NUCLEAR RISKS AND RISK REDUCTION
STATEMENT TO 25 APRIL NGO PLENARY
SESSION
People for Nuclear Disarmament
on behalf of:
Abolition2000 Working Group on Nuclear
Risk Reduction
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I have been giving statements for a number of NGOs to NGO plenaries
on the risks of nuclear war by accident, miscalculation or by design, or
by the 'malign m's' – madness, malice, miscalculation or malfunction –
for a number of years now.

Looking back over this activity, I realize that each time I have given
such a statement I have said that 'this year' – (whichever year that
may be) – 'is the most dangerous year yet.'

This puts me in the same position as the meteorologist who says,
each time (s)he gives an assessment of the year, that this year is the
hottest year yet. It is getting hotter and hotter. Every year is thus the
hottest year yet. Each year so far as I have been doing this, has been
'the most dangerous year yet'. The risk of a nuclear apocalypse
continues to rise.

Last time I did this, the position of the Doomsday Clock was at 2 and
a half minutes to midnight. It is now at 2 minutes to midnight, the
equal-closest (equal to 1953) that the clock-hands have ever been to
the potential end of civilization, and possibly of humans as a species.
Increased risks of nuclear war have been pointed to not only by the
Bulletin of the Atomic Scientists, but also by former US and Russian nuclear commanders, by Mikhail Gorbachev and by Pope Francis amongst others.

This generates alarmingly too little alarm, and far, far, too little attention or debate. The risk of global nuclear catastrophe needs to be much higher up the political agenda than it is.

We are running out of minutes. Unlike the Global Warming issue, where the thermometer can rise indefinitely, the clock has a limited number of minutes. We are, literally, running out of time.

The spike in the risk of nuclear war comes not merely from bloodcurdling threats emanating from the DPRK and from the President of the USA, threats that in recent days have thankfully somewhat receded, but which have included a threat made in the UN itself to 'totally destroy' the DPRK. Such threats quite literally push the world to the brink of the abyss – 'midnight' – and in recent days and weeks we have just barely stepped back. We can all too easily end up back at the brink. We must not do so. The most recent Trump crisis, over Syria, once more seemingly took us to the brink of the abyss. We have just barely stepped back – if indeed, we have done so. The result of the Syrian strikes leaves us closer to it than before.

As well as the possibility of a US-DPRK nuclear exchange – an event that by itself will give a body count in the millions to the tens of millions, but will not by itself destroy civilization – a number of other fuzes to other larger apocalypses are smoldering and there are a number of such larger apocalypses, entirely capable of destroying civilization.

Of these, the most obvious and by far the most dangerous smoldering fuze is the possibility of a NATO-Russia nuclear conflict, most recently thrown into sharp relief by the Syrian crisis.

Whether or not recent Russian announcements about new weapon systems 'change the game' in any fundamental technological sense (most of these things have actually been 'in the pipeline' for a while) – the manner of their announcement, and the very fact of their development, together with developments on the US side such as the SLBM 'super-fuze', contributes to an accelerated arms race, and to
dangerous confrontational postures between NATO and Russia. Both the US and Russia are now spending unprecedented amounts of money on their nuclear weapon systems.

I noted last time I spoke, and reiterate, that:

'An accidental or intentional military incident in North Korea, or Syria, the Ukraine, or the Baltic States, could send the world spiraling into a disastrous nuclear confrontation.

Both Russia and the US have conducted nuclear-weapons-related exercises in Europe, elevating the risks of a nuclear catastrophe. Nuclear risks are now being escalated, not reduced. It is imperative that provocative deployments and exercises cease. In particular, 'snap' exercises involving nuclear forces should no longer take place, most especially opposite other opposing nuclear-armed forces. A number of prominent authorities (Global Zero, the European Leadership Network) have recently performed studies pointing both to the increasing number of NATO-Russian forces incidents, and to the possibilities for catastrophic escalation and miscalculation.'

Clearly current developments between Russia and the UK and in Syria are in the highest degree unhelpful. Further 'snap' exercises would be even more unhelpful.

Statements threatening nuclear use (by anybody, of whatever magnitude) and statements indicating willingness to engage in arms races are even more unhelpful. I note that in recent weeks, as with the DPRK, there has been some talk of summity and of avoiding such outcomes. We applaud this and hope that it will be possible to reverse these dangerous trends.

India-Pakistan

Another smoldering fuze is of course, the India-Pakistan nuclear standoff, neglected behind the sheer noise of the US-DPRK standoff and the entirely justified alarm over NATO-Russia nuclear posturing.

While less intense than it was in 2003, the number of warheads on each side has significantly increased to guesstimates of 120-130 for Pakistan and 110-120 for India. Pakistani warheads are exclusively
pointed at India. Indian warheads will increasingly however, also be
pointed at China. Beijing's continued and rapid missile modernization,
as well as the continued development of India's capabilities, is certain
to impact regional and global nuclear dynamics.

Finally there is the somewhat more distant threat of a US-China
confrontation, possibly based on events in the South China sea.
China’s arsenal does not approach that of the US in size, and is not
kept on launch-on-warning status, or high alert, though voices within
the Chinese military have, it seems, suggested that it should go to a
higher alert status – something that would further ramp up the level
of risk. China does however, have some of the world's largest nuclear
warheads, notably the DF-5, ideal for creation of an EMP pulse above
the continental US, and China has arguably the world's most powerful
nuclear missile in the 10 warhead DF41, with a range of
13-15,000Km. (Making the recently tested Russian Sarmat the
number 2 most powerful nuclear missile, and relegating the US
Minuteman-III to number 3)

Cyberspace
An area of increasing concern is the possibility that nuclear command
and control mechanisms might be compromised by cyberattack.
Beyza Unhal notes in a recent article from Chatham House that:

“A cyberattack on nuclear weapons systems may cause a
paradigm shift in military strategy. Today’s mainstream theories
argue that nuclear weapons exist for the purpose of deterrence,
which relies on states not conducting a first strike for fear of the
devastating retaliation. If one side is confident that the other
cannot retaliate – for example because its weapons systems are
compromised – then the logic of deterrence would not hold.”

The most terrifying cyber-scenario is of course, not so much that
launch or control capabilities might be paralyzed, but that false
information might be inserted into the system leading to a decision to
launch, or that an actual launch might be initiated. Those who did this
would of course never be 'rational' state 'actors', but fanatics whose
aim is precisely to provoke an apocalypse in which we all (including
them) die. The very fact that such scenarios may even be seriously
entertained is at stark odds with the classic deterrence assumption that all decision-makers in nuclear matters must be 'rational'.

In fact of course, false information (and spurious launch orders) HAVE been transmitted by nuclear command and control systems on a number of occasions by equipment malfunction or operator incompetence, without need for hacking at all. On at least two of these occasions in the US, those who originated the spurious launch orders were completely unaware that they had done so. (Okinawa Cruise missiles during Cuban Missile Crisis, and 1974 STRATCOM)

The threat of cyber attack on nuclear command and control could therefore, even without this above scenario, lead to crisis instability as countries fear of system malfunction could lead to miscalculation and/or inadvertent escalation. Heightened risks in this domain offer no easy solutions except that nuclear adversaries might arrive at mutual agreements not to hack each others command and control, as suggested by Beyza Unhal. This would be technically challenging.

One reported reason for tardiness in updating nuclear-related computer systems, apart from the existence of massive quantities of legacy equipment, is that on the whole, old and 'obsolete' systems offer much less opportunity for cyberattack and vulnerabilites are well mapped. The replacement of legacy systems with new ones, usually many orders of magnitude more complex, offers much greater opportunity for cyberattack. As such legacy systems are replaced, the cyber risks of obsolete systems will be replaced by the risks of much larger, much more complex, systems which are far harder to diagnose.

Cyber-related problems in an atmosphere of distrust and fear (such as now) could well be fatal.

**Broader Considerations**

More broadly, The urgency of stepping back from the brink, of avoiding threatening language and postures, of avoiding conventional steps that could escalate into nuclear ones, and generally of taking the temperature down and establishing or re-establishing dialogue between nuclear–armed states cannot be overemphasized.

Nuclear–armed states often argue that the threat to use nuclear
weapons, including the threat to do so first, somehow (and paradoxically) provides important security benefits. In fact, however, it opens the entire world to the catastrophic after-effects of what may be no more than a faulty chip (or perhaps apocalyptic hackers) that initiates catastrophe. They argue that they can 'manage' the risks, or that the risks can somehow be 'managed', but the record does not inspire confidence, with over a dozen 'near misses' in which the world came perilously close to an accidental apocalypse. And of course, even a small risk (and it does not seem to be small), over an indefinite timescale, approaches asymptotically to certainty.

This applies across the board to the US-DPRK relationship, the NATO-Russia relationship, the India-Pakistan relationship, and the US-China relationship.

We noted in the last statement that:

'Conflicts between the nuclear-armed and allied states and differences between Governments more broadly need to be resolved well before they reach the level of crises, by the use of diplomacy, detente and common security mechanisms, rather than nuclear threat postures, and a language of ultimata.'

In this context your attention is particularly drawn to the joint letter from over 100 US organizations calling for a negotiations between the US and the DPRK and released at the UN in NY some weeks ago, and to many other calls for the avoidance of hostilities, and the reduction of nuclear risks.

What do we need to do?

In the short/medium term, the measures needed to reduce the risk of a potentially civilization-ending and maybe species-ending event sequence are well known. They include, but are not limited to:

--No First Use

Logically if no-one uses nuclear weapons first, (ie, refuses to initiate nuclear warfare) there will be NO use of nuclear weapons. The 'glitch' in most official 'No First Use' postures is of course that someone's equipment may erroneously indicate that someone else has launched, something that as taken place a number of times. Nonetheless,
officially articulated NFU postures will drastically decrease the likelihood of catastrophe.

A further development of the NFU posture, suggested by some of the authors of this paper and called 'Don't Initiate Nuclear Warfare' would mean that even in this event, a false indication of someone else's attack would not bring about nuclear warfare. Retaliation would be authorized only after actual nuclear explosions had taken place on one's territory, if at all. Under 'No First Use', launch on warning and/or launch under attack might still be permitted, though some variants of NFU may also envisage 'riding out' an attack with deeply buried and redundant systems ('Underground Great Wall'), and/or submarines.

'Don't Initiate Nuclear Warfare' includes, but in this respect goes a few crucial centimeters beyond, 'No First Use'(NFU). Under NFU, a false alarm might possibly still lead to a launch. Under a policy never to initiate nuclear warfare, that would not be so.

Both India and China, have officially articulated 'No First Use' policies. This may already have acted as a vital stabilizing element in the conflict over Doklam. However in both countries, there have been some reports that the NFU posture is under attack and is in danger of eroding. Such an erosion, should it ever take place, would further ramp up the risks of nuclear warfare. To date, officials in both countries have reiterated NFU as the official position. We urge not only that India and China retain their NFU postures but that others too adopt such postures.

--Lowering of Operational Readiness.

A number of worthy resolutions at First Committee include, or are wholly about, making the use of nuclear weapons inside a compressed timeframe impossible, and giving decision-makers more than mere minutes or seconds to make potentially civilization-ending decisions. These include the bi-annual Operational Readiness resolution, India’s Reducing Nuclear Dangers, and the annual NAM resolution. At one time, the Australia-Japan 'Renewed determination' resolution had good language on this, but no longer so.

--Improved Military-to military communication

As such communication is currently all but nonexistent this will not be hard. Military to military hotlines, between US and Russian militaries
received some attention during the waning years of the USSR and the year immediately following the fall of communism. A hotline between civilian leaderships has existed since the time of the Cuban Missile Crisis. Since that time and most especially recently, this process has been reversed, and military-to-military communication links have been severed. The old hotline between civilian leaders presumably still exists in some form.

--Information Sharing, including in particular the final establishment of the Joint Data Exchange Facility (JDEC) in Moscow, first agreed in the 1990s, reaffirmed multiple times, but never implemented. The same applies as to improved military to military communication.

As noted in the previous statement,

'Rather than relying more on nuclear weapons in such tense times, nuclear-reliant countries should be encouraged to utilize the legal and cooperative security mechanisms of the United Nations and of regional organizations in order to resolve or manage conflicts, monitor ceasefires, verify disarmament and render nuclear weapons unnecessary for security. The Parliaments of nuclear armed and nuclear reliant States have called for this in consensus resolutions adopted by the Inter Parliamentary Union and the Parliamentary Assembly of the Organization for Security and Cooperation in Europe, as well as the European Parliament itself.'

Governments should raise the issue of nuclear risk reduction in as many ways as possible in as many appropriate forums as possible, including especially the upcoming High Level Conference in New York, in the High Level segment of UNGA, in First Committee presentations, in bilateral conversations between nuclear-armed states, and in forums such as the CD and the Disarmament Commission.

Finally, This speaker spent some time and political capital last year (2017 in Vienna) in urging Governments to consider a specific resolution in First Committee to draw attention to the rising nuclear risks, and to urge measures to reduce them. I once more urge Governments from whatever groupings and if possible from a number of groupings, to again consider doing so. Such a resolution would complement existing risk reduction/de-alerting resolutions, and would act as an important 'flag' of global concern over an existential risk that affects the whole world. It would be highly desirable for such a
resolution to have support from more than one 'bloc'.

I and the NGO groups backing this statement do not look forward to repeating it, or by saying the situation has gotten even worse, year after year. And the situation is now as bad, seemingly, as it can be without actual global thermonuclear war.

Only two things could make that repetition unnecessary. Either:

--Actual nuclear warfare has rendered all our efforts futile (and we are not even here to talk about it)

--Or you all (and especially those states that have nuclear weapons) have finally come to grips with these dangers, and have taken steps to remedy them.

Which will it be? And will we all still be here to talk about it at all?

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