

Humanitarian Approaches to Nuclear Weapons Detonations and Nuclear Testing

CHATHAM HOUSE

The Royal Institute of International Affairs

Consultation Paper
Africa Focus
August 2016



Introduction

Chatham House is hosting a series of workshops on the humanitarian impacts of nuclear weapons testing. These workshops, held under the ‘Chatham House Rule’ of non-attribution, bring together a diverse range of expertise and engages officials and experts from a broad set of backgrounds, and particularly those representing civil society and humanitarian organizations in developing countries. These workshops aim to inform those working in the humanitarian sector about the medical, environmental, societal, cultural impacts of nuclear weapons use and testing so they are more informed when engaging with decision-makers, grassroots NGOs, and individuals on nuclear policy. These workshops build on the findings of Chatham House’s previous project, which were published in a report entitled [‘The Humanitarian Impacts of Nuclear Weapons Initiative: the ‘Big Tent’ in Disarmament’](#).

Based on these discussions on nuclear testing, which include interactive exercises based on scenarios of nuclear weapons use, Chatham House is producing consultation papers that will shape the intellectual framework regarding nuclear weapons, and contribute to the fact-based discussions within the humanitarian initiative. This consultation paper is a product of the workshop that took place in Accra, Ghana, in August 2016. The workshop included 20 participants from government officials to non-governmental organizations’ in Nigeria, Zimbabwe, Cameroon, Kenya, Ghana, South Africa, Uganda, and Mali.

What follows is a summary of some of the themes and questions which emerged from discussions of the participating civil society, humanitarian organizations and nuclear experts from Pacific.

Background

Nuclear weapons use – whether deliberate, accidental, or in the form of testing – have effects that go beyond war conditions. Some of the most severe impacts can affect the human body, mental health, society, climate, and both global and national economies. Whilst some of the immediate effects are well-studied, others are cumulative over time. The knock-on effects of nuclear weapons have not been discussed fully at the policy-making level. Yet although around 15,000 nuclear weapons exist today – with approximately a thousand and eight hundred of these strategic nuclear weapons on high alert status – the huge risks of possessing and using nuclear weapons have been neglected in the twenty-first century. The potential use and humanitarian impacts of nuclear weapons had not figured prominently in international discourse until a call by Member States during the 2010 Non-Proliferation Treaty Review Conference. At the Conference, Treaty members reaffirmed their

deep concern at the catastrophic humanitarian consequences of any use of nuclear weapons and reaffirms the need for all States at all times to comply with applicable international law, including international humanitarian law.¹

In 2013, Norway hosted the first international conference on the humanitarian impacts of nuclear weapons. This conference and the following two in Mexico and Austria (both held in 2014) were based on factual and scientific analysis of the consequences of nuclear weapon use. In the latter of these subsequent conferences, the Austrian government pledged to work with various actors “in efforts to stigmatise, prohibit and eliminate nuclear weapons in light of their unacceptable humanitarian consequences and associated risks.” Following the 2015 NPT Review Conference, this pledge has become known as the ‘humanitarian pledge’, and as of 1st November 2016 has been signed by 127 states.

During the 71st session of the First Committee Meeting of the United Nations General Assembly in November 2016, the United Nations adopted Resolution L.41 and called for holding a conference in 2017 to negotiate effective legal measures on the way towards nuclear disarmament.² With 123 states’ in favour, the resolution passed.

The *Humanitarian Approaches to Nuclear Weapons Detonations and Nuclear Testing* workshop, held in Accra, Ghana, in August 2016, aimed at contributing to the new humanitarian framework for understanding nuclear weapons in the 21st century and feeds into the discussion at the Open Ended Working Group (OEWG), a subsidiary body at the United Nations General Assembly.

Using the scenario of a multiple nuclear weapon detonation, this workshop focused on the following themes:

- Risks associated to use of nuclear weapons and political, legal and humanitarian perspectives;
- Responsibilities, procedures, plans and policies in African continent;

¹ ‘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, Part II: Organization and work of the Conference’, *2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons*, New York, 2010, P. 19 (Art. X, I. A – v).

² The resolution passed with 123 in favour, 38 against and 16 abstentions. For the resolution, see, United Nations General Assembly, 71 Session First Committee, General and Complete Disarmament: Taking Forward Multilateral Nuclear Disarmament Negotiations, A/C/71/L.41.

- The capacity of humanitarian organizations to respond, and the limits of current response strategies;
- The knock-on effect that nuclear weapons use would have on humanitarian assistance in other areas.

This workshop concluded that there is no preparedness mechanism for a nuclear weapons detonation; and the response phases of humanitarian organizations are based upon their knowledge in other crisis management and disaster response areas. The International Federation of Red Cross has been actively pursuing a nuclear disarmament campaign, increasing awareness and education within the Red Cross and Red Crescent chapters.

Nuclear Testing in African Continent and Nuclear Weapons Detonations

France conducted 17 nuclear tests in Algeria from 1960 to 1966 – four of which were atmospheric tests. The Evian Accords (1962) – a peace accords between Algeria and France – gave rights to France to conduct nuclear tests in the Algerian desert for a further five years following Algerian independence. After this period, France conducted all of its tests in the Pacific region. Recently declassified military documents have revealed that radiation fallout from the French nuclear tests in Algeria were not restricted to the Saharan desert, as claimed by France at the time, and that the fallout impacted the entire continent and even extended to southern Spain and Italy.

On 22 September 1979, it is alleged that South Africa and Israel conducted a joint nuclear test.

The nuclear weapons programme was highly secret, and as such the majority population were kept from basic knowledge. In the 1980s, South Africa built six gun-type nuclear weapons which it later dismantled. South Africa's nuclear weapons programme had political, social and economic dimensions to it. In particular, it inadvertently reinforced and expanded the already rigid hierarchical classification of the population along racial lines, and the linkage between 'race' and 'space'. South Africans were unaware of the role of nuclear weapons over social segregation at that time. A participant stated that nuclear scientists of the time were all of "white" origin, and thus a product of an already segregated and racialized education system. The government moreover took steps to ensure that nuclear sites and waste disposal areas were far from areas in which the white population lived. Decision-makers responsible for designing and planning the nuclear weapons programme were not questioned afterwards. One participant labelled this state of affairs as one of 'political amnesia'.

The main lesson learnt from South African nuclear weapons programme is the need for the state to 'come grips with its nuclear history', and for it to 'bring justice' through public outreach and education. This goes beyond a simple declaration of giving up nuclear weapons, and requires the country to internalize this decision and implement it at every level of the social and economic system. This would include compensation to the workers and their families that worked in nuclear facilities. Medical records should be made public, and there should be as few restrictions as possible on documents related to South Africa's nuclear weapons programme.

Historically, the nuclear disarmament narrative on the African continent has fed into independence efforts and the socio-economic development of newly independent states.³ Ghana's first prime minister and president, Kwame Nkrumah, once remarked that 'the poisonous fallout did not, and

³ S.C. Saxena, Disarmament: The African Perspective, Institute for Defence Studies and Analyses (IDSA).

never will, respect the arbitrary and artificial divisions forged by colonialism across our beloved continent” and “Africa is not interested in such ‘defence’ which means no more than the ability to share in the honour of destroying mankind.”⁴ More recently, the Treaty of Pelindaba (Africa’s nuclear-weapon free zone treaty) entered into force in 2009, with its parties undertaking ‘not to test or assist or encourage the testing of any nuclear explosive device’ on the continent.⁵

Nuclear disarmament is not generally viewed as an urgent security matter in many African states, and is consequently not prioritized by decision-makers. There is a common belief that terrorist organization (e.g. Boko Haram) acquiring a nuclear warhead, nuclear materials, or nuclear knowledge would be the main threat to African security, rather than an accidental detonation or nuclear conflict.

Participants highlighted that awareness across the African continent concerning nuclear weapons risks varies. Many are simply ignorant of the risks posed by nuclear weapons and nuclear testing. South Africa is a case of good practice however, having incorporated CBRN risk mitigation while preparing for the World Cup. However, government funding for emergency response in most of the continent is considered low. Most countries lack plans and procedures, even though they might have nuclear accident response plans. In most of the cases where planning does exist, implementation is not considered in detail. Drills, simulations and also needs assessments are necessary in order to test the response to a nuclear weapons incident. Most of African countries lack adequate detection in border controls.

Scenario

Participants discussed a hypothetical scenario of two simultaneous nuclear weapons explosion at Burma Camp and Airborne Base in Ghana. Burma Camp is the main army base in Accra, and the Airborne Base is the main army barrack in Tamale. These bases host two of the three air force bases in Ghana’s triad.

The scenario is discussed through several questions, such as:

1- What would be the humanitarian impact of nuclear testing and nuclear explosions, and the feasibility of adequate humanitarian response? Specifically, what would be the impact and response for:

- 1.a. emergency and on-going medical capacities in response to the health effects of the explosions;
- 1.b. communications, power, and transport systems following the explosions;
- 1.c. climatic, agricultural and food security following the explosions;
- 1.d. social cohesion and governance following the explosions
- 1.e. cultural heritage

2- What would be the primary objectives for humanitarian organizations in the event of nuclear weapons explosions?

⁴ Kwame Nkrumah, Positive Action Conference for Peace and Security in Africa, Accra, April 7, 1960.

⁵ UN General Assembly, Pelindaba Text of the African Nuclear-Weapon-Free Zone Treaty A/50/426, Protocol II Article I.

3- Would the response be similar to any other type of emergency response cases?

Participants were of the opinion that response and coordination mechanisms do not fully exist on the African continent.⁶ Moreover, military units and governments are viewed as the only institutions capable of leading any sort of response efforts in an emergency situation. There were questions regarding the Prime Minister or Presidents' role in responding to emergency situations. A state of emergency—in most of the cases—is declared by the President. In Ghana, for instance, the National Disaster Management Organization (NADMO) would engage in emergency and relief efforts, together with the coordination of the Ghana Atomic Energy Commission. The participants' assessment was that civil society would have a minimal capacity to deliver a humanitarian response, and that church groups (and particularly Evangelical groups) and elderly communities – rather than formal civil society organizations – would feature more prominently in disseminating information to local communities in the event of a nuclear incident. Church groups have vital networks that could be used for disseminating accurate information.

Participants discussed how plans and procedures are better defined for epidemic outbreaks due to its higher political prioritization: the more urgent need to respond to imminent threats rather than prepare for risks posed by nuclear weapons. In the epidemics plan, there is a cluster of systems—e.g. shelter, first-aid, relief—yet, a nuclear disaster response plan is not as clearly defined. During the Ebola outbreak of 2014, for instance, Nigeria cooperated with neighbouring countries and set up mobile centres.

A few important questions emerged concerning emergency response related to contamination. Is the area accessible for humanitarian relief? If not, what would be the role of the civil society? Would civil society or the Red Cross be involved? What type of equipment would these organizations require to respond? What are the methods of communication (nationally and regionally), and are there back-up communication plans if the main system goes down?

The potential effects of a nuclear weapons explosion on food production and water security were also considered. This would have impacts on trade links, the participants argued. Regional cooperation is believed by local participants to be a necessity in case of an emergency, not only for the nationals of an affected country but also for diasporas living outside their country of origin. For instance, proximately four million Zimbabweans live in South Africa. It is important to prepare communication channels prior to an emergency in order to protect all citizens and residents in that country.

The workshop and scenario discussion concluded that there is no adequate preparedness for a nuclear weapons detonation, and that any response to a nuclear weapons incident would be based on the prior experiences of humanitarian organizations in managing crises on a smaller scale in conventional areas. The International Federation of Red Cross (IFRC) has been actively pursuing a nuclear disarmament campaign, increasing awareness and education within the Red Cross and Red Crescent chapters. However, workshop discussants argued that Australian Red Cross would be incapacitated in the case of a nuclear weapons explosion. The group argued that regardless of whatever plans are put in place before an explosion, they would not be adhered to given the

⁶ Even though different parts of Africa would have different response capacity, the workshop had a continental focus.

magnitude of the situation. It is not currently known if the Australian government has any formal response plans for a response to a nuclear weapons detonation.

The humanitarian impact of the South African nuclear weapons programme was considered to be unique for participants. There are nevertheless similarities with the impact of nuclear weapons elsewhere, such as in the Pacific. Racial segregation and injustice were both drivers and consequences of South Africa's nuclear weapons programme, so too were they in the nuclear tests conducted in the Pacific region. Participants argued that it is important for South Africa to educate the public about consequences of a nuclear weapons accident. Education is also necessary for improving legislation in terms of emerging security threats, such as the potential for drones to attack nuclear sites.

The socio-cultural dimension of emergency response on the African continent is distinct. Participants noted that false positive alarms occur regularly in many African states, and have caused many people to become desensitized to emergency signals. The participants highlighted that they would not differentiate nuclear alarms from regular ones because it is not something that is taught. A gaseous explosion—from a volcanic lake—is given as an example that the region has learned on how to respond to natural emergencies. Yet, civil society in African states is in many instances politicized, and there is little room for cooperation between civil society and government. Traditional leaders are very much respected in African states, and in cases where chains of command are blurred, traditional leaders can often play a significant role in local communities. Similarly, traditional healers (doctors) are trusted more than medical doctors in profession. These traditional healers, rather than experts, would likely guide society and individuals towards certain actions in an emergency situation. Giving education to these powerful individuals, clerics, and service students would expand awareness.

Conclusion

The role of the International Federation of Red Cross and Red Crescent Societies (IFRC) has expanded over the years. Today, it is one of the few international civil society organizations with a systematic plan to respond to radiological and nuclear accidents based on a risk assessment framework.

The IFRC has guidelines for its national societies concerning nuclear and radiological emergency incidents. These guidelines include specific safety concerns for first-responders to be aware of during response. National societies, though, vary in capacity and capability. The Italian Red Cross is one example of best practice. There also exist e-learning modules on radiation protection. Some basic information in the guidelines concerns both physical protection and psycho-social support and risk communication. The Geneva Convention relies on national societies as auxiliary forces, and it is they that should press governments to take action on preparedness, prevention, and plans regarding nuclear accidents.

Nuclear disaster response centres are fundamental when providing timely communication of response plans. IAEA's safety guidelines should be tailored to regional and national needs, and in accordance with the IFRC's recommendations and involvement. Currently, there is no adequate humanitarian response mechanism for a full response to a nuclear accident. It took five days to evacuate 1,500 people from Fukushima. Six people were injured in the Fukushima nuclear disaster,

and it took around twenty-four hours for them to reach the hospital. Hospitals in the surrounding area were unprepared for an incident of this sort, and did not want to receive contaminated people. Similarly, ambulances did not want to enter the contaminated area. The question of how to transport people presumed to be contaminated to hospitals should be part of emergency response planning, particularly as a nuclear weapons attack would involve a far larger number of people and casualties than those impacted at Fukushima.

On top of the existing problems, risk mitigation plans may today only be in place for addressing safety issues in nuclear power plants, and therefore not take into consideration safety related to nuclear weapons detonations. It is important for national authorities to ask for international assistance in a timely manner. Minimizing the level of misinformation in nuclear incidents is also fundamental to managing crisis. In Africa, misinformation could be coupled with solutions that are not rooted in scientific or fact-based analysis of the situation. In Nigeria for instance during the Ebola outbreak, a false belief quickly took hold that the disease was killing people who drank salty water.

There are lessons to be learned from North Korea's nuclear tests, and today South Korea is translating radiation and nuclear emergency guidelines into Korean. Yet their response strategy relies mostly on the military, and the scenarios played at Chatham House events indicate clearly that military units would not be able to respond on their own to a nuclear incident.

It is important to disseminate facts and knowledge of the dangers and risks that nuclear weapons pose to African societies. The role of youth is extremely important to carry this message. Capacity building, e-learning modules and training the next generation of trainers through projects are important to move towards a world without nuclear weapons.

The questions arising from this workshop and the points of improvement that we can carry to the next meeting are as follows:

- Who takes the responsibility in response planning in the case of a nuclear explosion? Is it the government or the military?
- Are there any areas that humanitarian organizations can take the lead on?
- What are the methods to prepare humanitarian organizations for response planning?
- How could humanitarian organizations raise awareness in NGOs in their countries regarding the humanitarian consequences of nuclear weapons?
- What are the methods to maintain and sustain the relationship between government bodies and NGOs long after a humanitarian catastrophe?
- What are the similarities and differences between nuclear weapons explosion response strategies and other emergency and disaster situations?
- Are there any viable methods other than training and emergency exercises that would help humanitarian organizations to participate in the humanitarian initiative further?

By bearing these questions in mind, this workshop has concluded that:

- In thinking about nuclear weapons detonations, we are educating both the current generation and the next generations on the risks of nuclear weapons.

Finally, we should never forget:

- Prevention is the best mitigation strategy. Prevention is possible only through not possessing, not modernizing, and not using nuclear weapons, under any circumstances.

Contact:

Dr Beyza Unal
Research Fellow, Nuclear Weapons Policy
International Security Department
The Royal Institute of International Affairs
Chatham House

10 St James's Square, London, SW1Y 4LE
T: +44 (0) 20 7314 2796
E: BUnal@chathamhouse.org