weapons, we can make a real difference.

The nuclear powers need to agree to eliminate all options for using nuclear weapons in future. Under the Nuclear Non-proliferation Treaty (NPT), they are obligated to reduce – and ultimately eliminate – nuclear weapons. But this can only happen by taking the first step: the ratification of the CTBT.

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55 TESTS A YEAR

key challengers to the threat of using nuclear weapons. Yet, the CTBT remains in limbo because of the reluctance of eight states.

But enforcement of the CTBT is a real possibility and its success is dependent upon garnering sufficient public support for it. This will only happen if the disarmament debate is kept alive.

Disarmament activists and members of the CTBT Youth Group can do much to help raise awareness of the CTBT in their respective countries.

CTBT: Prospects and challenges in South Asia



By Tahir Nazir
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To this day, there are nine nuclear weapon states in possession of an estimated 14,200 nuclear weapons, of which nearly 4,000 are deployed and about 1,800 are on high alert and ready for use at short notice.

The Permanent Members of the United Nations Security Council, the United States, China, the Russian Federation, France and the United Kingdom, are upgrading their nuclear arsenal, spending hefty sums on new weaponry systems.

The US, for example, is projected to spend \$1.7 trillion on maintaining and upgrading its nuclear forces over the next 30 years. Similarly, Russia is spending about \$70 billion a year on modernising its military and strengthening its nuclear muscle. In South Asia, India has spent about a billion dollars over the past decade to modernize its military and nuclear forces. According to estimates by the Stockholm International Peace Research Institute (SIPRI), India was the world's largest importer of major arms between 2013 and 2017, accounting for 12% of the global total; its imports have increased by 24% between 2008–12 and 2013–17.

Despite emphatic calls to move towards “nuclear zero”, a world without nuclear weapons remains a perpetually distant, idealist's dream. North Korea's nuclear capability continues to pose a real threat to international peace and stability.

Likewise, the hostility between India and Pakistan, exacerbated by the introduction of the Cold Start Doctrine – an offensive military strategy to flatten Pakistan military might without invoking the nuclear threshold – the acquisition of destabilizing technology, ballistic missile defence systems, and a massive increase in India's conventional defence spending, is pushing the region towards increasing instability, and could potentially lead South Asia into a ‘nuclear nightmare’.

According to data provided by India's Institute for Defence Studies Analysis (IDSA) India will spend over \$62 billion on de-

Smooth_O_https://commons.wikimedia.org/wiki/File:Flags_of_India_and_Pakistan.jpg, CC-BY-SA-2.0

A COMMON THREAD: NUCLEAR DISARMAMENT IN SOUTH ASIA

fence in 2018-2019 in contrast to Pakistan's meagre \$9 billion. Such developments also have the potential to increase the level of an arms race which will erode the deterrence stability of the South Asian Region.

In this context, the Comprehensive Nuclear-Test-Ban Treaty (CTBT) remains a linchpin for nuclear disarmament and nuclear non-proliferation. It caps the development and modernisation of nuclear weapons systems, in an attempt to leave a narrow space and very little motivation for states to build new weapons. By banning all nuclear explosions, the CTBT also puts qualitative constraints on the development of new nuclear weapons. Thus there is direct linkage between ending nuclear testing and progressing toward a world without nuclear weapons.

The Treaty's relevance and importance was underlined first in 1998 when nuclear tests were carried out initially by India, followed by Pakistan. More recently the Democratic People's Republic of Korea (DPRK) conducted a test in 2017 and previously in 2006, 2009, 2013, and 2016.

Nearly two decades have elapsed since the Treaty was first opened for signature,

but due to various political and geo-strategic obstacles, its entry-into-force is yet to be achieved, which has prevented the CTBT from entering into full legal effect.

The CTBT remains a crucial element of the global nuclear disarmament and non-proliferation regime. Currently, it has 183 State signatories, and has been ratified by 166 States, the vast majority of the world's nations lending their voices to prevent further nuclear testing. However, for the Treaty to enter into force, the signature and ratification of the remaining eight Annex 2 States is a necessity.

Pakistan and India are both among these eight Annex 2 States, and both have not found it possible to sign and ratify the CTBT due to regional security constraints. As far as Pakistan's position is concerned, it has indicated its intent to sign and ratify the CTBT in parallel with India. Even in 1974, when India tested its nuclear weapons under the guise of a ‘peaceful test’, Pakistan proposed the idea of a regional CTBT. Since 1998, Pakistan has put forth proposals on a strategic restraint regime and bilateral dialogue on security and arms control issues to India many times,

but unfortunately none of these proposals have been received with any enthusiasm or met with reciprocation from India.

Another of the eight Annex 2 States – the US – recently published its nuclear posture review, indicating the role of nuclear weapons will increase in its national security policy, possibly opening a window for nuclear testing under extreme circumstances. Without doubt, the Trump administration's decision to leave open the option to resume testing will also have negative consequences for the South Asian region's nuclear politics, as both countries (India and Pakistan) are continuing to develop new nuclear weapons delivery systems to counter each other.

Despite these dangerous and contrary developments at the global level, I believe that in South Asia, the signing of the CTBT by India and Pakistan has the potential to stabilize and strengthen the deterrence equation between the two arch-rivals in the long run, particularly by dis-incentivizing the development of new nuclear weapons. Hypothetically, even a sharp move by India to sign the CTBT could place China and the US in an awkward position, where

they would be left with very little space and excuses to continue to remain outside the Treaty, and perhaps be encouraged to expedite the process for ratifying it.

It is therefore prudent for the international community to push India to sign the CTBT if the country really wants to be integrated into the Nuclear Suppliers Group (NSG) and other multilateral cartels.

In 2008, at the time of the Indo-US nuclear deal, a similar golden opportunity was lost to integrate the CTBT as one of the nuclear non-proliferation benchmarks when granting an NSG waiver to India. Let us hope that the same mistake will not be repeated in the discussions for Indian NSG membership proposal, and signing of the CTBT may be set as one of the preconditions.

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EDUCATION

Science and education: Keys to the CTBT and nuclear disarmament

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) bans nuclear explosions by everyone, everywhere, and the Organization detects all events on the earth's surface, in the oceans and in the atmosphere. Despite the significance of the CTBT acting as a brake on nuclear proliferation and reducing the risk of nuclear war, eight countries have still not ratified it.

Nuclear disarmament is imperative for the protection of human health, animals and plant life on our planet. The CTBT is a key step towards its achievement and needs universal support.

The contribution of young and energetic brains to global peace and security is extremely important in promoting the CTBT and its verification regime. The CTBTO Youth Group, of which I am proud to be a member, has a very important role in persuading governments to halt nuclear testing, and sign and ratify the CTBT to save lives.

There is clear evidence of the enormously destructive power of nuclear weapons. Civilian nuclear accidents also demonstrate the effects of exposure to radiation and radioactive fallout. Depending on weather conditions radioactive particles can be carried over very long distances and areas affected can be very large.

More than 200,000 people died as a result of the US bombings of Hiroshima and Nagasaki in Japan in 1945. Leukemia was the most fatal type of cancer from long-term effects.

Health effects from these events in Japan continue to be felt today. Following the Chernobyl accident in Pripjat, Ukraine, children suffered from thyroid cancer in Ukraine, Russia and Belarus and there were mutations in animals and plants.

Thyroid cancers increased even 1,000 km away in northern Turkey and surrounding regions. Thirty years after the accident, radiation levels around



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Chernobyl remain high. Effects of the 2011 accident at the Fukushima nuclear power plant in Japan were less acute but pointed to the absolute need for nuclear safety.

Between 1945 and 1996 over 2,000 nuclear tests were conducted. Even after the CTBT was opened for signature in 1996, India, Pakistan and the Democratic People's Republic of Korea (DPRK) continued to test. If the Treaty had been in force, backed up by its unique monitoring system, of seismic, hydroacoustic, infrasound, and radionuclide monitoring, governments would not have ventured to test.

But the two Koreas have recently signed a peace agreement and North Korea has declared it will stop nuclear testing and shut down its test site. This presents an opportunity for the CTBT to verify the shut-down and raises the possibility of the DPRK signing and ratifying the CTBT.

Science and education

The rapid development of science and technology is lifting education levels

globally. Correspondingly the awareness of young people about the importance of a healthy life and a peaceful world is also increasing.

New multilateral education techniques and an enriched environment starting in their childhoods, results in younger generations becoming very creative and finding more attractive paths, alternative to those followed by their parents and governments.

Importantly, younger generations have the opportunity to grasp the impact of nuclear accidents, weapons and testing, and can better understand the dangers and the need for peace.

Especially for young people, growing up in the shadow of harmful nuclear events and their health effects, there is awareness of the need to do more to protect their children and the children of their children.

Members of the CTBTO Youth Group with their increasing presence in many countries are doing their best to draw attention to the prevention of any kind of nuclear disaster and the need to live in peace.

Economic interdependence is among the most important issues for govern-

ments to pursue and the new generation is conscious that science is the best tool for countries to develop and compete with each other.

The growing number of scientists on earth represents a break from the past and an indication that young people will use science for peace.

Consequently, the impact of today's youth, as the adults of tomorrow, is significant to prevent future nuclear threats, and leads to diplomacy for peace. The efforts of young people could result in the abolition of nuclear weapons in future and put nuclear science and technology to peaceful uses only.

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YOUNG SCIENTISTS AT WORK



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Giving young people a voice

Over 50 per cent of the globe's population is under the age of 30, according to the United Nations, yet they rarely have a voice in their country's foreign policy.

This younger generation, comprising more than half the people in the world, born in the midst of a technological revolution, has proved it is the one most able to cope with recent developments.

The launch in 2016 of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) Youth Group (CYG) was a salute to young people everywhere and acknowledgment of their potential to bring positive change.

CTBTO Executive Secretary Lassina Zerbo founded it to encourage its members to raise awareness about the importance of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) to build support for it in their countries.

We believe this initiative should motivate and encourage young people to take an active role in calling on the international community to promote the CTBT and its verification regime.

It gives us a means of expressing our support for nuclear non-proliferation and disarmament and to be able to point out we are here and engaged.

The Treaty plays a crucial part in the pursuit of peace and all the technologies the CTBTO utilizes are environmentally friendly, able to detect natural events, such as earthquakes, and assist in disaster management.

In addition, these cutting-edge technologies can be applied to other civic and scientific purposes, killing two birds with one stone. For instance, the data collected by the International Monitoring System (IMS) can be put to use solving other major issues on earth, such as climate change.

The question, how do we meet our goal, has a simple answer. The CTBTO Youth Group must work together as a united team and urge our countries to either sign, ratify, or pressure other states to do so.

The Youth Group has been more than active, meeting regularly, organizing regional teams and coordinators, and now

launching this magazine, all focus on bringing positive change to the world.

Through social media, CYG members exchange ideas and opinions about current nuclear and political issues. Members often get involved in national discussions

We urge our policymakers and young people to recognize the role of youth in being able to change the future and pave the way to peace.

about nuclear topics and share their experiences by working together on projects.

The wonderful thing is that we are from all around the world. Our different backgrounds provide the CYG with a mix of inputs and ideas on how to proceed with our mission.



By Rana Hameed Al Abboodi and Shereen Nanish
Seismic analyst, Iraq
National Data Centre
Baghdad, Iraq
Freelance journalist,
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Since we are both from the Middle East, we urge our policymakers and young people to recognize the role of youth in being able to change the future and pave the way to peace. We need to be able to raise our voices and express our views without restriction.

When our voices become loud enough perhaps the establishment of Middle East Weapons of Mass Destruction Free Zone will become reality.

Young people in the Middle East are struggling to fulfill their aspirations and need to feel connected and be part of the big picture.

The CTBTO has enabled us to join with the rest of the world and get familiarized with what's happening on this planet. We must have the right to access knowledge and sufficient information in order to manage our own affairs effectively.

Finally, we, the young people of the whole world, must urge our schools and universities to promote the CTBT and raise awareness about its goals. This is particularly important in Annex 2 States, since without their ratification the treaty cannot enter into force.

Rana Hameed Al-Abboodi is an Iraqi information engineer who has worked for the Iraq National Monitoring Authority for Non-proliferation since 2011. She is a seismic analyst with the Iraq National Data Centre (NDC) and holds a Master's degree in information engineering.

Shereen Nanish is a freelance journalist, writer, content creator and translator. Currently enrolled in a Master's degree programme in journalism and new media at the Jordan Media Institute, she has a Bachelor's degree in English Language and Linguistics from the Jordan University of Science and Technology.

SCIENCE DIPLOMACY

An effective tool for confidence building to deescalate tension on nuclear weapons issues

Tensions between the US and the Russian Federation are escalating with the leadership of both countries vowing to develop new types of sophisticated nuclear weapons.

In his annual state of the nation address in March 2018 President Vladimir Putin of Russia unveiled Russia's development of its weapons arsenal, including a video showing nuclear missiles striking Florida. A contentious issue between the former foes is ballistic missile defense (BMD).

In February the Pentagon's Nuclear Posture Review (NPR) showed greater willingness for the US to use nuclear weapons first and called for the development of new weapons and capabilities to counter rivals, such as Russia and China. It also called for the development and deployment of a "low-yield" nuclear warhead for submarine-launched ballistic missiles and to "strengthen the integration of nuclear and non-nuclear military planning."

The North Korean nuclear programme has entered a new and complex phase. The leaders of North and South Korea met for the first time in over a decade, 27 April 2018. Both signed the Panmunjom Declaration for Peace, Prosperity and Unification on the Korean Peninsula, committing the two countries to a nuclear-free peninsula and talks to bring a formal end to the Korean War. But fulfilling complete denuclearization of the Korean Peninsula and the very definition of denuclearization are regarded with uncertainty.

Agreement between Iran and P5+1 countries had been considered a success story of science diplomacy for global nuclear non-proliferation efforts until US President Donald Trump announced a unilateral American withdrawal 8 May 2018.

The decision puts world peace and especially the Middle East in a fragile state. The day after the announcement tensions flared briefly between Israel and Iran.

Saudi Arabia's foreign minister told US television his country stands ready to build nuclear weapons if Iran restarts its atomic weapons programme.

These developments concerning nuclear weapons in the international forum show clearly that nations lack confidence in each other souring trust.

Only the tools of science diplomacy can bring back together these nations

scientific findings, offering a means for building trust, establishing leadership based on scientific precept.

A variety of policy measures and physical barriers are in place to prevent nuclear proliferation, but they are not very effective because of the technical complexities of nearly every aspect of the nuclear fuel cycle, as one example, and its potential for exploitation and vulnerability to risk of theft of fission material by non-state actors.

Cooperation on ballistic missile defense between the United States and Russia has many technical and political dimensions. Until now, political efforts have focused on trying to address the underlying issues of this challenge. But science diplomacy can create a friendlier atmosphere to increase cooperation on BMD, which both countries are pursuing with various space technology projects.

If we do not intensify science-based diplomatic efforts, initiatives such as the next phase of the Paris Climate Agreement will also be affected by political decision.

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) verification regime has established the precedent for a robust science-based verification regime, a platform that is a model for the world to emulate.

To build strong confidence among state parties, to meet the challenge of complex issues and build a safe, secure and responsible global order, science must be engaged and fully articulated to the public.

That is a task we are trying to undertake in the CYG with hope of bringing peace to the world through science diplomacy.

Muhammad Qasim holds a PhD in bio-engineering from Chung Ang University, South Korea and currently serves as Research Professor at Konkuk University in Seoul, South Korea.



By Muhammad Qasim
Research professor at
Konkuk University
Seoul, South Korea

to resolve complex nuclear non-proliferation issues. It is imperative for the scientific community to inform diplomats and policy makers about how networks of strong verification regimes can ensure a strict check on activities to develop lethal weapons.

Regional tensions can be lowered through scientific cooperation by the appointment of policy makers with scientific backgrounds, armed with scientific evidence, open and welcoming to new



REPORT FROM GENEVA

Women to the fore Gender at the 2018 NPT PrepCom meeting

The atmosphere at the 2017 Preparatory Committee (PrepCom) meeting for the Treaty on the Nonproliferation of Nuclear Weapons (NPT) was rightly described by some as “[vanilla](#).” To paraphrase Dinah Washington, what a difference a year makes.

The gloves came off at the 2018 meeting (23 April – 4 May) as delegates sparred over the future of the Joint Comprehensive Plan of Action (JCPOA) with Iran, chemical weapons use in Syria, and prospects for a Middle East Weapons of Mass Destruction-Free Zone (WMDFZ). One of the few positive elements of this otherwise dispiriting meeting was its focus on gender in non-proliferation and disarmament.



By Sarah Bidgood
Senior research associate and project manager at James Martin Center for Nonproliferation Studies (CNS) Monterey, California



BALANCE INSTEAD OF 'MANELS'

Women made up only 26.5 percent of delegates to the 2015 Review Conference, so in numbers alone, the 2018 PrepCom gave cause for modest optimism. Two side events focused on gender compared with none in 2017, and 108 statements were delivered by women compared with 80 last year. The draft chair's factual summary endorsed the “equal, full, and effective participation” of women and men in non-proliferation and [welcomed improvements](#) over 2017 in this area.

The broader multilateral disarmament community has seen some positive change, too. There is now [gender parity among the top leadership of the United Nations](#), and the High Representative for Disarmament Affairs Ms. Izumi Nakamitsu is currently [37th on Fortune's list](#) of the top 50 World's Greatest Leaders. This is measurable progress that is certainly worth celebrating.

Efforts to balance gender representation in our field, like [avoiding manels](#) (all male panels) and accrediting more women to national delegations, are important because they stop us from defaulting to men over qualified women. These approaches also make women experts more visible and train us to notice when they are absent.

Learning what an equal gender breakdown looks and sounds like will help the non-proliferation and disarmament community overcome entrenched biases. Contributing to these efforts is the fact that we have become better at spotting inequity in our field and less tolerant of its manifestations. Alexandra Bell and Kelsey Davenport's excellent piece on “marticles”, articles that quote only men (published in [‘Poynter,’ April 30, 2018](#)), is an example of this phenomenon at work.

Beyond calling out a discriminatory practice and explaining how to stop it, Bell and Davenport help readers understand how the status quo, when unchecked, perpetuates

bias against women. Greater awareness of where gender intersects with power in our field will be crucial to making it more inclusive and balanced.

By the same token, activities designed to increase gender representation will not induce systemic change by themselves. They require decision-makers to believe that gender diversity is important, and it is a mistake to assume that all, or even many, do. For this reason, we should talk more about engaging women in WMD issues not for the sake of fairness but to improve outcomes.

I was encouraged to hear several PrepCom delegations repeat what the private sector already knows: that [diversity in teams](#) yields more effective and impactful results. Given the issues the NPT faces today, the non-proliferation and disarmament regime can ill afford to pass up the potential benefits of this approach. For those in our community who are skeptical about the need for gender equity, this rationale may convince them to support greater engagement by women in genuine, rather than perfunctory, ways.

The 2018 PrepCom is not the only forum where UN Member States have acknowledged the need to include more women in non-proliferation and disarmament. I feel fortunate to have entered the field at a time when gender equity is being discussed more seriously at high levels.

CTBTO Executive Secretary Lassina Zerbo's International Gender Champion pledge is a good example of how to bridge the gap between words and deeds. By increasing flexibility in working hours for new parents, involving more young women in science-based diplomacy, and creating a shadowing programme with a high female-male ratio, the [CTBTO will engage more women](#) in the field and make it easier for them to stay.

[Canada](#) and Ireland's national action plans on Women, Peace, and Security promise similar results through their commitment to gender mainstreaming—the practice of consid-

ering how policies impact both women and men—in this space. Civil society, which has long recognized gender's relevance to WMD issues, should seize this moment to pursue ambitious projects aimed at getting more, and more diverse, women into our field.

On this basis, I am spearheading a new initiative at the Center for Nonproliferation Studies to raise awareness about nuclear non-proliferation among college-aged women, mentor them, and provide them with further training.

With support from governments and international organizations, our community can expand the cadre of women in non-proliferation and disarmament and ensure there is always room for them in this discourse. If we translate the thoughtful conversations I heard in Geneva into concrete action, we will all be in much better shape to tackle the challenges that lie ahead.

Sarah Bidgood is a senior research associate and project manager at the James Martin Center for Nonproliferation Studies (CNS) in Monterey, California. Her areas of focus include US-Russia non-proliferation cooperation, multilateral diplomacy, and gender issues. She has been a member of the CTBTO Youth Group since its founding in February 2016.

A global audience

Technology is astonishing. Each year I become more and more impressed as to what these huge technology companies are able to create. From laptops which are more flexible than I am to phones which have a 40-megapixel camera. As technology itself becomes even more advanced, so do the ways we are able to use it. The Comprehensive Nuclear-Test-Ban Treaty Organisation (CTBTO) uses technology to help maintain peace around the world. This is done by covering every inch of the globe with devices which are capable of detecting tiny signs of any possible nuclear tests. With this, the CTBTO manages to combine science and diplomacy into something unique.

Nonetheless, it is still a challenge for the CTBTO to be seen or heard by a global audience. Its message and cause run the risk of being lost in the sea of other ongoing debates in today's world, which is troubled with so many pressing matters. Recognizing this problem, members of the CTBTO Youth Group (CYG) aim to raise awareness of the cause among their peers and continue to fight for the message to be heard. They do this in a variety of ways, one being writing articles for different publications. This helps to inform people of the importance of the CTBTO,

and hopefully win their support and commitment as well. The speed at which we are able to share things with one another helps to spread the message even faster and further.

To strengthen the CTBTO's voice, I believe that having more CYG social media accounts would be a very effective way to connect with the youth. Instagram is a good example of a popular and therefore influential social media platform. Instagram offers a variety of benefits: it is easily accessible, easy to follow and most of all, it allows swift sharing among an unlimited number of people, who are instantly connected by a few simple hashtags.

Communicating and expressing CTBTO's cause in an interesting and fun way can help to make it even more compelling and powerful. Social media are where ideas, messages and knowledge can be shared instantly, swiftly and efficiently. Not only that, but it is also one of the easiest ways to connect with a global audience. After all, the CBTO does cover the entire world.

Salwa Yang is 16 and a member of the CTBTO Youth Group. She has many passions, among which are writing, theatre and spreading the message of the CTBTO.



By Salwa Yang
Member of the CTBTO
Youth Group
Vienna, Austria



TECHNOLOGY IS EVERYWHERE: VISITORS AT THE 2017 INTERNATIONAL DAY AGAINST NUCLEAR TESTS



SUPPORTING JOURNALISTS
COVERING NUCLEAR NEWS

By Peter Rickwood

This magazine is the work of the CTBTO Youth Group (CYG), produced in coordination with the CTBTO Public Information office with support from the CTBTO by the NGO Atomic Reporters.

In case you are interested, Atomic Reporters is a non-partisan Canadian incorporated non-profit, operating with INGO status in Austria, supporting and providing resources to professional and lay journalists.

We offer opportunities geared to the needs of journalists for help to better understand technical and legal information about nuclear related issues – addressing nuclear non-proliferation, safety and security.

Better reporting
would contribute
to a more engaged
public and more
responsive policy.

We have held workshops for journalists in Europe, India, and the Middle East and been asked to advise various independent and government organizations about working with journalists to find ways to keep the public better informed. We also publish a range of material.

In 2017 Atomic Reporters launched the CTBTO Youth Group newsroom project at the CTBTO's Science and Technology Conference, SnT2017, as an experiment, encouraging CYG participants to report on activities at the event and publish their articles. This magazine represents the evolution of that project.

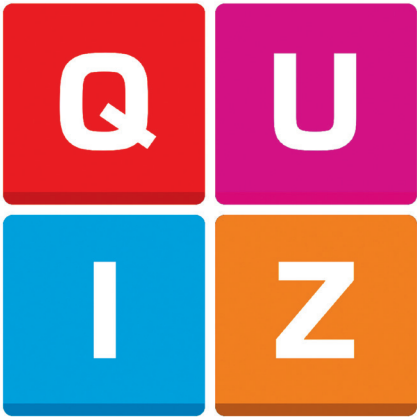
The main challenge for professional and lay journalists alike addressing the nuclear issue is to bring clarity and urgency to a poorly understood and neglected subject whose importance audiences need to be better informed about to act upon.

"Better reporting would contribute to a more engaged public and more responsive policy," the founding statute of Atomic Reporters states.

The demise of traditional news media at the hands of the digital revolution creates opportunities and the need to find new ways to deliver information and maintain conversation. Initiatives such as **NEWSROOM** provide a platform for informed and articulate young activists to highlight and share their concerns with audiences who otherwise would not hear them.

It's not a big step from helping journalists working for commercial media, to supporting members of the CYG to pick up pen, camera or recorder and explore ways of engaging audiences.

The subject matter in these pages is too important to be left unaddressed and Atomic Reporters congratulates the contributors to the inaugural edition of **NEWSROOM** on their contributions and hopes to be able to contribute further to amplifying the voices of the CTBTO Youth Group.



Go on a word hunt!

You are attending the CTBT Science Diplomacy Symposium 2018? Then join in our word quiz to win an amazing prize! All we want you to do is to identify a key sentence related to the CTBT and the CYG. How to do it? You have to read this magazine quite attentively, because the sentence in question is hiding in several places in **NEWSROOM**.

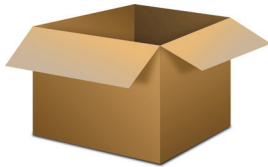
And here are your clues: find the words on the following pages and bring them into the correct order:

- > Page 2, column 2, line 9, word 1
- > p7, last line, w4
- > p8, col2, line 6 from below, w3
- > p9, col2, line 13 from below, w2&3
- > p9, col2, line 16, last 2 words
- > p10, line 4, w2
- > p12, col2, line 13 from below, w4
- > p22, line 2, w3
- > p24, line 1, w4&5
- > p25, line 15, w2&3
- > p29, line 1, w2
- > p30, col2, line 1, w5

OK, so you think you found all of them? Attention, we don't count headers but we do count lines in-between paragraphs!

So now you only have to piece them together so they make sense. This is where your in-depth knowledge of the CTBT and nuclear diplomacy comes into play!

If you think you have found the correct sentence, write it down legibly on a piece of paper and drop it in the collection box, which may look like this:



Look out for signs for the collection box in the Symposium premises.

So how does the draw work? Well, it's a first-come first-served game, so the prize goes to whoever is fished out by the jurors first and has submitted the correct answer.

Good luck!

JOIN THE CTBTO YOUTH GROUP

Add your own voice! Visit <https://youthgroup.ctbto.org/application>

THE CTBTO YOUTH GROUP (CYG) INVITES YOU TO JOIN US IN SUPPORTING OUR EFFORTS TO ENSURE THE **TREATY OUTLAWING NUCLEAR WEAPONS TESTING BECOMES GLOBAL LAW**. TODAY'S NUCLEAR DANGERS WILL BE OUR INHERITANCE TOMORROW UNLESS STEPS ARE TAKEN TO CURB THEM. THE **COMPREHENSIVE NUCLEAR-TEST-BAN TREATY (CTBT)** PUTS A BRAKE ON NUCLEAR PROLIFERATION THAT URGENTLY NEEDS TO BE APPLIED. NEARLY EVERY COUNTRY SUPPORTS IT AND THE GLOBAL SYSTEM IT HAS BUILT MONITORING THE PLANET FOR ANY SIGN OF A NUCLEAR EXPLOSION. YET **22 YEARS** AFTER ITS INTRODUCTION THE TREATY STILL NEEDS THE **ASSENT OF EIGHT COUNTRIES** TO BECOME BINDING. THE YOUTH GROUP AND ITS **NEWSROOM PROJECT PROVIDE CHANNELS FOR THE VOICES** OF ITS MEMBERS TO RAISE AWARENESS ABOUT THE CTBT, **ADDRESSING A MATTER OF LIFE AND DEATH** ABOUT WHICH WE ARE MOSTLY TONGUE-TIED – THE THREAT OF NUCLEAR WEAPONS. THIS MAGAZINE IS PART OF THE DIALOGUE.