

Research Paper

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# The Humanitarian Impacts of Nuclear Weapons Initiative: The ‘Big Tent’ in Disarmament

## Summary

- Growing understanding of the catastrophic impact of a nuclear weapon detonation on individuals, society, the economy and the environment has led to renewed efforts over the last three years, particularly by civil society and non-nuclear weapons states, to persuade governments to make nuclear disarmament a higher policy priority.
- International conferences on the humanitarian impact of nuclear weapons provide a unique forum for states and civil society to inject new urgency into nuclear disarmament and non-proliferation efforts. This forum operates in parallel with the nuclear Non-Proliferation Treaty review conferences and the Conference on Disarmament, which has seen little progress in recent years.
- Workshops organized by Chatham House, aimed at establishing a fact-based dialogue with a broad set of experts from civil society in different regions of the world, reveal that those working in the humanitarian sector consider that any nuclear weapons detonation in a populated area would result in an overwhelming humanitarian catastrophe. All rescue workers would be put at risk of unacceptable harm and there would be no practical immediate response they could implement.
- Capacity for planning and resource constraints are two especially prominent obstacles facing humanitarian organizations and states, particularly in under-resourced countries.
- Both experts and members of the public require access to new research on the impact of a nuclear detonation and response options, and states should declassify as much existing data and research as possible in order to inform the discussion.

## Introduction

Ever since the bombings of Hiroshima and Nagasaki, humanity has been all too aware of the indiscriminate devastation of nuclear weapons use. On 30 August 1945, more than three weeks later, Fritz Bilfinger, a representative of the International Committee of the Red Cross (ICRC) in Hiroshima, sent a telegram to Dr Marcel Junod, the head of the ICRC's delegation in Japan, that read:

Visited Hiroshima thirtieth, conditions appalling *stop* city wiped out, eighty percent all hospitals destroyed or seriously damaged; inspected two emergency hospitals, conditions beyond description *full stop* effect of bomb mysteriously serious *stop* many victims, apparently recovering, suddenly suffer fatal relapse due to decomposition of white blood cells and other internal injuries, now dying in great numbers *stop* estimated still over one hundred thousand wounded in emergency hospitals located surroundings, sadly lacking bandaging materials, medicines *stop*.<sup>1</sup>

New material on the destructive impact of those two nuclear bombs continues to come to light. The stories live on with the testimonies of the survivors and a recently discovered collection of photographs of Nagasaki by Japanese military photographer Yosuke Yamahata, who described the aftermath:

The appearance of the city differed from other bomb sites: here, the explosion and the fires had reduced the entire city (about four square kilometres) to ashes in a single instant. Relief squads, medical and fire-fighting teams, could do nothing but wait. Only the luck of being in a well-placed air raid shelter could be of any use for survival. Even if the medical and fire-fighting teams from the surrounding areas had been able to rush to the scene, the roads were completely blocked with rubble and charred timber. One had not the faintest idea where the water main might be located, so it would have been impossible to fight the fires. Telephone and telegraph services were suspended; the teams could not contact the outside world for help. It was truly a hell on earth. Those who had just barely survived the intense radiation – their eyes burned and their exposed skin scalded – wandered around aimlessly with only sticks to lean on, waiting for relief.<sup>2</sup>

Over the last 70 years, numerous atmospheric and underground nuclear weapons tests have added to a worldwide knowledge base on the immediate, short-term and long-term humanitarian consequences of nuclear weapons use.

Opposition to nuclear weapons based on humanitarian concerns is as old as the weapons themselves. Some of the scientists involved in their research and development would later become vocal opponents of the nuclear arms race, and supporters of disarmament and non-proliferation efforts.<sup>3</sup> Civil society organizations such as Pugwash,<sup>4</sup> the Campaign for Nuclear Disarmament (CND)<sup>5</sup> and the Women's International League for Peace and Freedom (WILPF)<sup>6</sup> brought public concerns to the attention of governments and international organizations in the hope of banning nuclear weapons. Likewise many governments have been concerned about the humanitarian impact of nuclear weapons from the early days of the nuclear age and have worked to control, reduce and ultimately abolish them. These efforts led to the 1963 Partial Test Ban Treaty and the 1968 nuclear

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<sup>1</sup> 'Statement by Peter Maurer, President of International Committee of the Red Cross', International Conference on the Humanitarian Impact of Nuclear Weapons, Oslo, 4–5 March 2013, [https://www.regjeringen.no/globalassets/upload/ud/vedlegg/hum/hum\\_maurer.pdf](https://www.regjeringen.no/globalassets/upload/ud/vedlegg/hum/hum_maurer.pdf); François Bugnion, 'The International Committee of the Red Cross and Nuclear Weapons', *International Review of the Red Cross* (Geneva), Vol. 87, No. 859, 1 September 2005, pp. 511–24. SIRS Issues Researcher, Web, 28 February 2013.

<sup>2</sup> Antonia Molloy, 'Nagasaki one day after the atomic bombing seen in newly-discovered pictures', *The Independent*, 2 June 2014, [http://www.independent.co.uk/news/world/asia/nagasaki-one-day-after-the-atomic-bombing-seen-in-newlydiscovered-pictures-9472178.html?slide\\_num=5&action=fullscreen#gallery-9471548](http://www.independent.co.uk/news/world/asia/nagasaki-one-day-after-the-atomic-bombing-seen-in-newlydiscovered-pictures-9472178.html?slide_num=5&action=fullscreen#gallery-9471548).

<sup>3</sup> For instance, Albert Einstein, Bertrand Russell, Hans Bethe, Victor F. Weisskopf and Joseph Rotblat.

<sup>4</sup> Website: <http://pugwash.org/>.

<sup>5</sup> Website: <http://www.cnduk.org/>.

<sup>6</sup> Website: <http://www.wilpfinternational.org/>.

Non-Proliferation Treaty (NPT) and to a set of bilateral negotiations between the United States and the USSR on limiting and controlling the nuclear arms race.

In the early 1980s, Cold War tensions increased dramatically and the proposed deployment of new weapons systems in Europe by both the USSR and the United States led to an enormous upsurge in civil society efforts to bring the humanitarian impact of nuclear weapons use to the attention of the world. Groups such as the International Physicians for the Prevention of Nuclear War (IPPNW), CND, Scientists Against Nuclear Arms and women's groups focused on the deployments at Greenham Common Royal Air Force base in the UK and in other parts of Europe all disseminated research to a wide audience regarding the types of medical and societal challenges that nuclear weapons detonations would cause locally and globally. In 1983, research on the effects that a nuclear winter would have on the environment and food production confirmed that governments and humanitarian organizations could do little in response to even a limited nuclear exchange.<sup>7</sup>

These efforts had significant success. Deployment of the weapons was halted; the United States and USSR (and their allies) negotiated a range of agreements including the Stockholm Accord (1986), Intermediate-range Nuclear Forces (INF) Treaty (1987) and the Conventional Forces in Europe (CFE) Treaty (1990). After the end of the Cold War, governments negotiated the multilateral Chemical Weapons Convention (1992) and the Comprehensive Nuclear Test Ban Treaty (CTBT) (1996), and extended the NPT indefinitely. Russia and the United States drew up several treaties and agreements on a dramatic mutual reduction in the number of strategic and nuclear forces.

However, for nearly 20 years following the 1998 nuclear weapons tests by India and Pakistan and the decision by the US Senate not to ratify the CTBT, the Conference on Disarmament (CD) in Geneva has been paralysed and unable to conduct negotiations. Concerns over the spread of nuclear weapons, the slow-down in the US–Russia nuclear weapons reduction talks and the inability to make any progress in the CD became the impetus for what is known as the Humanitarian Impact of Nuclear Weapons (HINW) initiative.

As part of this international initiative, Chatham House conducted a two-year research project on the humanitarian impacts of nuclear weapons. The project identified numerous themes related to the direct and indirect effects of nuclear detonations, and the implications of these facts on the international debate on nuclear policies, non-proliferation and disarmament. Commencing in January 2013, Chatham House held a series of international workshops with humanitarian organizations and other civil society groups exploring the humanitarian consequences of nuclear weapons detonations. The initial goal of the project was to build capacity within a diverse humanitarian community so as to enable a broader discussion on nuclear issues rooted in facts and evidence. The methodology and findings of the project are detailed in the following sections.

This paper aims to contribute to the broader discourse on nuclear weapons as an urgent humanitarian concern. It also highlights some of the internal and external debates regarding the way ahead for the HINW initiative as it strives to develop a set of new creative solutions for the nuclear weapons conundrum.

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<sup>7</sup> Richard P. Turco, Owen Brian Toon, Thomas P. Ackerman, James B. Pollack and Carl Sagan, 'Nuclear Winter: Global Consequences of Multiple Nuclear Explosions', *Science*, Vol. 222, No. 4630, 23 December 1983, pp. 1283–92.

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## Origins of the HINW initiative

The HINW initiative began with a conference in Oslo in March 2013, attended by 128 countries. It has grown in strength through meetings in Nayarit, Mexico, in February 2014, attended by 146 countries; and in Vienna in December 2014, attended by 159 countries.

From its inception, the initiative has brought together a diverse group of participants, including states with nuclear weapons, such as India and Pakistan; states in nuclear alliances (the so-called nuclear umbrella states); and states that have historically played a leadership role in disarmament and non-proliferation initiatives, such as Norway, Switzerland, Ireland, New Zealand, South Africa and Mexico. The initiative has developed far beyond the conferences and has also included statements in the United Nations General Assembly<sup>8</sup> and the Preparatory Committees of the NPT,<sup>9</sup> as well as increased engagement and research by civil society and think-tanks.<sup>10</sup> A new international organization, the International Campaign to Abolish Nuclear Weapons (ICAN), has galvanized young people and inspired non-governmental organizations all over the world to join in. Over the course of the past three years, the initiative has undertaken new research, disseminated facts, and opened up and energized a broader and deeper discussion about nuclear weapons.<sup>11</sup>

In recent years the nuclear disarmament and non-proliferation ground has been shifting towards a new discourse on nuclear weapons through a humanitarian lens; an approach that focuses on the very real and devastating impact that nuclear weapons would have on humanity, should they ever again be used in conflict.

As noted above, the potential use and the physical effects of nuclear weapons have not been part of an international and public discussion since the 1980s. In recent years, however, the nuclear disarmament and non-proliferation ground has been shifting towards a new discourse on nuclear weapons through a humanitarian lens; an approach that focuses on the very real and devastating impact that nuclear weapons would have on humanity, should they ever again be used in conflict.

The discourse at the heart of the humanitarian approach to nuclear weapons can be traced to previous efforts at prohibiting types of weapons because of their indiscriminate and inhumane effects. Germany's use of chlorine gas in Ypres in 1915 during the First World War was met by widespread condemnation. This eventually led, in the 1925 Geneva Protocol, to a ban on the use of asphyxiating and other poisonous gases as weapons of war. Emphasis was in this instance placed on the long-term

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<sup>8</sup> For example, see a joint statement at the 67th UN General Assembly (UNGA) First Committee session ('Joint Statement on the Humanitarian Dimension of Nuclear Disarmament', 22 October 2012, <http://www.acronym.org.uk/sites/default/files/UN%20First%20Committee%202012%2034-nation%20HUMANITARIAN%20STATEMENT.pdf>); and a joint statement at the 68th UNGA First Committee session in 2013 ('Joint Statement on the Humanitarian Consequences of Nuclear Weapons', 21 October 2013, [http://www.un.org/disarmament/special/meetings/firstcommittee/68/pdfs/TD\\_21-Oct\\_CL-1\\_New\\_Zealand-%28Joint\\_St%29](http://www.un.org/disarmament/special/meetings/firstcommittee/68/pdfs/TD_21-Oct_CL-1_New_Zealand-%28Joint_St%29)). See also the final report of the Open-ended Working Group to develop proposals to take forward multilateral nuclear disarmament, 'Report of the Open-ended Working Group to Develop Proposals to Take Forward Multilateral Nuclear Disarmament Negotiations for the Achievement and Maintenance of a World without Nuclear Weapons', 3 September 2013, <http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/OEWG/Documents/finalreport.pdf>.

<sup>9</sup> 'Joint Statement Delivered by Ambassador Abdul Samad Minty, Permanent Representative of South Africa to the United Nations in Geneva on "The Humanitarian Impact of Nuclear Weapons", at the Second Session of the Preparatory Committee for the 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Geneva, 24 April 2013', PrepCom, <http://www.dfa.gov.za/docs/speeches/2013/mint0424.html>.

<sup>10</sup> Organizations engaged with the HINW initiative include the European Leadership Network, the British and American Security Information Council and the Arms Control Association.

<sup>11</sup> Patricia Lewis and Heather Williams, 'The Meaning of the Oslo Conference', Chapter 4 in John Borrie and Tim Caughley (eds), *Viewing Nuclear Weapons through a Humanitarian Lens* (United Nations Publications, 2013), pp. 78–94.

medical and psychological effects of poisonous gases, and especially the inhumane nature of the suffering they were capable of inflicting.<sup>12</sup> The Geneva Protocol refers to the need for the prohibition to be binding over both 'the public conscience' and the 'practice' of nations.<sup>13</sup> It was the forerunner of the prohibition on biological and chemical weapons, first through the 1972 Biological Weapons Convention and, twenty years later, through the Chemical Weapons Convention.

Also in the 1990s, an international campaign to ban landmines owing to their indiscriminate and long-lasting effects proved successful<sup>14</sup> thanks to the pressure put on governments by humanitarian organizations and civil society groups to put aside any alleged tactical benefits and abandon their use in the light of humanitarian and ethical concerns. Victim assistance and the clearance of landmines remain huge challenges but are being seriously tackled. The Mine Ban Convention (1997) has created a strong norm against manufacturing and deploying landmines, and the international trade in these weapons has become almost non-existent. The monitoring of implementation of the convention is carried out by civil society, notably the International Campaign to Ban Landmines (ICBL). Similarly, a prohibition on cluster munitions was achieved through a humanitarian approach as the result of a civil society-led evidence-based campaign, and the Convention on Cluster Munitions (CCM) was negotiated and adopted in 2008.

It is frequently questioned why chemical and biological weapons, landmines and cluster munitions have been banned on humanitarian grounds whereas nuclear weapons – which are even more devastating and destructive and have a longer and deeper human suffering impact – are not considered in this way. Indeed possessor states and those allied with them characterize nuclear weapons as strategic tools, symbols and an 'ultimate guarantee of security'. They are furthermore primarily discussed in the abstract and within a small, elite policy community. Negotiations over the NPT and CTBT, and within the CD, often reinforce this idea that nuclear weapons are distinct from other weapons of mass destruction (WMD): endowed with political significance as instruments of deterrence, worthy of being treated with particular sensitivity and only appropriate for a select few countries. The nuclear weapons states (NWS) still accept the basic principle that the threat to use nuclear weapons is an acceptable strategic doctrine, despite broad recognition that their devastating effects can never be confined by geography and therefore represent a threat to global security and to people everywhere. The hope that the end of the Cold War would provide a stimulus for states to eliminate remaining nuclear stockpiles has not been realized.

Yet nuclear weapons are back in the public consciousness as a humanitarian concern. In a speech in Prague in 2009, US President Barack Obama stated that:

One nuclear weapon exploded in one city – be it New York or Moscow, Islamabad or Mumbai, Tokyo or Tel Aviv, Paris or Prague – could kill hundreds of thousands of people. And no matter where it happens, there is no end to what the consequences might be – for our global safety, our security, our society, our economy, to our ultimate survival.<sup>15</sup>

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<sup>12</sup> Ken Berry, Patricia Lewis, Benoît Pélopidas, Nikolai Sokov and Ward Wilson, 'Delegitimizing Nuclear Weapons: Examining the Validity of Nuclear Deterrence', James Martin Center for Nonproliferation Studies, Monterey Institute of International Studies, May 2010, p. 34.

<sup>13</sup> 'Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare', <http://disarmament.un.org/treaties/t/1925/text>.

<sup>14</sup> See 'Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction', otherwise known as the Mine Ban Convention or Ottawa Treaty 1997 (accessible at <http://www.icbl.org/media/604037/treatyenglish.pdf>).

<sup>15</sup> 'Remarks by Barack Obama', The White House, Office of the Press Secretary, 5 April 2009, Prague, [http://www.whitehouse.gov/the\\_press\\_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered](http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered).

Governments stated at the 2010 NPT review conference that they were deeply concerned about the ‘catastrophic humanitarian consequences of any use of nuclear weapons’.<sup>16</sup> Subsequently the International Red Cross and Red Crescent Movement proposed a resolution at the Council of Delegates in 2011 in support of the elimination of nuclear weapons.<sup>17</sup> This was adopted by 186 national societies and the International Committee of the Red Cross (ICRC). And in 2012, Norwegian Foreign Secretary Espen Barth Eide announced that these principles would be pulled together into a concentrated international effort.

Since 1986, at the height of the Cold War, the number of nuclear weapons has decreased by 76.4 per cent, from 69,368 to 16,350. However, the United States and Russia still have approximately 15,300 nuclear weapons between them, many on high alert, and four states with nuclear weapons remain outside the NPT.

The HINW initiative arose largely out of frustration with existing disarmament forums, namely the NPT and CD, and from a general shift towards human security considerations by many states, in which all weapons use was viewed through a humanitarian lens. Looking first at these sources of frustration, the NPT has been criticized, particularly by non-nuclear weapons states (NNWS), for the pace at which NWS are working towards nuclear disarmament as mandated under Article VI of the Treaty and subsequent NPT review conferences.<sup>18</sup> Since 1986, at the height of the Cold War, the number of nuclear weapons has decreased by 76.4 per cent, from 69,368<sup>19</sup> to 16,350.<sup>20</sup> However, the United States and Russia still have approximately 15,300 nuclear weapons between them, many on high alert, and four states with nuclear weapons remain outside the NPT.<sup>21</sup> Though supportive of the spirit of the treaty, many NNWS frequently criticize it for having essentially preserved the Cold War status quo.<sup>22</sup> States outside the treaty that do possess nuclear weapons have also made similar arguments. Jaswant Singh, a former foreign minister for India, wrote in 1998 that the indefinite extension of the NPT in 1995 ‘legitimized in perpetuity the existing nuclear arsenals and, in effect, an unequal nuclear regime’.<sup>23</sup>

In other forums, the CD’s agenda for negotiation includes nuclear weapons ‘in all aspects’,<sup>24</sup> including disarmament, but negotiations often run into deadlock and are currently at a standstill.<sup>25</sup> One example is the difficulties in negotiating the Fissile Material Cut-off Treaty (FMCT), which would prohibit the production of highly enriched uranium and plutonium for weapons purposes. The potential treaty has been discussed in the CD since 1995 under the Shannon Mandate, but it has proved impossible to reach consensus on key issues ranging from the management of existing stocks to verification

<sup>16</sup> ‘2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons Final Document’, Centre for Nonproliferation Studies, 28 May, Vol. I, Part I, Paragraph 80, 28 May 2010, [http://www.nti.org/media/pdfs/npt2010fd.pdf?\\_ = 1316544035](http://www.nti.org/media/pdfs/npt2010fd.pdf?_ = 1316544035).

<sup>17</sup> International Committee of the Red Cross, ‘Council of Delegates 2011: Resolution 1’, 26 November 2011, <https://www.icrc.org/eng/resources/documents/resolution/council-delegates-resolution-1-2011.htm>.

<sup>18</sup> ‘Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.’ Article VI, Treaty on the Non-Proliferation of Nuclear Weapons, <http://www.un.org/en/conf/npt/2005/npttreaty.html>.

<sup>19</sup> Robert S. Norris and Hans M. Kristensen, ‘Global Nuclear Weapons Inventories, 1945–2010’, *Bulletin of the Atomic Scientists*, Vol. 66, No. 4, July–August 2010, p. 81.

<sup>20</sup> *SIPRI Yearbook 2014* (Stockholm International Peace Research Institute/Oxford University Press, 2014) p. 288 (Table 6.1).

<sup>21</sup> *Ibid.*

<sup>22</sup> See, for instance, statements by Brazil ([http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/npt/prepcom14/statements/28April\\_Brazil.pdf](http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/npt/prepcom14/statements/28April_Brazil.pdf)), Mexico ([http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/npt/prepcom14/statements/28April\\_Mexico.pdf](http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/npt/prepcom14/statements/28April_Mexico.pdf)), and other NNWS at the 2014 PrepCom.

<sup>23</sup> Jaswant Singh, ‘Against Nuclear Apartheid’, *Foreign Affairs*, September/October 1998, Vol. 77, No. 5.

<sup>24</sup> *International Geneva Yearbook 2005–2006: Organization and Activities of International Institutions in Geneva* (United Nations Publications, 2005) p. 165.

<sup>25</sup> Those leading this initiative have also demonstrated unease at the prospect of parallel initiatives developing.

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measures and regional politics.<sup>26</sup> The CTBT remains unratified by eight states<sup>27</sup> required for it to enter into force. In addition, prospects for further arms control reductions in the US and Russian arsenals appear unlikely at present owing to ongoing tensions over Ukraine and alleged Russian violations of the 1987 INF Treaty.

The HINW shares the same aims as the NPT and CD, and operates in a complementary fashion by engaging audiences and participants not usually included in high-level discussions on nuclear weapons. Arms control and disarmament specialists have argued that the HINW is compatible with the NPT,<sup>28</sup> particularly in the light of a statement signed by 80 states at the 2013 PrepCom, stating that ‘[a]s an element that underpins the NPT, it is essential that the humanitarian consequences inform our work and actions during the current Review Cycle and beyond’.<sup>29</sup> The 2010 NPT Action Plan is perhaps the most explicit indication of the compatibility of the HINW and the NPT, and indeed also reaffirmed the need for ‘all States at all times to comply with applicable international law, including international humanitarian law’.<sup>30</sup>

### Chatham House project and methodology

As a contribution to the HINW, Chatham House hosted a series of workshops on the humanitarian impact of nuclear weapons in order to help delineate and develop the intellectual basis for such an approach and to build knowledge and expertise in the participating humanitarian organizations.

The project brought together a diverse range of expertise and engaged officials and experts from a variety of backgrounds, particularly from humanitarian organizations, including specialists with humanitarian response expertise from developed and developing countries. A key component of the broader international initiative is building capacity within humanitarian organizations on the medical, environmental and societal impacts of nuclear weapons to enable these bodies to engage with governments in a well-informed way. The aim of this facts-based initiative was not to encompass or address political issues but rather to focus on informing humanitarian organizations as to what nuclear weapons are and what they are capable of, and prompt a discussion of the range of response options.

**A key component of the broader international initiative is building capacity within humanitarian organizations on the medical, environmental and societal impacts of nuclear weapons to enable these bodies to engage with governments in a well-informed way.**

The Chatham House team held seven workshops between January 2013 and February 2015: four in London; one in South Africa, in partnership with the Institute of Security Studies based in Pretoria; one in Buenos Aires, in partnership with NPSGlobal; and one in Bangkok, in partnership with

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<sup>26</sup> Paul Meyer, ‘Is There Any Fizz Left in the Fissban? Prospects for a Fissile Material Cutoff Treaty’, Arms Control Association, 1 December 2007, [https://www.armscontrol.org/act/2007\\_12/Meyer](https://www.armscontrol.org/act/2007_12/Meyer).

<sup>27</sup> China, Egypt, India, Iran, Israel, North Korea, Pakistan and the United States.

<sup>28</sup> Lewis and Williams, ‘The Meaning of the Oslo Conference’, pp. 87–93.

<sup>29</sup> *Ibid.*, p. 91; ‘Joint Statement on the Humanitarian Impact of Nuclear Weapons, Delivered by Ambassador Abdul Samad Minty’.

<sup>30</sup> ‘Final Document Volume I, Part I: Review of the operation of the Treaty, as provided for in its article VIII (3), taking into account the decisions and the resolution adopted by the 1995 Review and Extension Conference and the Final Document of the 2000 Review Conference Conclusions and recommendations for follow-on actions’ (June 2010), <http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/npt/revcon2010/FinalDocument.pdf>, p. 19.



the Observer Research Foundation based in New Delhi. Cumulatively the workshops comprised over 160 participants from organizations including Amnesty International, Médecins sans Frontières, national Red Cross and Red Crescent societies, as well as regional and local disaster management teams, nuclear experts and others. All discussions took place under the Chatham House Rule of non-attribution so as to foster frank exchanges of views. The workshops resulted in consultation papers which were discussed and disseminated among participants and a wider community of civil society and government experts. This approach provided an additional layer of research by soliciting feedback and serving as a direct link between civil society and government. In many cases, the feedback proved to be as insightful and useful as the workshops themselves. The consultation papers also reinforced the multidisciplinary nature of the project by bringing together historians, lawyers, scientists and aid workers.

The workshops were designed to build capacity and understanding of the facts of nuclear weapons, such as the physics of a nuclear chain reaction and the impact on the human body. The goal was to relay facts and dispel any misperceptions about nuclear detonations, and to keep nuclear weapons issues separate from civil nuclear power production. The topic of radiation illustrates the nature of such discussions. One of the most common concerns about nuclear weapons centres on their radiological impact on humans: increased levels of cancers (including leukaemia, thyroid, breast, lung and stomach), hair loss and decreased platelet count. While important and certainly inhumane, these are nevertheless mid- to long-term impacts, and the tendency to focus on the radiological aspects has often meant that insufficient attention has been paid to the significantly greater destruction and loss of life caused by the heat and blast effects of a nuclear detonation.

Importantly, the different locations of the workshops demonstrated that all regions of the world have been affected by nuclear weapons in different ways. The African continent has endured nuclear weapons testing in Algeria and a South African nuclear weapons programme and the later decision to renounce and dismantle them, leading to the African Nuclear Weapon Free Zone (NWFZ); Argentina and Brazil have developed and then renounced a nuclear weapons capability and the whole region was the first to negotiate a NWFZ; South Asia, living under the threat of a nuclear exchange between India and Pakistan, has not yet developed a nuclear disarmament and non-proliferation regional regime; and Southeast Asia, with nuclear-armed ships passing through its waters and military bases in the region, developed the South East Asian NWFZ. More widely, there are dozens of states in nuclear military alliances; and just about every country in the world would be affected, either directly or indirectly, by even one nuclear detonation anywhere. In the course of these discussions, Chatham House observed trends in the emerging nuclear discourse and the broader perspectives yielded new information about the humanitarian response to possible future nuclear weapons incidents.

What the workshops and research revealed was that the HINW initiative provides a much-needed 'big tent' for the discussion on the way forward for nuclear weapons disarmament and non-proliferation. As a concept, the tent rests on four perimeter poles:

- education;
- facts-based discourse;
- empowering non-nuclear weapons states and civil society; and
- contributing to disarmament in conjunction with other forums such as the Non-Proliferation Treaty.

Moreover, four issues consistently emerged in discussions across these diverse workshops:

- responses to a nuclear weapons detonation, and prevention of use;
- the morality of nuclear weapons;
- regional perspectives; and
- public engagement and the role of civil society in policy-making on this issue.

These are discussed in more detail below.

### Workshop themes and findings

The themes and findings discussed here were identified through the course of workshops that yielded numerous recommendations. These were reinforced through other research and material that became available as the initiative gained momentum. This paper draws on many of these sources as a means of highlighting the broader discourse and the work of colleagues. Above all, what the workshops demonstrated is that the greatest strength of the HINW is in providing a 'big tent' to include a diverse range of states and civil society actors addressing the issue of nuclear weapons from the humanitarian impact perspective.

### Response options and prevention

Enormous practical challenges would arise in the event of the detonation of nuclear weapons, including first response, triage, supplies, shipment, logistics, quarantine and treatment of extreme medical conditions. The conclusion of the Oslo conference was that:

It is unlikely that any state or international body could address the immediate humanitarian emergency caused by a nuclear weapon detonation in an adequate manner and provide sufficient assistance to those affected. Moreover, it might not be possible to establish such capacities, even if it were attempted.<sup>31</sup>

Coordination and communication between governments, militaries and NGOs would be chaotic and confusing. Who would lead? The use of nuclear weapons would destroy many of the resources necessary for a response, not least the personnel including nurses and doctors. In the absence of electricity and basic means of communication, there might be no clear chain of command or means to guide responses to alleviate the immediate suffering of victims on the ground.

Humanitarian organizations do not have the capacity to respond to such an event, and they would prioritize the safety of their own personnel. The conclusion among most humanitarian practitioners from the workshops was that any use of nuclear weapons would overwhelm the available resources of governments, first responders and humanitarian organizations alike. These findings on the challenges of coordination and lack of capacity are confirmed by recent research. A 2014 study by the United Nations Institute for Disarmament Research (UNIDIR), *Illusion of Safety*, found that 'there are inadequate specific procedures and systems appropriate to nuclear weapon detonation events as these differ from civil nuclear accidents in significant ways. Protection of humanitarian personnel is highlighted as a particular issue of concern.'<sup>32</sup> The ICRC itself concurred with this in 2013:

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<sup>31</sup> Norwegian Ministry of Foreign Affairs, 'Chair's Summary Humanitarian Impact of Nuclear Weapons', 4–5 March 2013, [https://www.regjeringen.no/nb/aktuelt/chair\\_oppsummering/id716343/](https://www.regjeringen.no/nb/aktuelt/chair_oppsummering/id716343/).

<sup>32</sup> John Borrie and Tim Caughley, *An Illusion of Safety: Challenges of Nuclear Weapons Detonations for United Nations Humanitarian Coordination and Response* (UNIDIR, United Nations Publications, 2014) p. xi.

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The loss of life and medical needs of the wounded and sick in the aftermath of a nuclear bomb explosion in a populated area are likely to be enormous. An overwhelming number of people would need immediate treatment for severe and life-threatening wounds. Yet, such treatment or assistance is unlikely to be available in the short term as most of the local medical personnel would be dead or wounded and most medical facilities would be destroyed or unable to function in the area affected by the explosion. Any medical supplies that were not destroyed or contaminated by the blast (for example fluids, bandages, antibiotics, and pain medicines) would quickly be used up.<sup>33</sup>

These challenges would be exacerbated in developing regions. For example, lack of personnel is a consistent problem for disaster response across Africa because of the reliance on volunteers, including in the Red Cross, in countries such as Malawi. People with the necessary skills often do not volunteer when they are needed most. International forums, such as the HINW initiative, and greater visibility provide an opportunity for humanitarian organizations to communicate these challenges to their governments.

Ultimately the population on the ground would play a crucial role in disaster response. As one participant suggested, we can work to 'build resilience in society and human beings'. This does not mean a return to Cold War-style 'duck and cover' drills, but rather improved awareness of a spectrum of threats and how to respond to disasters, when to respond and when to wait. Knowledge-sharing is a significant part of projecting the kind of humanitarian response to a nuclear weapons explosion that is possible. Yet the amount of information states are willing to share with others in terms of their capacity to respond to such an occurrence is limited owing to the sensitivity of this information, and specifically concerns arising from the possibility of its exploitation by states and non-state actors.

While the objective of raising awareness among the international community so that individual states are better prepared for a nuclear weapons explosion could potentially alleviate the burden on humanitarian organizations, it is likely that the more practical issue for such bodies will be how to adapt current practices and ways of delivering humanitarian relief on an ad hoc basis following a disaster of unprecedented scale. This would entail developing existing methods of delivering aid in disaster zones where communication and transportation infrastructure has been destroyed. There are opportunities to start a dialogue between humanitarian organizations in regions and states that have already had to cope with working in extreme disaster zones. A distinction should always be made, however, between a civil nuclear disaster such as the 2011 Fukushima meltdowns and the far greater disaster that would result from a nuclear weapons strike. The latter would most likely target cities as they traditionally house centres of government. Consequently the destruction of critical infrastructure – including hospitals, ambulance and fire services, policing, communications, road and rail networks – would be catastrophic and more people would also be affected as a result.

Even with significant resourcing and planning, however, responders would be overwhelmed in the face of the practical challenges that often emerge in crises. For example, South Africa invested heavily in training for disaster response in the lead-up to the World Cup and many lessons can be learned from its experience. Planning and training for personnel are crucial but there must also be adequate numbers of personnel to ensure implementation. In addition, plans and the requisite equipment must be tested in simulations and drills, all of which must be maintained over long periods. Workshop participants offered an example of chemical suits that were purchased for the World Cup but which will become unavailable or unusable over a period of years; while this may not matter immediately, it does reduce the capacity for civilian protection in the longer term.

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<sup>33</sup> Lou Maresca, 'The Catastrophic Humanitarian Consequences of Nuclear Weapons: the Key Issues and Perspective of the International Committee of the Red Cross', in Borrie and Caughley (eds), *Viewing Nuclear Weapons through a Humanitarian Lens*, pp. 134–35.

Workshop participants and those responding to the consultation papers often questioned the focus on response. They argued that response options would be impossible to implement and a waste of planning and resources, and that the initiative should not necessarily strive to build capacity within humanitarian organizations to respond to such an event. Even discussing such issues could have a blowback effect of indirectly legitimizing the use of nuclear weapons by suggesting that a humanitarian response could be adequate for the task. Instead, it was argued, the focus should be on prevention of nuclear use. The questions for first and later responders was how many lives could be saved in the aftermath of a nuclear weapons attack and what the risks were to the responders themselves. The recent UNIDIR study struck a balanced approach to this point, noting:

Prevention is the best approach to the possibility of nuclear weapon detonation events. However, it is incumbent upon those humanitarian actors in a position to do so, such as the United Nations, to plan for the likely challenges of ‘lower end’ nuclear weapon detonation events even if such a response is palliative.<sup>34</sup>

### Nuclear weapons and morality

A statement from Pope Francis that was read at the Vienna conference highlighted the relationship between nuclear weapons and morality, a theme that also emerged over the course of the Chatham House workshops:

Now, more than ever, technological, social and political interdependence urgently calls for an ethic of solidarity, which encourages peoples to work together for a more secure world, and a future that is increasingly rooted in moral values and responsibility on a global scale.<sup>35</sup>

Morality is not a new concept to apply to nuclear weapons policy.<sup>36</sup> ‘Moral authority’ certainly played a role in influencing South Africa to give up its nuclear weapons and in achieving test bans, along with bans on chemical and biological weapons, landmines, cluster munitions and small arms. Ethical arguments are gaining visibility as part of a broader attempt to question the logic of deterrence and, more specifically, whether nuclear deterrence is credible given the awesome humanitarian consequences of a nuclear detonation.<sup>37</sup>

Workshop discussions revealed that many South American participants perceived their unique role as a ‘moral authority’ in nuclear weapons discourse. This role is largely rooted in the legacy of the Treaty of Tlatelolco, the first to declare a NWFZ in 1967. While the issue of nuclear weapons is no longer at the forefront of South American security concerns, all participants still expressed a desire to engage with it by identifying how they could contribute to disarmament and attempt to influence the remaining nine nuclear-weapon possessor states. For example in 2013, Costa Rican President Laura Chinchilla Miranda, with Religions for Peace, launched a ‘Resource Guide on Nuclear Disarmament for Religious Leaders and Communities’ during a high-level consultation on ‘The World’s Religious Communities for Nuclear Disarmament’ at the United Nations.<sup>38</sup> These counter-narratives of nuclear weapons possession challenge the view of nuclear weapons as a signifier of great-power status or

<sup>34</sup> Borrie and Caughley, *An Illusion of Safety*, pp. xi–xii.

<sup>35</sup> ‘Message of his Holiness Pope Francis on the Occasion of the Vienna Conference on the Humanitarian Impact of Nuclear Weapons’, 7 December 2014 (Vatican: Holy See), [http://w2.vatican.va/content/francesco/en/messages/pont-messages/2014/documents/papa-francesco\\_20141207\\_messaggio-conferenza-vienna-nucleare.html](http://w2.vatican.va/content/francesco/en/messages/pont-messages/2014/documents/papa-francesco_20141207_messaggio-conferenza-vienna-nucleare.html).

<sup>36</sup> See, for example, Reinhold Niebuhr, ‘The Nuclear Dilemma’, *Chicago Review*, Vol. 16, No. 3, Autumn 1963, pp. 5–11; Stephen P. Lee, *Morality, Prudence, and Nuclear Weapons* (Cambridge University Press, 1996); Tanya Ogilvie-White (ed.), *On Nuclear Deterrence: The Correspondence of Sir Michael Quinlan* (New York: International Institute for Strategic Studies/Routledge, 2011).

<sup>37</sup> Nick Ritchie, ‘Legitimising and Delegitimising Nuclear Weapons’, in Borrie and Caughley (eds), *Viewing Nuclear Weapons through a Humanitarian Lens*.

<sup>38</sup> Religions for Peace Disarmament and Non-Proliferation Efforts, July 2012–June 2014 (United Nations, Office of Disarmament Affairs), <http://www.un.org/disarmament/education/docs/SGReport69contributions/NGOs/rfp.pdf>.

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'great civilizations', highlighting instead the costly threat they pose to global human security, and portraying the objectives of disarmament as benefiting humanity as a whole.

Representatives of different faith organizations have agreed with this view.<sup>39</sup> In 2014 the Vatican reversed its policy that had been tacitly accepting of nuclear deterrence with a statement from Pope Francis:

Nuclear deterrence and the threat of mutually assured destruction cannot be the basis for an ethics of fraternity and peaceful coexistence among peoples and states [...] I am convinced that the desire for peace and fraternity planted deep in the human heart will bear fruit in concrete ways to ensure that nuclear weapons are banned once and for all, to the benefit of our common home.<sup>40</sup>

The Vatican's reference to 'concrete ways' to achieve a ban indicates that the church's moral stance on nuclear weapons is not only a principled or symbolic form of opposition to the massive destructive power of nuclear weapons, but would also include a substantive legal and political challenge to current nuclear weapons policies, and ultimately to our way of thinking about international security.

### Regional issues and perspectives

The three workshops held in Africa, South America and Asia provided diverse regional perspectives.<sup>41</sup>

#### *Africa*

The capacity for planning and resource constraints are two of the greatest challenges for African humanitarian organizations. Disaster response planning is often insufficient even in many of the most developed countries in the world, as was seen in the United States following the terrorist attacks of 11 September 2001, or in responding to Hurricane Katrina. From an African perspective, if the United States is unprepared and unable to respond in such crises, what hope is there for less developed African countries to respond? In addition, it was noted that these challenges would be exponentially greater in the event of a nuclear explosion.

The effects of a nuclear explosion would be felt across the globe. Therefore, while a detonation may not occur in Africa, the continent would still suffer as a result of refugee flows, reduced agricultural production, economic shock and the secondary impact of diverting humanitarian resources that could be used elsewhere. The effects of such diversion would be felt disproportionately in developing countries that currently rely heavily on international organizations for assistance. Moreover, these countries do not have strong domestic infrastructures or first-responder capabilities of their own to compensate for a decrease in such assistance at a time of increased need.

Participants from African countries in discussions on the humanitarian impacts of nuclear weapons emphasized the Treaty of Pelindaba that established the African NWFZ. South Africa, in particular, is a leader on both disarmament and humanitarian issues. It is poised to play a unique role in the HINW initiative because of its decision to relinquish nuclear weapons and its promotion of other disarmament campaigns across Africa. Algeria likewise, having suffered the impact of nuclear weapons testing, takes a strong line on nuclear weapons. North African countries that are also in the

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<sup>39</sup> See 'Resource Guide on Nuclear Disarmament for Religious Leaders and Communities', *Religions for Peace* (New York, 2013), [http://www.baselpeaceoffice.org/sites/default/files/imce/rfp\\_resource-guide-nuclear-disarmament\\_v12\\_preview-pages.pdf](http://www.baselpeaceoffice.org/sites/default/files/imce/rfp_resource-guide-nuclear-disarmament_v12_preview-pages.pdf).

<sup>40</sup> 'To His Excellency Mr Sebastian Kurz, Federal Minister for Europe, Integration and Foreign Affairs of the Republic of Austria, President of the Conference on the Humanitarian Impact of Nuclear Weapons', 7 December 2014, [http://www.bmeia.gv.at/fileadmin/user\\_upload/Zentrale/Aussenpolitik/Abruestung/HINW14/HINW14\\_Message\\_from\\_His\\_Holiness\\_Pope\\_Francis.pdf](http://www.bmeia.gv.at/fileadmin/user_upload/Zentrale/Aussenpolitik/Abruestung/HINW14/HINW14_Message_from_His_Holiness_Pope_Francis.pdf).

<sup>41</sup> 'Development and Disarmament Roundtable: Nuclear Weapons: Contemplating Catastrophe', *Bulletin of the Atomic Scientists*, September–October 2013, <http://thebulletin.org/nuclear-detonations-contemplating-catastrophe>.

League of Arab States have added concerns about nuclear weapons in the Middle East. Discussion of nuclear issues for many African states raises concerns about uranium mining and safety for mine, storage and transport workers, and how natural resources contribute to broader security issues. Uranium-rich countries such as Namibia and Niger are keen to see progress in ensuring that peaceful nuclear activities cannot be militarized in order to increase their certainty that their exports will not be used for weaponization. While this was not a focus of the workshop, numerous participants linked these local issues to broader nuclear challenges.

### *South America*

Discussion of nuclear weapons issues in this continent has become more abstract because of its distance from nuclear-armed states – although that is not so true for Central American states given their proximity to the United States. One participant described the prevailing attitude as ‘we have other problems, why worry about nuclear weapons?’ As a result, many people are unaware of nuclear threats and the facts behind nuclear weapons. There are exceptions. First, many Argentinians are directly concerned with nuclear issues because, as it was expressed, ‘part of Argentina is ruled by a nuclear-armed state’, namely the United Kingdom in the Falklands/Malvinas. The second exception is the perceived threat from nuclear terrorism, which was exacerbated by the deep psychological impact of 9/11 on states in the region stemming from both their close relations with the United States and the impact that the attacks had on regional trade.

Argentina and Brazil, in particular, view many security issues through the lens of their volatile relations with each other, which largely determine their foreign and security policies. Currently relations are good and therefore defence issues are not a high priority. One participant suggested that Argentina–Brazil relations could serve as an example to the nuclear-armed India and Pakistan, showing how to effect the transition from dangerous nuclear and military rivalry to non-nuclear and non-military stability and cooperation.

### *South and Southeast Asia*

Explicit concerns were raised by workshop participants in these regions about what is perceived to be differential treatment of the ‘Global South’. These concerns led some participants to express scepticism about the humanitarian initiative itself. As one participant queried, ‘Can the West lecture India and Pakistan about the humanitarian impacts of nuclear weapons when their security is guaranteed by the US?’ The specific urgency to consider the humanitarian consequences of a nuclear detonation in the South Asia region was further underlined by a discussion at the workshop of the tense military balance that exists between India and Pakistan. This confirmed that the fact-based discussion upon which the HINW hinges could benefit from considering different regional scenarios as a way of contextualizing the paucity of response options.

## Public engagement with government

One key objective of the HINW is to convey the facts about nuclear weapons use to a broader audience, so that the general public does not feel alienated from a debate long dominated by politicians.

Engagement with humanitarian and development-oriented civil society organizations is crucial if there is to be a change in nuclear weapons policies. Changing the discourse of the nuclear weapons debate from politics to humanitarian impacts requires that experts and those working on humanitarian issues communicate the risks and potential consequences of nuclear weapons use, and not solely their

political or military status. A vital step towards demystifying nuclear weapons is to increase scientific and technical understanding. One potential avenue for greater public engagement is to present the economic impacts and a wider cost-benefit analysis of nuclear weapons use and possession.

Civil society engagement varies across countries and regions. The Philippines, for example, has a strong abolition movement that challenges the US policy of neither confirming nor denying the presence of nuclear weapons on ships in the region. This is often wrapped up in the larger issue of US basing. Other states in the region are less active in disarmament and non-proliferation campaigns. For South Asia, the question remains how to promote greater public engagement on the issue. India has a strong civil society, but has not engaged with nuclear weapons issues as much as civil society in other countries. This is largely due to a lack of transparency and information on these issues, an area where the HINW can contribute. There are also difficulties in linking nuclear weapons with humanitarian issues in Pakistan. As in the West, many of the think-tanks that disseminate influential scholarship about nuclear weapons in fact support official nuclear weapons policies, and reinforce the idea of these weapons as deterrents.

**Levels of awareness within the humanitarian community regarding the specificities of a nuclear weapon detonation – and consequently the ability of organizations to respond to them – are low.**

Levels of awareness within the humanitarian community regarding the specificities of a nuclear weapon detonation – and consequently the ability of organizations to respond to them – are low.<sup>42</sup> Greater engagement depends not only on dissemination of the facts about nuclear weapons detonation, but on the evidence being presented as relevant to existing concerns about the environment, human security and even the global economy. The effectiveness of social media and innovation in this regard cannot be understated. Organizations such as ICAN, Wildfire and Article 36 have taken leading roles in disseminating the HINW findings in innovative ways, utilizing infographics,<sup>43</sup> striking website designs<sup>44</sup> and social media such as Twitter and Facebook. They have also used these tools to facilitate better coordination and a greater degree of information-sharing among individuals and civil society organizations wishing to learn more about the HINW, or even wanting to participate at various conferences and side-events. Live coverage from the conferences over social media has also given the humanitarian initiative a wide exposure.

In the course of discussions, numerous proposals for future consideration emerged. Among the most important were:

- developing scenarios for simulation of nuclear weapons use and response, which would depend on the location and scale of use;
- the need for additional research or declassification of existing research; and
- the need for NWS not to be excluded from the HINW initiative.

Consideration of nuclear-use scenarios is useful in order to examine in depth the regional, infrastructural and geographic challenges arising from an attack, and their repercussions for humanitarian organizations working on the ground. Scenarios demonstrating how nuclear

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<sup>42</sup> Borrie and Caughley, *An Illusion of Safety*, p. 77.

<sup>43</sup> See, for example, infographics on first responders (<http://www.icanw.org/wp-content/uploads/2015/02/FIRSTRELIEF.pdf>), international support for the humanitarian initiative (<http://www.icanw.org/wp-content/uploads/2015/02/Infographic-support-version2.pdf>) and the people at risk in a nuclear detonation (<http://www.icanw.org/wp-content/uploads/2015/02/IRA.pdf>).

<sup>44</sup> See, for example, the Geneva Nuclear Disarmament Initiative website: <http://www.wildfire-v.org/p001.html>.

weapons work, and modelling the importance of specifics such as yield, height, weather, geography and demographics in determining the impact, are all important questions from the perspective of humanitarian organizations. For example, a nuclear attack would be likely to target economic and industrial hubs. The long-term aftermath of nuclear weapons use would be likely to affect less economically developed states or impoverished areas of developed states disproportionately, and should also be addressed in the debate. These practical issues contextualize the discussion, given that the state’s ability to respond to a nuclear explosion would be hindered by a lack of equipment, personnel, buildings, paediatric care centres, cancer centres, blood for transfusions, burn beds and radiation treatment. The politics of scarce resources would have its own impact on response options – a reality already faced by humanitarian organizations and governments across the world when responding to urgent crises. The 2013 UNIDIR report has similar findings, stressing the need to ‘study and simulate varied nuclear weapon detonation scenarios with a view to humanitarian response’.<sup>45</sup>

Ultimately planning and awareness must be met with resources, which would be the greatest challenge in the event of a crisis.

Improved planning could include tabletop exercises or modelling software able to capture the types of challenges faced by those working in the field. Many workshop participants said that they would raise the issue of planning with their appropriate governmental bodies, such as the national planning cluster in the South African National Disaster Management Centre. Ultimately, however, planning and awareness must be met with resources, which would be the greatest challenge in the event of a crisis.

A theme repeated by different experts in all the regions was the need for more information about nuclear weapons and their effects – which can be obtained from measurements made during nuclear weapons tests – in order to improve understanding of the associated risks. For example, although the US government has conducted more nuclear tests than any other state<sup>46</sup> and has published some studies about their effects,<sup>47</sup> much of the data remains classified. Two recent studies for the US Department of Defense highlighted ongoing problems with the US nuclear infrastructure, including lack of resources, sloppy security practices, inappropriate behaviour by leadership, and micromanagement that diverted from the ultimate mission.<sup>48</sup> The HINW presents a timely opportunity for the United States to provide more information about its nuclear arsenal as a confidence-building measure.

A final suggestion from the workshops was that there should be greater engagement in future with the governments of NWS, which should participate more actively in HINW conferences. It was regarded as encouraging that the United Kingdom and United States attended and actively participated in the Vienna conference.

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<sup>45</sup> Borrie and Caughley, *An Illusion of Safety*, p. 80.

<sup>46</sup> See ‘The Nuclear Testing Tally’, Arms Control Association, <https://www.armscontrol.org/factsheets/nucleartesttally>.

<sup>47</sup> See Samuel Glasstone and Philip J. Dolan (eds), *The Effects of Nuclear Weapons* (United States Department of Defense and United States Department of Energy, 3rd edition, 1977); *Planning Guidance for Response to a Nuclear Detonation*, National Security Staff Interagency Policy Coordination Subcommittee for Preparedness & Response to Radiological and Nuclear Threats, 2nd edition, 2010.

<sup>48</sup> Larry G. Welch and John C. Harvey Jr., ‘Independent Review of the Department of Defense Nuclear Enterprise’, United States Department of Defense, 2 June 2014, <http://www.defense.gov/pubs/Independent-Nuclear-Enterprise-Review-Report-30-June-2014.pdf>. For more see David E. Sanger and William J. Broad, ‘Pentagon studies reveal major nuclear problems’, *New York Times*, 10 November 2014, [http://www.nytimes.com/2014/11/14/us/politics/pentagon-studies-reveal-major-nuclear-problems.html?\\_r=0](http://www.nytimes.com/2014/11/14/us/politics/pentagon-studies-reveal-major-nuclear-problems.html?_r=0). See also Eric Schlosser, *Command and Control: Nuclear Weapons, the Damascus Accident, and the Illusion of Safety* (New York: Penguin Books, 2013).



## Conclusion

The 'big tent' provided by the HINW initiative is clear evidence that civil society groups and the majority of states have not yet given up on nuclear disarmament. Previously, NNWS had largely grown frustrated with progress in established forums to discuss concrete steps towards complete prohibition. Civil society organizations have often been excluded from discussions that were dominated by political and diplomatic concerns. The eagerness of civil society to participate in the Oslo, Nayarit and Vienna conferences is evidence that slow progress towards the long-held vision of a world free from nuclear weapons should not be conflated with apathy towards the issue within different countries. The Chatham House workshops demonstrated that humanitarian NGOs are keen to explore new discourses surrounding the impact of nuclear weapons use, and that this type of discussion can take place in forums parallel to long-established ones.

What began as information-sharing sessions on the effects of nuclear weapons with those working for NGOs and other first- and second-responder organizations quickly developed into a conversation that hugely benefited the participating experts. They were quickly able to identify overlapping concerns with regard to disaster response measures in the event of a nuclear detonation, finding parallels in other areas of humanitarian work (such as confronting epidemics, delivering relief in active conflict zones, or logistical difficulties associated with relief provision).

The driving force of the HINW will always be its fact-based discussion of the effects of nuclear weapons. This is reflected in the type of experts – many of them doctors, physicists, aid workers and particularly survivors of nuclear weapons use – invited to speak at previous conferences, and the readiness of participants to confront the profound ethical and moral issues emerging from current nuclear weapons policies distinguishes it from other forums. The diverse and facts-based discussion provides an opportunity to challenge conventional thinking about the sustainability of the current nuclear order given the enormous risks associated with the catastrophic effects of these weapons. As with chemical weapons use, landmines and cluster munitions, the strength of the discourse can create a global shift in attitudes and perception. Civil society organizations inside the 'big tent' are already attracting a younger and more diverse group of experts on nuclear issues. Many of these young men and women are the next generation of policy-makers who do not share the orthodox views popularized during the Cold War, and who will instead start to view nuclear weapons through a human security lens.

At the conclusion of the Vienna conference, the atmosphere was one of anticipation. Many participants, both states and NGOs, took a 'wait and see' approach to the direction of the HINW, largely owing to the timing of the NPT review conference in April–May 2015. This conference will deal with a multitude of issues under the NPT, but the HINW will play a prominent role in the discussions. Only time will tell if the initiative is able to inject a new impetus into the NPT itself. Regardless, the underlying frustrations and humanitarian concerns that gave rise to the initiative remain, and in the absence of speedier and more substantive progress by the NWS towards disarmament, that frustration may manifest itself further in a more dramatic fashion. Tough choices lie ahead.

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