



UNIDIR

# From the Margins to the Mainstream

## Advancing Intersectional Gender Analysis in Nuclear Non-Proliferation and Disarmament

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## About UNIDIR

UNIDIR is a voluntarily funded, autonomous institute within the United Nations. One of the few policy institutes worldwide focusing on disarmament, UNIDIR generates knowledge and promotes dialogue and action on disarmament and security. Based in Geneva, UNIDIR assists the international community to develop the practical, innovative ideas needed to find solutions to critical security problems.

## About the Gender and Disarmament Programme

The Gender and Disarmament Programme contributes to the strategic goals of achieving gender equality in disarmament forums and effectively applying gender perspectives in disarmament processes. It encompasses original research, outreach activities and resource tools to support disarmament stakeholders in translating gender awareness into practical action.

## Notes

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A gender turn has taken place in arms control and disarmament. Gender-related discussions have moved from side events to the conference room, from civil society statements to official decisions and action plans, from the margins to the mainstream.

# Introducing the edited volume

by Renata Hessmann Dalaqua

A gender turn has taken place in the practice and study of arms control and disarmament, including in the nuclear field. In multilateral forums, gender-related discussions have moved from side events to the conference room, from civil society statements to official decisions and action plans, from the margins to the mainstream.

This can be observed in the meetings of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). The previous NPT review cycle (2017–2022) saw a record number of working papers and statements addressing issues related to women’s participation and gender equality in the NPT; the different impacts that ionizing radiation can have on women and men; and the importance of gender analysis in nuclear policymaking. Gender-related topics were also reflected in the draft final document of the Tenth Review Conference of the NPT, and the language was seemingly accepted by all states parties, despite there being no consensus on a final document. This conversation has been carried forward into the current NPT review cycle and will be the subject of new working papers, statements, discussions and, hopefully, decisions too.

However, it is in the Treaty on the Prohibition of Nuclear Weapons (TPNW) that gender mainstreaming has gained more solid ground. The TPNW includes a clause mandating states parties to provide age- and gender-sensitive assistance to survivors of nuclear weapons use and testing, including medical care, rehabilitation and psychological support, as well as to provide for their social and economic inclusion. Moreover, the negotiations that led to the TPNW were shaped by the engagement of women diplomats, activists and survivors and very much informed by gender equality considerations. This gender focus has been further advanced in the Vienna Action Plan, adopted in 2022, in which states agreed to integrate gender considerations into the treaty’s implementation, including in TPNW-related national policies, programmes and projects.

Positive as these developments are, significant challenges persist. One such challenge is the reach of the gender turn; not everyone is convinced of the importance of gender equality and gender perspectives in nuclear non-proliferation and disarmament. A second challenge is the misperception that *gender equals women* or *women’s issues*. This view neglects the broad range of perspectives covered in a gender analysis and ignores the potential of adopting an intersectional approach to international security issues.

To overcome these challenges, UNIDIR has worked with a diverse group of experts to uncover new issues that could benefit from being examined not only through a gender lens but also through an intersectional analysis. Whereas a gender analysis examines the relationships between people of all genders and the power dynamics that underpin those relationships, an intersectional analysis addresses diversity within gender groups by examining how gender intersects with other aspects, including ethnicity, age, religion, class, sexual orientation and disability, among others.

Building on decades of work by gender scholars, women's rights organizations and nuclear disarmament advocates, the authors of the papers in this collection have explored gendered and intersectional dimensions of nuclear non-proliferation and disarmament: from public opinion on nuclear weapons across dozens of countries to justice claims of nuclear survivors and feminist foreign policies in Latin America and the Caribbean. When defining research questions and methods, authors were encouraged to take into account a plurality of perspectives, in order to avoid replicating Western-centric frames of analysis that have, to a large extent, shaped International Relations scholarship. Throughout the research process, however, they were confronted with the unevenness of publicly available information on sensitive issues. Generally, Western countries tend to be more open in relation to their policy-making processes, which in part explains the preponderance of Western examples and case studies in this collection.

Despite these limitations, the papers presented in this collection outline paths for future research that are applicable across various scholarly cultures and contexts. Additionally, they all include ideas for states and multilateral stakeholders on how to translate awareness of injustices and inequalities into meaningful action. UNIDIR hopes that the analyses presented here will represent a springboard for new and inclusive efforts towards nuclear non-proliferation and disarmament.

## **Walking the diversity talk**

In the first paper of this collection, Louis Reitmann tackles the need for diversity in the nuclear field. The author avoids the common “business case” and, instead, develops a scientific case for diversity, based on findings from psychology and behavioural science about how demographic diversity can shape human interaction and work outcomes. The paper includes a guide to talking diversity, which advocates can use to make more evidence-based, nuanced and persuasive arguments for greater demographic diversity in the nuclear field. It also includes good practices to help organizations walk the diversity talk, such as commitment from leadership; transparency in recruitment and promotion processes; a workplace culture that offers opportunities for learning across diverse identities; and openness to addressing resistance in a participatory manner.

## **Placing survivors at the centre**

The second paper illustrates the affinities between a gender approach and a survivor-centric approach, as both shed light on people's needs and the humanitarian impact of nuclear weapons. By surveying testimonies, Rebecca Davis Gibbons listened to survivors, learned about the harms they have faced, and explored what they perceive as nuclear justice. Developing a survivor-centric nuclear justice framework, the author outlines justice mechanisms encompassing compensation, policy change, acknowledgement of harm, apology and data collection. These areas for action could be pursued collectively by a diverse group of states, providing an avenue for bridge-building between TPNW states parties and non-states parties.

## **Understanding public opinion on nuclear weapons**

The third paper examines public opinion on nuclear weapons and asks, Is there a gender gap? Ellen Willio and Michal Onderco try to answer this question by reviewing academic articles and opinion polls spanning from 1990 to 2023 and covering 47 countries. Their findings indicate that women tend to be more opposed than men to nuclear proliferation and express greater discomfort about the existence of nuclear weapons. Results on opinions about the use of nuclear weapons are conflicting: some studies

suggest that men are more inclined than women to approve of nuclear weapons use, while other studies argue the opposite, that women are more likely to approve than men. In relation to arms control and nuclear disarmament, no distinct gender differences in public opinion were identified. The findings underscore the importance of interrogating notions of masculinities and of patriarchal attitudes that may be present in men's and women's opinions on the use of force. Overall, the paper concludes with a call for gender diversity as a means of diversifying perspectives in nuclear research, advocacy and policy-making.

### **Interrogating feminist foreign policies**

The fourth paper looks at the growing trend of countries implementing a feminist foreign policy or a foreign policy with a gender perspective. María Pía Devoto, Mariel R. Lucero Baigorria and Ana Levintan direct their analysis to countries in Latin America and the Caribbean, which have been among the most vocal supporters of this foreign policy approach. By examining official policy documents, the authors seek to understand whether and how gendered approaches to foreign policy in Latin America and the Caribbean address relevant links between gender equality, nuclear disarmament and the environment. The authors conclude with proposals to strengthen the leadership of Latin America and the Caribbean in this field, including by fostering South–South dialogue on nuclear disarmament in the context of the gender equality initiatives.

### **Bridging the TPNW and the Women, Peace and Security agenda**

The final article of this collection draws on feminist scholarship and examines the progress and the limitations in realizing the TPNW's ambitions for gender and racial equality. Building on long-existing feminist activism around nuclear disarmament and inclusive peace, Peixuan Xie considers possibilities for increasing synergies between the TPNW and the Women, Peace and Security agenda – a normative framework that seeks to integrate gender considerations into all aspects of international security. The author concludes by setting out five proposals for gender-transformative change in nuclear regimes: change in discourse, commitment to supporting survivors, genuine inclusion and equity, enhanced synergies among related policy frameworks, and knowledge production that incorporates gender and racial issues.

# I. The scientific case for diversity in nuclear weapons policymaking

by Louis Reitmann<sup>1</sup>

## 1. Introduction

There is a lack of diversity in the nuclear weapons space. This is especially pronounced among the officials involved in the strategic military aspects of nuclear weapons policy – including arsenal development, nuclear posture and deterrence strategy – in nuclear-armed countries.<sup>2</sup> This lack of diversity has contributed to the reproduction of traditional nuclear weapons thinking in nuclear-armed states, with little innovation, despite significant criticism that such thinking is ineffective at reducing nuclear risk and incentivizing arms control and disarmament.

While the conversation around the importance of diversity in the nuclear weapons space has grown, there has been little development in the arguments commonly made for addressing this lack of diversity. Arguments based on the moral and social justice elements of boosting the participation of women, people of colour, especially Indigenous Peoples, and others in decision-making on nuclear weapons may be quickly dismissed by sceptics as liberal-progressive politics.

In an attempt to demonstrate diversity's value irrespective of political conviction, advocates have relied heavily on the "business case", which simply claims that greater diversity leads to better performance. Upon closer examination, however, this simple logic neither accurately describes the mechanics of diversity nor incentivizes the measures necessary to activate diversity's benefits for nuclear weapons policymaking.

Instead, this paper proposes a scientific case for diversity, based on strong empirical findings from psychology and behavioural science about diversity's complex positive and negative effects on how group members think and collaborate, demonstrating how diversity can contribute to more effective, more innovative nuclear weapons policy.

This paper begins by addressing the lack of diversity among the officials controlling arsenal development, deterrence and nuclear strategy in the United States, as an illustration of common issues affecting

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<sup>1</sup> The author is grateful to the officials whose detailed, nuanced and candid insights enriched the findings presented in this paper. The author gives special thanks to the reviewers Sarah Erickson, Dr Renata Hessmann Dalaqua, Paula Jou Fuster and Dr Marion Messmer, who helped this paper deliver key learnings for the nuclear field more effectively.

<sup>2</sup> Where not specified otherwise, this paper defines diversity as demographic diversity, meaning the presence of visible or noticeable differences – gender expression, skin colour, age, demeanour, speech, etc. – within a group. Speech is included as a communicator of differences such as nationality, education, class or age. This understanding of diversity builds on research that demonstrates that how we think and interact with others is shaped significantly by outer differences, not only by differences in skills, opinions or experiences.

nuclear-armed states<sup>3</sup> The paper explains the deficits in effectiveness and innovation from which these homogeneous groups suffer, how this homogeneity reproduces traditional nuclear weapons thinking, and how it limits leaders' horizons for policy innovation. The paper concludes that the lack of diversity within this so-called nuclear priesthood<sup>4</sup> ultimately contributes to growing nuclear risk.

Given the need for enhanced demographic diversity in nuclear weapons policymaking, the paper finds that a line of reasoning based on morality, social justice or the business case for diversity is insufficient for building accurate, nuanced and persuasive arguments for change. To fill this gap, the scientific case presented in this paper explains why diverse teams tend to better understand tasks, make fewer errors and be more innovative. It also examines how the social friction that comes with diversity can have detrimental effects on collaboration. The paper presents management strategies for maximizing diversity's positive effects while minimizing social friction and offers a short guide on making persuasive pro-diversity arguments in the nuclear weapons field.

These are important issues for the nuclear weapons field, which has seen growing interest in measures to increase the share of women, people of colour and other previously excluded groups in the nuclear weapons space. The paper criticizes the corporate feminist approach of the nuclear weapons complex, which follows the business case logic of diversifying staff without addressing structural inequities, reforming working methods and transforming workplace cultures. Not only are superficial diversity programmes like this unlikely to activate diversity's potential for more effective or innovative policymaking, they may actually be used to uphold traditional nuclear weapons thinking and eliminate the critical potential of alternative perspectives.

Given the limitations of publicly available material, this paper focuses mostly on Western states, which also tend to adopt a transparent approach to policymaking. In addition to studies and documents, this paper relies on the openly available testimonies of deterrence officials, as well as on key interviews carried out by the author.<sup>5</sup> These interviews helped illustrate the status quo of demographic diversity in the government structures that make nuclear weapons policy. They also helped examine whether the effects of demographic diversity found in psychological and behavioural studies match the real-life experiences of those working on nuclear weapons policy.

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<sup>3</sup> This paper focuses exclusively on national policymaking processes. For a study on the role diversity can play in multilateral diplomacy on nuclear weapons issues, see John Borrie and Ashley Thornton, *The Value of Diversity in Multilateral Disarmament Work* (Geneva: UNIDIR, 2008), <https://www.unidir.org/publication/value-diversity-multilateral-disarmament-work>.

<sup>4</sup> The term "nuclear priesthood" has emerged as a synonym for the policy community in charge of the strategic military aspects of nuclear weapons policy in the United States. While it has no connection to any religious community, it is a metaphor to describe that this policy community is similarly closed-off, hierarchical and regulated by traditions and conventions as those in holy orders.

<sup>5</sup> As part of this research, the author conducted interviews with experts and practitioners involved in nuclear weapons policy. In total, eight people were interviewed – six women and two men – from Italy, Mexico, South Africa, the United Kingdom of Great Britain and Northern Ireland and the United States of America.

## 2. Who makes nuclear weapons policy?

### 2.1 How a lack of diversity leads to greater nuclear risk

The need for greater diversity in nuclear weapons policymaking is best illustrated by the continued prevalence of nuclear orthodoxy among the officials who control the strategic military aspects of nuclear weapons policy. But today's expansion of arsenals and the growing threat of nuclear use call for innovative approaches that improve on or transcend traditional theories on deterrence, crisis stability and mutually assured destruction.<sup>6</sup> These theories have well-documented critical weaknesses, such as gaps in what we know about the human decision-making processes they are based on and the theories' disregard for severe risks of accidental and unintended nuclear use.<sup>7</sup>

Experts have proposed options for updating deterrence thinking, for example retiring the idea that an adversary's nuclear capabilities and deployment must be matched like for like,<sup>8</sup> reducing launch readiness levels,<sup>9</sup> and promoting minimal deterrence and (limited) no-first-use policies.<sup>10</sup> Yet nuclear orthodoxy has been perpetuated by the policy community in charge of nuclear posture, arsenal development and deterrence strategy. In other words,

politicians and analysts fall back on the old standby of nuclear deterrence – “deterrence will hold”. But the world has changed dramatically since the Cold War... A confluence of changes to technological, domestic and strategic landscapes has destabilized nuclear deterrence, and it would be dangerous to maintain a continued, unquestioning reliance on it.<sup>11</sup>

In an interview for this paper, Laura Holgate, a former Pentagon official with the Cooperative Threat Reduction Program, said,

This community has settled on nuclear deterrence theory as if it were not an unproven theory but rather an evidence-based principle. You have to suspend a lot of your natural thought process to comprehend what deterrence means. The priesthood's insistence on nuclear deterrence being indispensable for national security sidelines the reality that many of today's acute nuclear threats are related to the safety and security of nuclear material and facilities. I think there is an insecurity at the heart of this insistence that prevents re-examining the assumptions underpinning traditional deterrence theory.<sup>12</sup>

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<sup>6</sup> Peter Rudolf, “US Nuclear Deterrence Policy and Its Problems”, Stiftung Wissenschaft und Politik, 6 November 2018, <https://www.swp-berlin.org/publikation/us-nuclear-deterrence-policy-and-its-problems>; Michael Krepon, “Donald Trump's Challenge to Nuclear Orthodoxy”, Stimson Center, 15 August 2016, <https://www.stimson.org/2016/donald-trumps-challenge-nuclear-orthodoxy>.

<sup>7</sup> Ward Wilson, “Reconsidering Nuclear Deterrence”, European Leadership Network, 1 March 2022, <https://www.european-leadershipnetwork.org/commentary/reconsidering-nuclear-deterrence>.

<sup>8</sup> John Gower, “The Dangerous Illogic of Twenty-First-Century Deterrence Through Planning for Nuclear Warfighting”, Carnegie Endowment for International Peace, 6 March 2018, <https://carnegieendowment.org/2018/03/06/dangerous-illogic-of-twenty-first-century-deterrence-through-planning-for-nuclear-warfighting-pub-75717>.

<sup>9</sup> Sico van der Meer, “Reducing Nuclear Weapons Risks: A Menu of 11 Policy Options”, Clingendael, June 2018, [https://www.clingendael.org/sites/default/files/2018-06/PB\\_Reducing\\_nuclear\\_weapons\\_risks.pdf](https://www.clingendael.org/sites/default/files/2018-06/PB_Reducing_nuclear_weapons_risks.pdf).

<sup>10</sup> Tytti Erästö, “Revisiting ‘Minimal Nuclear Deterrence’: Laying the Groundwork for Multilateral Nuclear Disarmament”, SIPRI, June 2022, [https://www.sipri.org/sites/default/files/2022-06/sipriinsight2206\\_minimal\\_nuclear\\_deterrence\\_1.pdf](https://www.sipri.org/sites/default/files/2022-06/sipriinsight2206_minimal_nuclear_deterrence_1.pdf).

<sup>11</sup> Maria Rost Rublee, “Nuclear Deterrence Destabilized”, in *Perspectives on Nuclear Deterrence in the 21st Century* (London: Chatham House, 2020), 14–18, <https://www.chathamhouse.org/sites/default/files/2020-04-20-nuclear-deterrence-unal-et-al.pdf>.

<sup>12</sup> Interview with the author, 24 October 2023.

This community's lack of diversity – meaning the under-representation and marginalization of women, people of colour, especially Indigenous Peoples, and others – makes it vulnerable to groupthink, inhibits innovation and prevents the critical questioning of baseline assumptions. Considering the stakes of nuclear weapons policy, this community's inability to develop innovative strategies to reduce nuclear risk and make progress towards arms control and disarmament is concerning.<sup>13</sup> In this way, the lack of diversity in nuclear weapons policymaking may contribute to greater nuclear risk.

## 2.2 Inside the nuclear “priesthood”: Dynamics of a homogeneous group

Indicators from the wider nuclear field show that white men still make up the vast majority of officials and experts in this space. UNIDIR has measured the average proportion of women participating in meetings under the Treaty on the Non-Proliferation of Nuclear Weapons at 32% between 2017 and 2022.<sup>14</sup> The share of women among heads of delegation was only 24% in 2019.<sup>15</sup> A mere 25% of staff in the nuclear sector are women; the share is even lower in scientific and leadership roles.<sup>16</sup> A similar trend can be observed within the International Atomic Energy Agency (IAEA), where women are over-represented in administrative roles and make up only 35.4%, on average, of nuclear engineers, safeguards inspectors and physicists.

While the data are even sparser than on the inclusion of women, people of colour are under-represented too; for example, only 34.6% of the IAEA's professional and higher staff are from non-white-majority regions (i.e., Africa, Asia and Latin America).<sup>17</sup> Both findings are echoed in countless testimonies by women and people of colour at all levels and in all areas of the nuclear field.

Combining these data with insights about women's representation in military structures – for example, women occupied only about 30% of positions at assistant secretary level or higher at the US Department of Defense between 2009 and 2018 – we can draw conclusions about the lack of diversity in the nuclear priesthood.<sup>18</sup> Laura Holgate, who continues to work with members of this community, and other senior officials from the nuclear field confirmed its drastic lack of demographic diversity.<sup>19</sup>

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<sup>13</sup> Heather Hurlburt et al., “The ‘Consensual Straitjacket’: Four Decades of Women in Nuclear Security”, *New America*, 5 March 2019, <https://www.newamerica.org/political-reform/reports/the-consensual-straitjacket-four-decades-of-women-in-nuclear-security>.

<sup>14</sup> UNIDIR, “Gender and Disarmament Hub”, <https://unidir.org/tools/gender-disarmament-hub>.

<sup>15</sup> Renata Hessmann Dalaqua, “How Can We Achieve Gender Break-Throughs in Nuclear Negotiations and Technical Cooperation?” *IAEA Bulletin* 62-4 (December 2021), <https://www.iaea.org/bulletin/how-can-we-achieve-gender-break-throughs-in-nuclear-negotiations-and-technical-cooperation>.

<sup>16</sup> This percentage is based on a study by the Organisation for Economic Co-operation and Development's Nuclear Energy Agency, conducted across its 34 Member States; see World Nuclear News, “Getting More Women in Nuclear ‘Crucial to Hitting Climate Targets’”, 8 March 2023, <https://world-nuclear-news.org/Articles/Getting-more-women-in-nuclear-%E2%80%98crucial-to-hitting>.

<sup>17</sup> This excludes the approximately 1,100 general service staff that carry out administrative, technical and scientific support duties. For more, see IAEA, *Personnel: Staffing the Agency's Secretariat* (Vienna: IAEA, 2023), 5, <https://www.iaea.org/sites/default/files/gc/gc67-18.pdf>.

<sup>18</sup> Heather Hurlburt, Elizabeth Weingarten and Elena Souris, *National Security: What We Talk About When We Talk About Gender* (Washington, DC: New America, 2018), 20, [https://d1y8sb8igg2f8e.cloudfront.net/documents/National\\_Security\\_What\\_We\\_Talk\\_About\\_When\\_We\\_Talk\\_About\\_Gender\\_2018-12-10\\_214208.pdf](https://d1y8sb8igg2f8e.cloudfront.net/documents/National_Security_What_We_Talk_About_When_We_Talk_About_Gender_2018-12-10_214208.pdf).

<sup>19</sup> Interview with the author, 24 October 2023.

The most detailed account of the state of diversity in nuclear weapons policymaking is Hurlburt et al.'s milestone study, which found that the community of US officials working on nuclear posture and deterrence policy is “closed-off and highly hierarchical, tending to value long experience and insider knowledge over innovation”.<sup>20</sup> Insiders describe it as “male-dominated, and unwelcoming, with a small group of long-time insiders controlling what new ideas and individuals would be considered”.<sup>21</sup>

As further explained in Section 4 of this paper, empirical findings show that homogeneous groups like the priesthood are more prone to misunderstanding problems and tasks, make mistakes more frequently, and discourage the exchange and serious consideration of new perspectives. They are less likely to re-examine working methods and assumptions, which increases the risk of systemic fallacies, meaning ineffective or counterproductive strategies based on false assumptions.

According to senior US officials, policy processes controlled by the priesthood are determined by established scripts among individuals with similar backgrounds and views.<sup>22</sup> Proposals to reconsider underlying assumptions or past experience tend to be dismissed as naive or unprofessional. As elaborated later in this paper, even if the priesthood was more demographically diverse, restrictive working methods and innovation-averse cultures like this prevent teams from accessing diversity's benefits for collaboration.

Joining or having influence within the priesthood depends on alignment with nuclear orthodoxy, rather than on what change or outside expertise an individual can bring.<sup>23</sup> The premium attached to deep technical knowledge, subscription to certain theories, and long-term niche experience continues the dominance of the same norms and ideas in this policy space. This makes entering and having an impact in this community difficult. As former US Under Secretary of Defense for Policy Michèle Flournoy put it, “You had to master the technical details before you could have an opinion.”<sup>24</sup> Other US officials confirm that “the high demand for technical knowledge was...used to exclude people from the nuclear elite”.<sup>25</sup>

Personal connections are crucial for professional success in the nuclear weapons space. Due to confirmation bias, by which people are more attentive to others similar to them, those who have traditionally been under-represented in the priesthood – young people, women, people of colour, and simply those with experience in other areas – are less likely to be identified as desirable talent. Senior women in US nuclear policy report that their experience working for NGOs, especially on arms control and non-proliferation matters, was used to question their seriousness about the military side of nuclear weapons policy.<sup>26</sup>

These implicit and explicit restrictions on who is included or has influence in nuclear weapons policy-making reproduce the reality and image of nuclear weapons policy as a white, male space, illustrated

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<sup>20</sup> Hurlburt et al., “The ‘Consensual Straitjacket’”, 9.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid., 30.

<sup>23</sup> Carol Giacomo, “The Nuclear Weapons Sisterhood”, *New York Times*, 15 May 2019, <https://www.nytimes.com/2019/05/15/opinion/women-national-security.html>.

<sup>24</sup> Hurlburt et al., “The ‘Consensual Straitjacket’”, 10.

<sup>25</sup> Ibid., 18.

<sup>26</sup> Carol Giacomo, “The Nuclear Weapons Sisterhood”, *New York Times*, 15 May 2019, <https://www.nytimes.com/2019/05/15/opinion/women-national-security.html>.

by gender-coded language describing experts as “graybeards”<sup>27</sup> or “silverbacks”.<sup>28</sup> It also cements a separation of people and perspectives between the fields of deterrence and of arms control and disarmament, the latter of which has seen a remarkable rise of women in leadership positions.<sup>29</sup> Eirini Lemos-Maniati, Deputy Director of the Arms Control, Disarmament, and WMD Non-Proliferation Centre at NATO, has observed the growing divide between these two communities over the last 20 years: “If you look back at the late 1990s or early 2000s, including the negotiations towards the INF Treaty [Treaty on Intermediate-range Nuclear Forces] and New START [new Strategic Arms Reduction Treaty], the deterrence and arms control communities used to work together very closely.”<sup>30</sup>

All this puts the priesthood at a disadvantage; the over-emphasis on technical accuracy comes at the expense of skills like diplomacy and empathy.<sup>31</sup> These are critical weaknesses for a policy community that needs to understand adversaries’ perceptions and interests to be effective. Richard Johnson, Deputy Assistant Secretary of Defense for Nuclear and Countering Weapons of Mass Destruction Policy, stressed the importance of understanding the full range of perspectives present in the nuclear weapons space for making sound policy.<sup>32</sup> This is ever more crucial, as new challenges arise, such as effectively responding to the impacts of climate change and extreme weather and of emerging and disruptive technologies on the safety and security of nuclear deterrence. Eirini Lemos-Maniati also underlined the importance of diversifying the expertise in order to be able to address the complex security landscape.<sup>33</sup>

Another downside of the homogeneity in the priesthood may be a reduced capacity for effective participation in cross-governmental decision-making. Where working methods and cultures differ significantly between homogeneous and diverse teams, collaboration may be difficult. This impediment was noted by a South African official, reflecting on collaboration between foreign policy and military officials on international security issues.<sup>34</sup>

## 2.3 Impact on human capital

Despite their negative effects on decision-making, the problematic standards and exclusivity set by the priesthood create an undeserved attraction. There is a sense of having to “make it” in a hyper-competitive environment like the priesthood. As former US Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy Elaine Bunn described, “[A mentor said to me] if you’re going to stay in the Defense Department, you need to do the nuclear, the targeting, the hard side of this, not just the arms control side or you’re not going to be taken seriously.”<sup>35</sup>

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<sup>27</sup> Nathan Hodge, “World Without Nukes? Not So Fast, Graybeards Say”, *Wired*, 6 May 2009, <https://www.wired.com/2009/05/world-without-nukes-not-so-fast-graybeards-say>.

<sup>28</sup> Arms Control Association, “New Risks and New Arms Control Solutions”, 15 April 2019, <https://www.armscontrol.org/armscontrol2019>.

<sup>29</sup> Isabel Martinez and Anna Schumann, “Who Runs the Nukes? Women!” *Nukes of Hazard* (blog), Center for Arms Control and Non-Proliferation, 19 February 2021, <https://armscontrolcenter.org/who-runs-the-nukes-women>.

<sup>30</sup> Interview with the author, 21 November 2023.

<sup>31</sup> Hurlburt et al., “The ‘Consensual Straitjacket’”, 11.

<sup>32</sup> Interview with the author, 9 November 2023.

<sup>33</sup> Interview with the author, 21 November 2023.

<sup>34</sup> Interview with the author, 31 October 2023.

<sup>35</sup> Hurlburt et al., “The ‘Consensual Straitjacket’”, 10.

For women and people of colour, working in such environments can be taxing.<sup>36</sup> Explicit and implicit expectations of how they should act in a majority-men and majority-white space can cause significant stress. Senior US women in the nuclear space describe having to perform the “constant mental and emotional calculus that comes with implicit sexism...and gendered expectations” and report that “adopting stereotypically masculine traits [firm demeanour and assertiveness] was crucial to success”.<sup>37</sup> Stereotypically feminine qualities, such as “being a team player, and being able to get buy-in from all relevant stakeholders”, were discounted.<sup>38</sup> However, exhibiting masculine traits against expectations of femininity also led to discrimination.

Women and people of colour expend significant time and energy walking this tightrope and experience imposter syndrome and self-censorship as a result. Attempts to drown out prejudiced expectations and discrimination by working extreme hours and being over-competent lead many to feel dissatisfied and burnt out and, eventually, to leave the field.<sup>39</sup> Additionally, the lack of peers and role models for women and people of colour considering a career in strategic defence may lead them to pursue other opportunities, which reinforces homogeneity within the priesthood. Laura Holgate explained that the “conservative way of thinking” and the “very little intellectual risk-taking”, the lack of women role models in this space, and the priesthood’s requirement for in-depth, niche knowledge of deterrence theory by way of a military background or PhD all contributed to her transitioning to other nuclear policy issues.<sup>40</sup>

## 2.4 Limiting leaders’ horizons

Ultimately, the disproportionate agenda-setting power and long-standing privileged access to the highest levels of government accorded to the priesthood can prevent alternative proposals from reaching senior decision makers. This, in turn, shapes political leaders’ expectations of what constitutes sound nuclear weapons policy and limits what they consider possible, thus reinforcing nuclear orthodoxy.

An example that illustrates this horizon-limiting effect is the refusal by several nuclear-armed countries to consider a no-first-use policy to advance risk reduction. Opposition to a no-first-use policy is rooted in the idea that ruling out a first strike invites aggression with conventional weapons, based on outdated deterrence concepts that are inconsistent with historical evidence, most recently, the Russian Federation’s invasion of Ukraine.<sup>41</sup>

Lack of diversity among the officials making nuclear weapons policy reduces innovation and problem-solving potential; it excludes and diminishes the qualities and expertise offered by traditionally under-represented actors, which is crucial for sound decision-making. The structural problems of the

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<sup>36</sup> Renata Dwan, “Women in Arms Control: Time for a Gender Turn?”, *Arms Control Today* 49, no. 8 (2019): 6–11, <https://www.jstor.org/stable/26823065>.

<sup>37</sup> Hurlburt et al., “The ‘Consensual Straitjacket’”, 19.

<sup>38</sup> Ibid.

<sup>39</sup> Colleen Walsh, “Closing the Gender Gap in Nuclear Security”, *Harvard Gazette*, 3 November 2021, <https://news.harvard.edu/gazette/story/2021/11/closing-the-gender-gap-in-the-field-of-nuclear-security>.

<sup>40</sup> Interview with the author, 24 October 2023.

<sup>41</sup> Nina Tannenwald, “It’s Time for a U.S. No-First-Use Nuclear Policy”, *Texas National Security Review* 2, no. 3 (2019): 131–137, <https://tnsr.org/roundtable/its-time-for-a-u-s-no-first-use-nuclear-policy>; Andrew Fetter, “Five Nuclear Reflections on the Ukraine War”, European Leadership Network, 19 June 2023, <https://www.europeanleadershipnetwork.org/commentary/five-nuclear-reflections-on-the-ukraine-war>.

priesthood and the resulting vulnerabilities serve as an example to leaders that increasing diversity is a legitimate policy tool for addressing contemporary security challenges, such as nuclear risk – not just a “nice to have” human resources policy.

### 3. Why the business case is ineffective and inaccurate

To raise awareness of diversity’s transformative potential for nuclear weapons policy, advocates should employ arguments that build on diversity’s studied effects on human behaviour and collaboration. With the premium that the priesthood attaches to technical detail, a scientific case for diversity promises to be more persuasive to this key audience.

The argument already commonly used is the business case for diversity. It claims that simply having more diverse staff leads to better performance. Popularized by a 2015 McKinsey study, which indicated a positive relationship between diverse corporate leadership and financial profit, this idea has been adopted across many sectors.<sup>42</sup> It is repeated in numerous statements, policies and research papers in the nuclear field.<sup>43</sup>

The business case, however, is reductive. It says little about how behaviour and collaboration are different in diverse versus homogeneous teams. It leaves a “black box” around the socio-psychological dynamics that purportedly translate demographic diversity into performance gains. Ultimately, it suggests that governments and organizations can benefit from diversity by merely adding more staff from under-represented groups. This idea has been disproven.

The McKinsey study, for example, was found to be irreplicable. Its findings did not hold up when linking diversity with other performance metrics, like sales growth or shareholder returns. When adjusting for other variables, like company size, the relationship between boardroom diversity and profits disappeared.<sup>44</sup> Similar issues were found with successor studies.

It has become clear that diversifying staff alone leads to neither higher profits nor better teamwork nor more effective decision-making.<sup>45</sup> In fact, diversity messaging that emphasizes performance benefits – like the business case – has been shown to increase concerns about tokenization among people

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<sup>42</sup> Vivian Hunt, Dennis Layton and Sara Prince, “Why Diversity Matters”, McKinsey & Company, 1 January 2015, <https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/why-diversity-matters>.

<sup>43</sup> Sarah Bidgood at “Pipelines and Ceilings: The Gender Gap in Nuclear Policy”, Belfer Center for Science and International Affairs, 29 October 2021, <https://www.belfercenter.org/event/pipelines-and-ceilings-gender-gap-nuclear-policy>; “Joint Statement on Gender, Diversity and Inclusion at the 10th NPT Review Conference”, Reaching Critical Will, August 2022, [https://reachingcriticalwill.org/images/documents/Disarmament-fora/npt/revcon2022/statements/4Aug\\_Gender.pdf](https://reachingcriticalwill.org/images/documents/Disarmament-fora/npt/revcon2022/statements/4Aug_Gender.pdf); Nuclear Threat Initiative, “Our Commitment to Diversity, Equity, and Inclusion”, <https://www.nti.org/about/diversity-equity-and-inclusion-at-nti>; Gender Champions for Nuclear Policy, “Why Gender Equity?”, <https://gcnuclearpolicy.org/about/about>.

<sup>44</sup> Alex Edmans, “Is There Really a Business Case for Diversity?”, Medium, 30 October 2021, <https://medium.com/@alex.edmans/is-there-really-a-business-case-for-diversity-c58ef67ebffa>.

<sup>45</sup> Robin Ely and David Thomas, “Getting Serious about Diversity: Enough Already with the Business Case”, *Harvard Business Review*, November/December 2020, <https://hbr.org/2020/11/getting-serious-about-diversity-enough-already-with-the-business-case>.

from under-represented groups, reducing their sense of belonging to the workplace and raising doubts about the authenticity of the organization's interest in diversity.<sup>46</sup> Defining diversity by performance gains neither accurately captures how diversity changes the way people think and interact nor attracts talent from under-represented groups.

Moreover, it is important to acknowledge that introducing greater diversity into teams is not without risks. Diversity is a complex phenomenon that requires structural change and skilled management to have a positive effect. Only by better understanding the psychology behind it can we develop accurate, evidence-based, persuasive arguments for diversity and maximize its benefits for nuclear weapons policymaking.

## 4. What is the scientific case for diversity?

The scientific case complements arguments resting on the moral and restitutive benefits of including marginalized groups in decisions about nuclear weapons. These arguments focus on women, who have been denied access to what is seen as a masculine policy domain, and people of colour, especially Indigenous Peoples, who are disproportionately affected by nuclear weapons production and testing but whose voices are seldom heard in nuclear weapons policymaking. However, as values-based arguments, they may be easily written off by sceptics as liberal-progressive politics.

Instead, the scientific case demonstrates the value of diversity beyond ideas of what is “right”. By incorporating consistent empirical findings from studies in psychology and behavioural science, it opens the black box that the business case leaves shut. It highlights the processes by which demographic diversity shapes human thinking and interaction, but it also exposes the negative effects diversity can have through social friction.

Though an awareness of the different objectives that diversity efforts may serve is important, the scientific case is agnostic about the outcomes of the policymaking processes it seeks to diversify. Whereas moral arguments often state or imply that nuclear disarmament is their ultimate ambition or consequence, the scientific case does not prescribe a policy goal. Instead, it focuses on how diversity can make decision-making processes more immune to superficial assumptions and systemic fallacies and more open to innovation, in turn producing more effective solutions to policy challenges. This makes the scientific case accessible and persuasive to deterrence traditionalists and disarmament advocates alike, providing an opportunity to find common ground and incentivize enhancing diversity across the nuclear weapons space.

The scientific case incorporates the following findings:

- Diverse teams are less likely to misunderstand tasks because they discuss them more extensively, developing a shared task interpretation.
- Diverse teams make fewer mistakes because they frequently re-examine assumptions and evidence due to team members' increased accountability.<sup>47</sup>

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<sup>46</sup> Oriance Georgeac and Aneeta Rattan, “Stop Making the Business Case for Diversity”, *Harvard Business Review*, 15 June 2022, <https://hbr.org/2022/06/stop-making-the-business-case-for-diversity>.

<sup>47</sup> David Rock and Heidi Grant, “Why Diverse Teams Are Smarter”, *Harvard Business Review*, 4 November 2016, <https://hbr.org/2016/11/why-diverse-teams-are-smarter>.

- Where errors happen, they are more likely to be addressed in discussion. Diverse teams are better problem solvers too.
- Diverse teams have been shown to identify the correct solutions to puzzles more consistently than homogeneous teams.<sup>48</sup>

These effects have common origins. We assume that colleagues who look and act differently to us also hold different knowledge than we do, causing us to evaluate our own arguments more carefully.<sup>49</sup> In an interview for this paper, Laura Rockwood, long-time senior legal affairs official at the IAEA, said, “Working in a diverse environment taught me not to assume that others share my assumptions, think in the same way, or come to the same conclusions.”<sup>50</sup>

We are also more likely to expect people who are different to disagree with us.<sup>51</sup> This makes us consider dissent from someone of a different gender, age or race more seriously than from someone close to us, and it makes us put greater effort into defending our own view in response.<sup>52</sup> By encouraging critical thinking and discussion, diversity helps teams avoid task misunderstanding and mistakes. As one US official put it: “I have to think harder and communicate better in a diverse environment.... When I share my thoughts, I must reflect and provide support for my positions.”<sup>53</sup>

Diversity increases the exchange of unique information and new ideas. Members of homogeneous teams are more likely to assume that the information they hold is already known to their colleagues. The opposite is true in diverse teams.<sup>54</sup> Another important dynamic is social cohesion. Homogeneous teams have stronger social cohesion. To avoid exclusion, their members are incentivized not to challenge what they expect or know to be the consensus. Diverse teams have weaker social cohesion. This lowers the barriers to sharing new or dissenting views for all team members, including those from the majority.<sup>55</sup> In short, the research demonstrates that for innovative proposals to be made, heard and considered, it is important to have capable individuals who can contribute smart ideas, but it is even more important that these individuals are grouped in diverse teams.

However, interviews for this paper highlighted that individuals tend to be unaware of the specific effects of outer differences. Whereas interviewees confirmed that their awareness of others’ backgrounds, opinions and preferences shapes how they approach and interact with them, they generally did not report an awareness of outer differences having a discernible influence. Laura Holgate, recalling her time working at the US Department of Defense, said,

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<sup>48</sup> Katherine Phillips, “How Diversity Makes Us Smarter”, University of California, Berkeley, 18 September 2017, [https://greatergood.berkeley.edu/article/item/how\\_diversity\\_makes\\_us\\_smarter](https://greatergood.berkeley.edu/article/item/how_diversity_makes_us_smarter).

<sup>49</sup> Katherine Phillips, Gregory Northcraft and Margaret Neale, “Surface-Level Diversity and Decision-Making in Groups: When Does Deep-Level Similarity Help?”, *Group Processes and Intergroup Relations* 9, no. 4 (2006): 467–482, <https://doi.org/10.1177/1368430206067557>.

<sup>50</sup> Interview with the author, 13 October 2023.

<sup>51</sup> Phillips, “How Diversity Makes Us Smarter”.

<sup>52</sup> Ibid.

<sup>53</sup> Jay Porter, “Diversity: Not Just a Cause for the Underrepresented”, *Foreign Service Journal*, September 2018, <https://afsa.org/diversity-not-just-cause-underrepresented>.

<sup>54</sup> Phillips, Northcraft, and Neale, “Surface-Level Diversity”, 468.

<sup>55</sup> Ibid.

It's difficult to pinpoint whether I was sometimes undermined specifically because I was the only woman in the room or because I was civilian and not military or because I was a political appointee. All of these may have played a role but it is difficult to isolate the effects of gender from other factors.<sup>56</sup>

Further, it should be recognized that many of the findings about the advantages of diverse teams were reached in experiments under controlled conditions. To translate them into real-life environments, it is important to account for the social friction that diversity can cause.<sup>57</sup>

Studies consistently show that individuals prefer to work with others who are like them and tend to distrust those who are different.<sup>58</sup> We tend to categorize individuals into subgroups by outer differences, such as skin colour, gender expression and speech. If team members become set in their perception of colleagues in subgroups, the same presence of outer differences that helps diverse teams avoid mistakes and generate innovative ideas can create distrust, conflict, poor communication and low morale.<sup>59</sup> Subgroup formation can lead to stereotyping and an “us–them” mentality.<sup>60</sup> This situation removes the incentives for exchanging diverging or new ideas and shrinks diverse teams’ innovation potential.

The sociopolitical context of different identities adds a layer to this friction. A senior US national security official recalled instances where policy discussions between men and women staff deteriorated because of underlying societal tensions around gender.<sup>61</sup> This highlights that demographically diverse teams can suffer from “othering” not only based on outer differences but also based on the sociopolitical meaning that these differences carry, (e.g., contested ideas of what is typically masculine or feminine behaviour).

Increasing demographic diversity in a team can have other negative effects too: A greater diversity of views, leading to more critical examination of evidence and assumptions, can reduce a group’s confidence in joint decisions and work outcomes because they may not align with the preferences and experiences of some team members. In short, diverse teams may make more accurate decisions, but they may feel less certain that their decisions are correct. This can have negative implications for the implementation of agreed decisions. Since consistent shared understanding within an administration and clear, coherent signalling to others are vital for reducing the likelihood of unintended nuclear weapons use, this is a particularly relevant risk of diversity in relation to nuclear weapons policy.

Finally, diversity measures can alienate those traditionally in the majority: Experiments suggest that white men are likely to expect unfair treatment at organizations that emphasize diversity, regardless of their personal politics or views on diversity.<sup>62</sup> A zero-sum mentality, believing equitable access to opportunities to come at the expense of those who have been enjoying privileged access to the same, seems to be commonplace. If left unaddressed, this can lead to pushback against diversity measures.

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<sup>56</sup> Interview with the author, 24 October 2023.

<sup>57</sup> Phillips, “How Diversity Makes Us Smarter”.

<sup>58</sup> Catarina Fernandes and Jeffrey Polzer, “Diversity in Groups”, in *Emerging Trends in the Social and Behavioral Sciences*, ed. Robert Scott and Stephan Kosslyn (Hoboken: Wiley, 2015), 2.

<sup>59</sup> Ibid.

<sup>60</sup> Astrid Homan and Lindred Greer, “Considering Diversity: The Positive Effects of Considerate Leadership in Diverse Teams”, *Group Processes & Intergroup Relations* 16, no. 1 (2013): 105–121, <https://doi.org/10.1177/1368430212437798>.

<sup>61</sup> Interview with the author.

<sup>62</sup> Porter, “Diversity”.

A former senior Pentagon official, who had been involved in developing the most recent Nuclear Posture Review, noted an example for such pushback from the nuclear priesthood. Some officials in national and multilateral settings questioned the utility of promoting policy innovation through the inclusion of diverse officials in the Review, expressing concern over whether a Review with “too much innovation” would be effectively implemented by traditionalist elements of the nuclear policy community.<sup>63</sup>

## 5. A guide to talking diversity

Diversity advocates may consider the following tips on making more evidence-based, nuanced and persuasive arguments for greater demographic diversity in the nuclear weapons space.

### ► Diversity is more than the “business case”

A simplistic framing of diversity, as in the business case, is counterproductive. Its suggestion that simply adding more diverse staff to an organization produces performance gains is not only wrong, it promotes the tokenization of those belonging to under-represented groups. Diversity advocates should retire this line of reasoning.

Instead, advocacy should present a holistic picture of diversity as a long-term strategy that has opportunities and risks and requires skilled implementation to be successful, like any other strategy. With this approach, diversity advocates can help leaders differentiate between effective and ineffective diversity programmes that take into account risks and potential pushback, using the added insights into how diversity shapes human thought and collaboration. This can help make diversity efforts more realistic, sustainable and effective.

### ► Demographic diversity matters

Those opposing an emphasis on demographic diversity often argue that only a person’s skills and credentials should decide whether they enter or rise within the structures that control nuclear weapons; their gender, race, and so on, should not matter. Ironically, this ignores the reality that women, people of colour, and others have long been denied access to nuclear weapons policymaking precisely *because* of their outer characteristics or structural disadvantages (e.g. a lack of mentorship or personal connections). It is not by coincidence that, in Western nuclear-armed states, leadership in strategic defence has consistently been staffed with white men.

The scientific case adds another counterargument by pointing to evidence that shows the importance of diversity for effective policymaking. Studies show that, without diversity in outer differences, critical questions that help eliminate false assumptions and errors are less likely to be raised and innovative proposals are less likely to be made, heard and enacted. Having capable people on a team is only the first step; for more effective and innovative policymaking, those capable people should be demographically diverse.

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<sup>63</sup> Interview with the author, 17 November 2023.

### ► Connecting the dots is crucial

Sometimes, pro-diversity arguments can lack a sense of direction. Promoting diversity for diversity's sake has inherent value; it supports equitable participation in high-stakes decisions about nuclear weapons.

However, connecting the dots between the benefits of diversity and the positive outcomes they can help achieve, or between the lack of diversity and the negative consequences thereof, strengthens the argument that diversity is an effective solution to security challenges and not just a “nice to have” human resources policy.

Eirni Lemos-Maniati, a senior NATO official, stressed, “We need to get better at communicating to what end we want to increase diversity in the nuclear weapons field. We need to be clear about what we want to achieve through diversity rather than focusing on diversity as an end in itself.”<sup>64</sup> Being specific about the change that diversity is intended to effect underlines that it is a policy tool that leaders should use, like others, to achieve their strategic objectives.

### ► Testimonies from the field are a vital data source

There is still very little information available about the state of diversity in the nuclear weapons establishment and how this affects nuclear weapons policy. Comprehensive studies involving officials will likely not be possible due to the degree of secrecy involved. This makes personal testimonies from those who work, or have worked, on nuclear weapons policy essential for diversity advocacy, especially where direct lines between the diverse composition of a team and the outcomes of policy processes can be drawn. Not only do these accounts lend credibility to the case for diversity, they help make the more abstract findings from the studies cited in this paper more graspable for practitioners.

Eirini Lemos-Maniati recalled the update of NATO's Chemical, Biological, Radiological and Nuclear Defence Policy in 2022 as one such example.<sup>65</sup> The demographic diversity among headquarters staff in 2022 ensured that this policy included gender considerations for the first time. By recognizing and addressing gender-based differences in requirements for equipment, medical management, protection and capacity-building, the policy makes an important contribution to increasing military readiness and supporting national resilience against chemical, biological, radiological and nuclear threats.

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<sup>64</sup> Interview with the author, 21 November 2023.

<sup>65</sup> Interview with the author, 21 November 2023.

## 6. Walking the talk: Harnessing the benefits of diversity

To reap the benefits of diversity, leaders have to create conditions that release its positive effects on behaviour and collaboration and reduce stereotyping and conflict. How can they do this? This section offers five concrete good practices, the effectiveness of which has been shown in psychological and behavioural research and in the experiences of senior officials in the nuclear weapons space.

### ► Investigate bias and activate social accountability

The benefits of diversity become accessible when all team members are able to openly discuss hierarchies and work processes, shape the agenda, influence strategy and policy, exercise leadership, and receive recognition and reward.<sup>66</sup>

Emphasizing that equality in numbers is not sufficient for a work environment that thrives on diversity, Mexico's Coordinator for Disarmament and Non-Proliferation, Maria Antonieta Jaquez, added that, while the number of women in nuclear weapons policymaking has grown, less palpable limits to inclusion remain: "It's not just about being able to speak up or contribute, but also about the weight or authority your contributions carry. The work of most women in the field, even in senior positions, is often subject to review or approval by men at the same seniority level." This structural inequity limits the innovation potential of gender-diverse teams.<sup>67</sup>

A key step in improving the conditions for diversity to have a positive effect is investigating how the allocation of opportunities, influence and rewards in a team may be biased.<sup>68</sup> As referenced earlier, this bias arises because leaders recognize and remember talented staff more quickly when they can identify with them. Especially in high-pressure situations, leaders tend to rely on staff who are like them. This leads others to be denied the experience they need to be promoted and leaves significant leadership and innovation potential untapped.

Because of this, the successful de-activation of bias depends to a large extent on changes in decision makers' personal behaviour. This is why their deep involvement in the change process, especially if they belong to the majority group of white men, is crucial. Having analysed structural inequities, leadership should communicate a clear vision for change, motivate and guide its implementation, and ensure continual monitoring and adjustments.

An emphasis on data and transparency is especially important for successful change as they activate social accountability. Once people know that their decisions may be compared against objective data, they tend to base those decisions more closely on an evidentiary basis. In a case from the legal services industry, a task force was created to gather data about the career progress of women. Once managers

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<sup>66</sup> Sylvia Ann Hewlett, Melinda Marshall and Laura Sherbin, "How Diversity Can Drive Innovation", *Harvard Business Review*, December 2013, <https://hbr.org/2013/12/how-diversity-can-drive-innovation>.

<sup>67</sup> Interview with the author, 23 October 2023.

<sup>68</sup> Ely and Thomas, "Getting Serious about Diversity".

knew that their promotion decisions would be transparent, the share of senior women staff tripled over a few years because of the incentive to base decisions on clear reasoning and trackable evidence.<sup>69</sup>

### ► Promote a community workplace culture

Diversity is more likely to increase effectiveness in teams with a culture that emphasizes shared objectives, equity between interests, and commonalities among members, instead of individuals' traits and achievements.<sup>70</sup> This helps colleagues base their sense of belonging on being members of the team rather than being members of a particular subgroup within the team (e.g., men, women), helping prevent the us–them thinking that inhibits collaboration and innovation. This community workplace culture increases creativity, reduces conflict and makes debate productive and results-oriented rather than obstructive.<sup>71</sup>

From his experience as a mediator between different perspectives within the US government, especially between the deterrence and the arms control and non-proliferation communities, Richard Johnson highlighted that a participatory culture that promotes open discussion can enhance the procedural justice of policymaking and ensure that decisions are more widely accepted because they were reached through an inclusive process.<sup>72</sup> This may also help remedy the reduced confidence in decision-making outcomes that diverse teams may have a higher risk of experiencing.

Interviews for this paper also highlighted the essential role that effective leadership plays in creating a culture that activates diversity's benefits. "Leadership makes a key difference in group identity formation. An effective leader makes all team members feel that they are pulling in the same direction", Laura Rockwood concluded from her 28 years serving at the IAEA.<sup>73</sup>

A South African government official reflected on their experience working in a demographically diverse team, saying, "With the right culture, you might have intense discussions, but there is a trust factor. We are aware that we are a cohesive unit and when we disagree, we disagree on positions, not personality."<sup>74</sup> These experiences match findings about collaboration and the team identity of diverse groups, in which the initial friction caused by the presence of differences is either ameliorated or exacerbated, largely depending on interventions by leadership.<sup>75</sup>

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<sup>69</sup> Frank Dobbin and Alexandra Kalev, "Why Diversity Programs Fail", *Harvard Business Review*, July/August 2016, <https://hbr.org/2016/07/why-diversity-programs-fail>.

<sup>70</sup> Fernandes and Polzer, "Diversity in Groups", 3.

<sup>71</sup> Jennifer Chatman et al., "Being Different Yet Feeling Similar: The Influence of Demographic Composition and Organizational Culture and Work Processes and Outcomes", *Administrative Science Quarterly* 43, no. 4 (1998): 749–780, <https://web.mit.edu/cortiz/www/Diversity/PDFs/Chatman%20et%20al,%201998.pdf>.

<sup>72</sup> Interview with the author, 9 November 2023.

<sup>73</sup> Interview with the author, 13 October 2023.

<sup>74</sup> Interview with the author, 31 October 2023.

<sup>75</sup> Frederick Herbert and Paris Will, "The Effects of Diversity on Teams Change over Time", *LSE Business Review*, 23 November 2021, <https://blogs.lse.ac.uk/businessreview/2021/11/23/the-effects-of-diversity-on-teams-change-over-time>.

## ► Count on integration and learning, not equality

An emphasis on equality risks penalizing the distinctive skills and approaches that diverse team members bring to the table.<sup>76</sup> For example, competitive work cultures that reward assertiveness can disadvantage women, who tend to favour collaboration, for not conforming to expectations based on masculine stereotypes.<sup>77</sup> When those differences are valued as a learning resource, work processes and outcomes are more closely examined and improved, and staff become more effective because they are more confident in bringing the full breadth of their qualities to bear, including those that differentiate them from the majority. Psychological safety (the freedom to be oneself without reprisal) and interpersonal congruence (the alignment of self-perception with the perception by others) are high.<sup>78</sup>

A crucial finding is that learning across diverse identities within a team is inherently positive for performance and morale, even when learnings do not relate to specific tasks.<sup>79</sup> When people with different backgrounds show vulnerability by asking for help and are met with support, this strengthens relationships, increases team resilience and improves problem-solving. Creating workplace cultures that promote learning and openness to change has attractive pay-offs for collaboration in high-pressure, high-stakes situations.<sup>80</sup>

The benefits of integration and learning have already been demonstrated in the nuclear weapons space. Michèle Flournoy reports that performance improved significantly once a human capital strategy, which invested in staff by providing mentoring, training and constructive feedback, was implemented.<sup>81</sup> The positive impact of such measures was echoed by a South African official, who attributed the positive work culture of their team to a leadership style that prioritized openness to new proposals, active mentorship, and constructive rather than dismissive feedback.<sup>82</sup>

Other senior US officials from the nuclear weapons space corroborate that greater diversity broadened the range of perspectives and challenged previously unquestioned assumptions. This outside-the-box thinking led to better-informed policy decisions *when* leadership encouraged unconventional and innovative ideas.<sup>83</sup>

## ► Accept and plan for resistance to diversity measures

As stated above, studies have found that white men, who constitute the majority in the nuclear weapons field, tend to feel threatened by diversity measures. Studies show that resisting challenges to our biases is natural. Biases are cognitive rules that help us make decisions more quickly and confidently; as default reactions they are, by their nature, resistant to change.<sup>84</sup>

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<sup>76</sup> Ely and Thomas, “Getting Serious about Diversity”.

<sup>77</sup> Ibid.

<sup>78</sup> Jeffrey Polzer, Laurie Milton and William Swann, Jr., “Capitalizing on Diversity: Interpersonal Congruence in Small Work Groups”, *Administrative Science Quarterly* 47, no. 2 (2002): 296–324, <http://www.jstor.org/stable/3094807>.

<sup>79</sup> Ely and Thomas, “Getting Serious about Diversity”.

<sup>80</sup> Ashley Groggins and Ann Marie Ryan, “Embracing Uniqueness: The Underpinnings of a Positive Climate for Diversity”, *Journal of Occupational and Organizational Psychology* 86, no. 2 (2013): 264–282, <https://doi.org/10.1111/joop.12008>.

<sup>81</sup> Hurlburt et al., “The ‘Consensual Straitjacket’”, 32.

<sup>82</sup> Interview with the author, 31 October 2023.

<sup>83</sup> Hurlburt et al., “The ‘Consensual Straitjacket’”, 32.

<sup>84</sup> Christine Wiggins-Romesburg and Rod Githens, “The Psychology of Diversity Resistance and Integration”, *Human*

However, they can be unlearned if challenged correctly. Accepting resistance enables openness and engagement with the change process. Stigmatizing resistance, instead, allows the resistor to perceive the change process, rather than their own bias, as the problem. Leaders should address resisters' psychological needs for acceptance, positive self-image and inclusion in the change process. Participation in diversity programmes helps resisters shift the source of their validation from acting in line with their bias to acting in line with a new diversity culture.

### ► Avoid boilerplate diversity measures

Traditional measures like compulsory training and complaint procedures are not effective at creating diverse and inclusive workplaces. “Outlawing” bias does not work. Instead, it often fuels resistance to change and disadvantages women and people of colour; for example, managers are more likely to dismiss allegations of discrimination when an organization prescribes diversity training.<sup>85</sup> A long-term study of over 700 US companies demonstrated that traditional diversity training had little to no positive effect on demographic diversity.<sup>86</sup> Instead, leaders should define an organization's lack of diversity and equity as a problem and invite staff to help find effective solutions, just as they would for other challenges facing their organization.

In doing so, they can use cognitive dissonance: When sensing a disconnect between their beliefs and actions, people tend to correct either. Evidence shows that, if prompted to actively participate in diversity measures, even sceptical staff start to think of themselves as diversity champions. Effective measures are those that promote individuals' responsibility for solving an organization's diversity challenges, for example by implementing diversity-focused recruitment, mentoring programmes and task forces.<sup>87</sup>

## 7. Reflections on the risk of co-optation

While focusing on diversity's effect on policymaking, this paper is also mindful of the different goals that diversity efforts can serve. There is a growing awareness in the field that diversity efforts by the nuclear weapons establishment regularly fail to achieve structural change beyond simply raising the share of staff from under-represented groups and that they often undermine the critical approaches to nuclear weapons that women, people of colour and others have been championing.<sup>88</sup>

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*Resources Development Review* 17, no. 2 (2018): 179–198, <https://doi.org/10.1177/1534484318765843>.

<sup>85</sup> Dobbin and Kalev, “Why Diversity Programs Fail”.

<sup>86</sup> Tessa Dover, Brenda Major and Cheryl Kaiser, “Diversity Policies Rarely Make Companies Fairer, and They Feel Threatening to White Men”, *Harvard Business Review*, 4 January 2016, <https://hbr.org/2016/01/diversity-policies-dont-help-women-or-minorities-and-they-make-white-men-feel-threatened>.

<sup>87</sup> Dobbin and Kalev, “Why Diversity Programs Fail”.

<sup>88</sup> Kjølv Egeland and Hebatalla Taha, “Experts, Activists, and Girl Bosses of the Nuclear Apocalypse: Feminisms in Security Discourse”, *Zeitschrift für Friedens- und Konfliktforschung*, 12 May 2023, <https://doi.org/10.1007/s42597-023-00100-3>; Senem Kaptan, “Feminist Perspectives Towards ‘Excessive Military Spending’: An Intimate Dialogue With Cynthia Enloe”, Women's International League of Peace and Freedom, 17 October 2019, <https://www.peacewomen.org/node/103744>; Ray Acheson, “Notes on Nuclear Weapons & Intersectionality in Theory and Practice: A Working Paper”, Princeton University, June 2022, <https://sgs.princeton.edu/sites/default/files/2022-06/acheson-2022.pdf>.

Diversity, particularly women's representation and empowerment, is becoming a consensus objective in Western nuclear weapons establishments. The nuclear weapons industry and state institutions like the UK Atomic Weapons Establishment<sup>89</sup> and US national nuclear laboratories advertise their commitment to diverse workforces and have created staff resource groups for women and people of colour.<sup>90</sup> They organize promotional events on International Women's Day and run programmes to recruit women and advertise their career paths to girls; for example, Lockheed Martin, Raytheon and others have funded and cooperated with the Girl Scouts of the USA and Girl Security.<sup>91</sup>

Why is this problematic? To be sure, there is inherent value in a greater diversity of people being included in decision-making on nuclear weapons, given their indiscriminate nature. Increasing diversity in the nuclear weapons complex is the necessary condition for activating diversity's positive potential for nuclear weapons policymaking.

However, a simplistic understanding of diversity's effects on human behaviour and collaboration, akin to the business case, is inadequate to address the systemic fallacies in traditional nuclear weapons thinking. Current diversity efforts in the nuclear weapons complex are limited to adding diverse staff into existing hierarchies, working methods and thinking. Continuing top-down control and intellectual orthodoxy leaves little room for diverse staff to introduce alternative approaches.

These corporate feminist practices may actually uphold traditional nuclear weapons thinking.<sup>92</sup> They help "future-proof" the nuclear weapons enterprise by dressing up existing power structures to fit modern expectations about progressiveness. Whereas critical feminism aims to highlight injustices in traditional nuclear weapons policy and erode nuclear weapons' legitimacy as "guarantors of security", the corporate feminist efforts of the nuclear weapons complex appropriate ideas like gender equality to aid recruitment and legitimize nuclear armament.

There is a risk that the nuclear weapons space as a whole will conflate corporate feminism with the critical academic and activist feminism that has informed 60 years of disarmament advocacy. Given the resources and reach of state and industry actors, the nuclear field's understanding of feminism could be reduced to an equal share of men and women carrying out an unchanged set of policies.

Critical feminism is an effective tool for promoting policy change by analysing the conceptual errors in traditional deterrence thinking and making visible how the production, maintenance, testing and use of nuclear weapons have harmed people.<sup>93</sup> Corporate feminism, however, is unlikely to trigger policy change.

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<sup>89</sup> Atomic Weapons Establishment, "Diversity and Inclusion", <https://www.awe.co.uk/responsible-business/our-people/diversity-and-inclusion>; Atomic Weapons Establishment, "Celebrating the Women of AWE", 8 March 2018, <https://www.awe.co.uk/2018/03/celebrating-the-women-of-awe>.

<sup>90</sup> C.J. Bacino, "The Diversity Issue", Los Alamos National Laboratory, 28 November 2022, <https://discover.lanl.gov/publications/national-security-science/2022-winter/the-diversity-issue>.

<sup>91</sup> Egeland and Taha, "Experts, Activists, and Girl Bosses", 10.

<sup>92</sup> Egeland and Taha, "Experts, Activists, and Girl Bosses", 3–4.

<sup>93</sup> Feminism is a form of critical theory. It investigates structures of power, "common sense" narratives, and the ways in which they relate to ideas of masculinity and femininity. A feminist perspective on nuclear weapons questions the validity of

## 8. Conclusions

The scientific case represents key changes in how the nuclear weapons field should understand diversity. It demonstrates that diversity shapes how group members think and interact in complex ways that can create more effective and innovative outcomes but also disrupt collaboration through social friction. This approach moves the field beyond the logic of the business case that adding more diverse staff automatically produces performance gains. It retires the simplistic idea of diversity as a one-dimensional scale on which more always equals better.

The scientific case creates an awareness that the presence of diversity is necessary but not sufficient for activating its positive potential. It shows that leaders must adapt hierarchies, working methods and organizational cultures to create the conditions in which diversity's benefits can be accessed. In this way, the scientific case enables leaders to differentiate between effective and ineffective diversity measures and provides them with good practices for implementing diversity, based on empirical evidence.

Crucially, the scientific case demonstrates that demographic diversity matters. It uses consistent empirical evidence about human thought processes and social dynamics to underline that a group's diverse composition plays at least as important a role as the individual capabilities of its members in creating efficacy and innovation in policymaking. This emphasis on empirical evidence also makes the scientific case a more accessible argument for the nuclear priesthood, a key audience for diversity advocacy.

In these ways, the scientific case provides an effective, nuanced, evidence-based and more persuasive line of reasoning that diversity advocates should employ to complement arguments based on ethics and social justice.

Further research should focus on tracing the effects of diversity on collaboration and work outcomes identified in psychological and behavioural studies in the real-life experiences of those working, or having worked, in the nuclear priesthood to reinforce the learnings presented in this paper. Likewise, identifying more case studies of (in)effective diversity measures in the nuclear weapons space would help leaders implement diversity more successfully and sustainably.

As important as increasing demographic diversity in nuclear weapons policymaking is raising awareness of the purposes that different diversity efforts serve. While there is inherent value in expanding access to work in the nuclear weapons complex, this is unlikely to enable policy innovation if not accompanied by structural change in hierarchies, working methods and intellectual orthodoxy. Those committed to reducing the influence of traditional nuclear weapons thinking should be diligent in assessing if and how corporate diversity programmes may serve to legitimize the status quo.

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traditional deterrence thinking and the association of power and status in the international system with the masculinized capacity to inflict mass violence. It highlights the harms nuclear weapons have inflicted on marginalized groups. Focusing on human security, it prioritizes the rights and well-being of people over the abstract idea of national security. It perceives nuclear weapons as contributors to global insecurity rather than as a source of security. For more, see Ray Acheson, "Mobilizing Feminist Action for Nuclear Abolition", *Arms Control Today*, March 2023, <https://www.armscontrol.org/act/2023-03/features/mobilizing-feminist-action-nuclear-abolition-0>.

# II. Achieving nuclear justice: A survivor-centric framework

by Rebecca Davis Gibbons<sup>94</sup>

## 1. Introduction

Beginning in 2010, diplomats, scholars and anti-nuclear activists placed renewed emphasis on the detrimental and unjust humanitarian effects of nuclear weapons in order to push forward the nuclear disarmament agenda. At that year's Review Conference of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the final consensus document included language on the "catastrophic humanitarian consequences" of nuclear use.<sup>95</sup> After that, the Humanitarian Initiative on the Impact of Nuclear Weapons held three conferences in 2013–2014, highlighting scientific research on nuclear risks and effects as well as the voices and experiences of individuals and communities directly harmed by nuclear detonations.<sup>96</sup> The experience of these survivors<sup>97</sup> helped build momentum for negotiating and adopting the Treaty on the Prohibition of Nuclear Weapons (TPNW) in 2017. The treaty, which entered into force in January 2021, prohibits the possession and use of nuclear weapons and all nuclear weapon-related activity.<sup>98</sup> The TPNW does not explicitly mention justice, but the treaty's positive obligations in Articles 6 and 7 represent a broad conception of nuclear justice by requiring treaty members to provide for victim assistance and environmental remediation.

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<sup>94</sup> The author is grateful to Dr Steven Herzog, Dr Renata Hessmann Dalaqua, Paula Jou Fuster, Dr Jaroslav Krasny, Elizabeth Minor and Franziska Stärk for their helpful feedback, to Jacob Beaulieu for research assistance, and to survivors of nuclear use and testing who have bravely shared their stories.

<sup>95</sup> 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Final Document, Volume I, Part I (New York, 2010), [https://undocs.org/NPT/CONF.2010/50%20\(VOL.I\)](https://undocs.org/NPT/CONF.2010/50%20(VOL.I)).

<sup>96</sup> John Borrie, "Humanitarian Reframing of Nuclear Weapons and the Logic of a Ban", *International Affairs* 90, no. 3 (2014): 625–646; Becky Alexis-Martin, Matthew Breay Bolton, Dimity Hawkins, Sydney Tisch, and Talei Lucia Mangioni, "Addressing the Humanitarian and Environmental Consequences of Atmospheric Nuclear Weapon Tests: A Case Study of UK and US Test Programs at Kiritimati (Christmas) and Malden Islands, Republic of Kiribati", *Global Policy* 12, no. 1 (2021): 106–121, <https://doi.org/10.1111/1758-5899.12913>; Sébastien Philippe, Sonya Schoenberger, and Nabil Ahmed, "Radiation Exposures and Compensation of Victims of French Atmospheric Nuclear Tests in Polynesia", *Science & Global Security* 30, no. 2 (2022): 62–94, <https://doi.org/10.1080/08929882.2022.2111757>; Matthew Breay Bolton, "Human Rights Fallout of Nuclear Detonations: Reevaluating 'Threshold Thinking' in Assisting Victims of Nuclear Testing", *Global Policy* 13, no. 1 (2022): 76–90, <https://doi.org/10.1111/1758-5899.13042>; Aiko Sawada, Julia Chaitin, and Dan Bar-On, "Surviving Hiroshima and Nagasaki – Experiences and Psychosocial Meanings", *Psychiatry* 67, no. 1 (2004): 43–60, <https://doi.org/10.1521/psyc.67.1.43.31249>; Masao Tomonaga, "The Atomic Bombings of Hiroshima and Nagasaki: A Summary of the Human Consequences, 1945–2018, and Lessons for *Homo sapiens* to End the Nuclear Weapon Age", *Journal for Peace and Nuclear Disarmament* 2, no. 2 (2019): 491–517, <https://doi.org/10.1521/psyc.67.1.43.31249>.

<sup>97</sup> Although the term "survivor" is generally preferred over the term "victim", many of the key international instruments use the latter (e.g., victim assistance). In this article, both terms will be used interchangeably.

<sup>98</sup> Rebecca Davis Gibbons, "The Humanitarian Turn in Nuclear Disarmament and the Treaty on the Prohibition of Nuclear Weapons", *The Nonproliferation Review* 25, nos. 1–2 (2018): 11–36, <https://doi.org/10.1080/10736700.2018.1486960>; Alexander Kmentt, *The Treaty Prohibiting Nuclear Weapons* (London: Routledge, 2021); Ray Acheson, *Banning the Bomb, Smashing the Patriarchy* (Lanham, MD: Rowman & Littlefield Publishers, 2021).

The need for nuclear justice stems from the US bombings in Hiroshima and Nagasaki, Japan, in August 1945 and the over 2,000 nuclear test explosions conducted by at least eight countries since then.<sup>99</sup> More than 500 of those tests were conducted above ground, spreading harmful radiation throughout the atmosphere.<sup>100</sup> Radiation harmed those in the vicinity of the tests, including those living in the area and those in the military who were assigned to the tests.<sup>101</sup> These survivors of nuclear use and testing face consequences such as higher risk of disease (including many types of cancer), polluted land and water, and negative psychological effects.<sup>102</sup> In addition, approximately 214,000 people died by the end of 1945 as a result of the attacks on Hiroshima and Nagasaki.<sup>103</sup>

Despite recent strong interest in the topic,<sup>104</sup> there is not yet a consensus framework laying out the mechanisms that would make up an ideal form of nuclear justice for those affected by nuclear use and testing.<sup>105</sup> At the first and second Meeting of States Parties and in intersessional meetings in between, members of the TPNW began working towards implementing Articles 6 and 7.<sup>106</sup> One prominent idea is establishing a fund to provide aid to survivors and communities. But are there additional mechanisms for providing justice?

Some advocates call for employing restorative justice or transitional justice to redress nuclear harms. Others argue for gender-sensitive and feminist foreign policy approaches. Applying a feminist foreign policy lens should involve an inclusive process of listening to survivors, learning about the harms they have faced, and exploring what they perceive as nuclear justice.

Acknowledging the ongoing work of TPNW members to establish a means to provide aid and assistance, this article explores the priorities and values reflected in recent calls for nuclear justice and then employs the testimonies of survivors to propose additional key justice mechanisms – defined as “a justice response, process, activity, measure, or practice”<sup>107</sup> – to develop a survivor-centred form of nuclear justice.<sup>108</sup>

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<sup>99</sup> At least eight states have conducted nuclear tests: China, Democratic People’s Republic of Korea, France, India, Pakistan, USSR/Russian Federation, United States of America and United Kingdom of Great Britain and Northern Ireland. For a detailed timeline of nuclear testing, see Daryl Kimball, “Nuclear Testing and Comprehensive Test Ban Treaty (CTBT) Timeline”, *Arms Control Association*, December 2023, <https://www.armscontrol.org/factsheets/NuclearTestingTimeline>.

<sup>100</sup> Daryl Kimball, “The Nuclear Testing Tally”, *Arms Control Today*, August 2023, <https://www.armscontrol.org/factsheets/nucleartesttally>.

<sup>101</sup> For example, see, Steven L. Simon and Andre Bouville, “Radiation Doses to Local Populations Near Nuclear Weapons Test Sites Worldwide”, *Health Physics* 82, no. 5 (2002): 706–725.

<sup>102</sup> Matthew B. Bolton and Elizabeth Minor, “Addressing the Ongoing Humanitarian and Environmental Consequences of Nuclear Weapons: An Introductory Review”, *Global Policy* 12, no. 1 (2021): 81–99.

<sup>103</sup> Bolton and Minor, “Addressing the Ongoing Humanitarian and Environmental Consequences of Nuclear Weapons”, 84.

<sup>104</sup> See, for example, the vast amount of work conducted by Bonnie Docherty at the Harvard Humanitarian Initiative (<https://hhi.harvard.edu>). Also see Franziska Stärk and Ulrich Kühn, “Roundtable: Making Nuclear Injustice an Agenda for Change”, *Bulletin of the Atomic Scientists*, 2 February 2023, <https://thebulletin.org/2023/02/roundtable-making-nuclear-injustice-an-agenda-for-change/#post-heading>.

<sup>105</sup> Bonnie Docherty, “From Obligation to Action: Advancing Victim Assistance and Environmental Remediation at the First Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons”, *Journal for Peace and Nuclear Disarmament* 3, no. 2 (2020): 253–264, <https://doi.org/10.1080/25751654.2020.1842657>.

<sup>106</sup> Rebecca Davis Gibbons and Stephen Herzog, “The First TPNW Meeting and the Future of the Nuclear Ban Treaty”, *Arms Control Today*, September 2022, <https://www.armscontrol.org/act/2022-09/features/first-tpnw-meeting-future-nuclear-ban-treaty>.

<sup>107</sup> Kathleen Daly, “What Is Restorative Justice? Fresh Answers to a Vexed Question”, *Victims & Offenders* 11, no. 1 (2016): 18, <https://doi.org/10.1080/15564886.2015.1107797>.

<sup>108</sup> This article focuses on those affected by nuclear use and testing. However, individuals and environments are negatively

Why is this effort important? Justice claims – consistent with David Welch’s definition, “the drive to correct a perceived discrepancy between entitlements and benefits”<sup>109</sup> – are increasing around the world as the international community becomes more aware of and sensitive to environmental, economic, racial and Indigenous justice. Establishing a framework of nuclear justice is long overdue, as harm from the nuclear weapons enterprise began almost 100 years ago. Many of those affected never received recognition, but it is not too late for everyone. The TPNW, as well as recent developments in the United Nations General Assembly,<sup>110</sup> offers an opportunity to renew efforts to achieve nuclear justice. This article seeks to contribute to discussions on the mechanisms suitable for providing justice for individuals and communities affected by nuclear use and testing. Inspired by different perspectives on justice, the article recommends specific mechanisms based on the justice claims of survivors of nuclear use and testing.

## 2. What type of justice?

When it comes to nuclear justice, scholars and advocates have called for concepts to be borrowed from existing justice frameworks and mechanisms. Though no extant theory of justice fits nuclear justice perfectly, several such theories offer important insights and inspiration. This section explores the relevance of restorative justice, transitional justice, gendered perspectives, intersectionality and intergenerational justice.

### 2.1 Restorative justice

Restorative justice is commonly invoked by those calling for nuclear justice. For example, the Good Energy Collective writes, “restorative justice places an obligation on the part of the federal government...players who knowingly harmed communities through nuclear weapons production and testing”.<sup>111</sup> Similarly, Matt Korda argues that the United States of America should begin a process of restorative justice for victims of the nuclear weapons enterprise.<sup>112</sup>

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impacted throughout the cycle of developing nuclear weapons: mining and milling uranium, enrichment, reprocessing, assembly, testing, dismantlement, and waste storage. As early parts of the nuclear fuel cycle have commercial applications, untangling commercial activities from weapon activities may be challenging. Moreover, Article 6 of the TPNW, “Victim assistance and environmental remediation”, calls for the treaty’s states parties to address the needs of individuals and environments “affected by the use or testing of nuclear weapons”, though the treaty’s preamble acknowledges broader effects of nuclear weapons. See <https://disarmament.unoda.org/wmd/nuclear/tpnw>. Other non-governmental organizations involved in the TPNW meetings note the harms existent throughout the nuclear fuel cycle. See, for example, “First Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons”, working paper submitted by Manhattan Project for a Nuclear-Free World, 8 June 2022, [https://documents.unoda.org/wp-content/uploads/2022/06/TPNW.MSP\\_.2022.NGO\\_.14.pdf](https://documents.unoda.org/wp-content/uploads/2022/06/TPNW.MSP_.2022.NGO_.14.pdf).

<sup>109</sup> David Welch, *Justice and the Genesis of War* (Cambridge: Cambridge University Press, 1993), 19. I am grateful to Franziska Stärk for pointing out this definition.

<sup>110</sup> United Nations General Assembly, “Addressing the legacy of nuclear weapons: providing victim assistance and environmental remediation to Member States affected by the use or testing of nuclear weapons” A/RES/78/240, 28 December 2023, <https://digitallibrary.un.org/record/4032824>.

<sup>111</sup> Jackie Toth, Jessica Lovering, Ariel Gould and Colter Schroer, “Interim Nuclear Justice Roadmap”, Good Energy Collective, 31 October 2022, <https://www.goodenergycollective.org/policy/interim-nuclear-justice-roadmap>.

<sup>112</sup> Matt Korda, “We Need a Green New Deal for Nuclear Weapons”, *Bulletin of the Atomic Scientists*, 11 September 2019, <https://thebulletin.org/2019/09/we-need-a-green-new-deal-for-nuclear-weapons>.

Restorative justice has an intuitive appeal for addressing the suffering faced by survivors of nuclear use and testing. It implies that the survivors and their communities would be “restored” in some way through the justice process. However, restorative justice is most commonly used in criminal justice settings, with the goal of repairing the harm caused by an offender.<sup>113</sup> For example, a victim of harassment or other interpersonal harm may directly communicate with the perpetrator and vice versa, supported and witnessed by other members of the community. Kathleen Daly, an expert on restorative justice, argues that it is best defined as a justice mechanism “to address crime, disputes, and bounded community conflict.”<sup>114</sup> Her definition explicitly “exclude[s] civil war, state violence, and wider socio-political conflicts and cleavages, for which other justice mechanisms are appropriate.”<sup>115</sup>

When defined narrowly as a specific justice mechanism, restorative justice does not address state violations, but those calling for this type of justice in the nuclear context are likely considering a broader definition. For instance, a values-based conception of restorative justice emphasizes that humans are “deeply connected to one another and to the environment” and sees this approach “as a wider social movement with an aim to transform individuals and social structures to be in alignment with this connected and relational worldview.”<sup>116</sup> In other words, applying a broader view of restorative justice to the nuclear realm could mean repairing the broken relationships between affected communities and nuclear-armed governments by creating systems to aid harmed individuals and the environments in which they work and live.

This more expansive version of restorative justice appears to be what New Mexican Senator Ben Ray Lujan meant when talking about the “downwinders” in his state, those who were exposed to radiation from US nuclear tests. He explained, “This is an issue of justice – of making New Mexicans whole who played a role in our national security. They paid a price for it – their health, livelihoods, and lives.”<sup>117</sup> Thus, although the specific mechanism may not apply, nuclear justice can take inspiration from the values of restorative justice in terms of transforming and restoring the connections between those affected and governments and aiding individuals with a goal of restoring (to the extent possible) their health, economic well-being, community and environment.

## 2.2 Transitional justice

Others argue that nuclear justice should take the form of transitional justice, a means by which societies respond to the legacies of massive human rights abuses.<sup>118</sup> Some commentators have proposed the development of a fund to aid both survivors and the environment as part of a transitional justice

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<sup>113</sup> Christian B. M. Gade, “Is Restorative Justice Punishment?” *Conflict Resolution Quarterly* 38, no. 3 (2021): 127–155, <https://doi.org/10.1002/crq.21293>; Masahiro Suzuki and Xiaoyu Yuan, “How Does Restorative Justice Work? A Qualitative Meta-synthesis”, *Criminal Justice and Behavior* 48, no. 10 (2021): 1347–1365, <https://doi.org/10.1177/0093854821994622>.

<sup>114</sup> Daly, “What Is Restorative Justice?” 11

<sup>115</sup> Daly, “What Is Restorative Justice?” 21.

<sup>116</sup> Lindsey Pointer, Chloe Dutreuil, Brianna Livelli, Catalina Londono, Clare Pledl, Paula Rodriguez, Ping Showalter and Rodney “Page” Tompkins, “Teaching Restorative Justice”, *Contemporary Justice Review* 25, nos. 3–4 (2022): 272, <https://doi.org/10.1080/10282580.2023.2181286>.

<sup>117</sup> Lesley M. M. Blume, “Collateral Damage: American Civilian Survivors of the 1945 Trinity Test”, *Bulletin of the Atomic Scientists*, 17 July 2023, <https://thebulletin.org/premium/2023-07/collateral-damage-american-civilian-survivors-of-the-1945-trinity-test>.

<sup>118</sup> See, for example, Colleen Moore, “Seeking Justice for Victims of Nuclear Testing”, Inkstick Media, 29 August 2019, <https://inkstickmedia.com/seeking-justice-for-victims-of-nuclear-testing>.

approach.<sup>119</sup> The final document of the first meeting of TPNW states parties in July 2022 also proposed a fund for victims, which will be discussed later in the article.<sup>120</sup>

The United Nations Secretary-General has defined transitional justice as “the full range of processes and mechanisms associated with a society’s attempts to come to terms with a legacy of large-scale past abuses, in order to ensure accountability, serve justice and achieve reconciliation.”<sup>121</sup> Transitional justice mechanisms have been employed in many countries transitioning out of conflict and/or dictatorial regimes, including Argentina, Chile, Liberia, Sierra Leone and South Africa. Among the most commonly used mechanisms are trials, truth commissions, amnesty for perpetrators, reparations for victims and relatives of victims, and lustration (or removal) of certain officials or group members.<sup>122</sup>

As the goal of transitional justice is to help transform a country from one in which large-scale human rights abuses occur into one in which they would not, the state transformation is often significant, such as moving from an authoritarian regime to a democracy. Cases of nuclear testing are quite different. As such, some of the common mechanisms of transitional justice, such as lustration, are less likely to apply to injustices stemming from nuclear use and testing decades ago. In addition, reparations usually imply taking responsibility for the abuses, so compensation (without taking responsibility) may be more likely when it comes to aiding nuclear survivors. Nonetheless, practitioners of nuclear justice may be able to borrow research and insights from specific transitional justice mechanisms, particularly those seeking truth and providing compensation.

## 2.3 Intersectionality and justice

Many in the nuclear disarmament and advocacy fields emphasize the importance of an intersectional approach when considering nuclear justice mechanisms. Intersectionality brings attention to the fact that factors such as gender, age, ethnicity shape the impacts of nuclear weapons, including social and psychological effects burdening victims.<sup>123</sup> For instance, children are more negatively affected by ionizing radiation than adults exposed to a similar amount, with girls facing the most harm.<sup>124</sup> Research

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<sup>119</sup> See, for example, Jana Baldus, Caroline Fehl and Sascha Hach, “NPT 2022: An Opportunity to Advance Nuclear Justice”, *Global Policy*, May 2022, <https://www.globalpolicyjournal.com/articles/conflict-and-security/npt-2022-opportunity-advance-nuclear-justice>.

<sup>120</sup> Report of the First Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons, TPNW/MSP/2022/6 (Vienna, 21–23 June 2022), <https://undocs.org/Home/Mobile?FinalSymbol=TPNW%2FMSP%2F2022%2F6&Language=E&DeviceType=Desktop&LangRequested=False>.

<sup>121</sup> United Nations Security Council, Report of the United Nations Secretary-General, The Rule of Law and Transitional Justice in Conflict and Post-Conflict Societies, S/2004/616 (23 August 2004), 4, <https://digitallibrary.un.org/record/527647>.

<sup>122</sup> Tricia D. Olsen, Leigh A. Payne and Andrew G. Reiter, “Transitional Justice in the World, 1970–2007: Insights from a New Dataset”, *Journal of Peace Research* 47, no. 6 (2010): 805, <http://www.jstor.org/stable/20798965>.

<sup>123</sup> For instance, women in Kazakhstan exposed to radiation from testing were more likely than exposed men to develop digestive cancers. See Susanne Bauer, Boris I. Gusev, Ludmila M. Pivina, Kazbek N. Apsalikov and Bernd Grosche, “Radiation Exposure due to Local Fallout from Soviet Atmospheric Nuclear Weapons Testing in Kazakhstan: Solid Cancer Mortality in the Semipalatinsk Historical Cohort, 1960–1999”, *Radiation Research* 164, no. 4, part 1 (2005): 409–419, <https://www.jstor.org/stable/3581526>. Women and girls were more likely to suffer with solid cancers in the decades following the bombings in Hiroshima and Nagasaki. See Kotaro Ozasa, Yukiko Shimizu, Akihiko Suyama, Fumiyoshi Kasagi, Midori Soda, Eric J. Grant, Ritsu Sakata, Hiromi Sugiyama and Kazunori Kodama, “Studies of the Mortality of Atomic Bomb Survivors, Report 14, 1950–2003: An Overview of Cancer and Noncancer Diseases”, *Radiation Research* 177, no. 3 (2012): 229–243, <http://www.jstor.org/stable/41433189>.

<sup>124</sup> National Research Council, *Health Risks from Exposure to Low Levels of Ionizing Radiation: BEIR VII Phase 2* (Washington, DC: National Academies Press, 2006), 7, <https://nap.nationalacademies.org/read/11340/chapter/1>.

also indicates that women may have greater negative psychological effects from radiation exposure, with mothers of children experiencing particularly high levels of stress.<sup>125</sup> Many women victims of the Hiroshima and Nagasaki bombings faced especially harsh discrimination when it came to marriage.<sup>126</sup> Men also face sex-specific and gendered effects, including potential infertility from exposure to radiation and the loss of traditional and cultural roles due to the loss of land to nuclear testing.<sup>127</sup> Nuclear justice, therefore, must take these gendered effects into account when considering justice for each individual.

In addition to gender, there are other identity-based aspects of nuclear effects,<sup>128</sup> making an intersectional perspective essential for developing a survivor-centric form of nuclear justice. Intersectionality refers to the fact that “race, class, gender, sexuality, ethnicity, nation, ability, and age operate not as unitary, mutually exclusive entities, but as reciprocally constructing phenomena that in turn shape complex social inequalities.”<sup>129</sup>

An intersectional perspective is especially important when contemplating the effects of nuclear testing, as tests were conducted in locations perceived as peripheral to power centres and among groups that were often marginalized by more powerful political actors, including Indigenous communities, colonies and former colonies.<sup>130</sup> Intersectionality “helps build a more holistic definition of ‘justice’ from both a legal and socio-cultural perspective, which can lead to a fuller understanding of what remediation could look like.”<sup>131</sup> Gender, race, ethnicity, socioeconomic status, prior colonization and geography may all intersect when it comes to nuclear justice.

With intersectionality and gender in mind, this article takes inspiration from the many countries that have adopted feminist foreign policy approaches to inform their framework for nuclear justice. The international community’s normative commitment to gender equality was formalized in the United Nations 1948 Universal Declaration of Human Rights, with a more recent incarnation found in United Nations Security Council resolution 1325 on women, peace and security, adopted in October 2000. The landmark resolution calls for bringing women and girls into peacebuilding and conflict-reduction activities and recognizes that women and girls may have different needs from men and boys throughout

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<sup>125</sup> Anne Guro Dimmen, “Gendered Impacts: The Humanitarian Impacts of Nuclear Weapons from a Gender Perspective”, IL-PI-UNIDIR Vienna Conference Series (International Law and Policy Institute, 2014), <https://unidir.org/sites/default/files/publication/pdfs/gendered-impacts-en-620.pdf>.

<sup>126</sup> Elaine Natalie and Katie Yoon, “Hibakusha: The Human Cost of Nuclear Weapons”, Asia-Pacific Leadership Network, 30 March 2021, [https://www.apln.network/analysis/commentaries/hibakusha-the-human-cost-of-nuclear-weapons#\\_ftnref11](https://www.apln.network/analysis/commentaries/hibakusha-the-human-cost-of-nuclear-weapons#_ftnref11).

<sup>127</sup> Renata Hessmann Dalaqua, James Revill, Alastair Hay and Nancy Connell, “Missing Links: Understanding Sex- and Gender-Related Impacts of Chemical and Biological Weapons” (Geneva: UNIDIR, 2019), <https://doi.org/10.37559/WMD/19/gen1>.

<sup>128</sup> Mariana Budjeryn and Togzhan Kassenova, “Nuclear Shades of Red Racism”, Inkstick Media, 24 September 2020, <https://inkstickmedia.com/nuclear-shades-of-red-racism>.

<sup>129</sup> Patricia Hill Collins, “Intersectionality’s Definitional Dilemmas”, *Annual Review of Sociology* 41, no. 2 (2015): 1–20, <https://www.annualreviews.org/doi/pdf/10.1146/annurev-soc-073014-112142>.

<sup>130</sup> Robert Jacobs, “Nuclear Conquistadors: Military Colonialism in Nuclear Test Site Selection during the Cold War”, *Asian Journal of Peacebuilding* 1, no. 2 (November 2013): 157–177, <https://ipus.snu.ac.kr/eng/archives/ajp/volume-1-number-2-november-2013/research-article/nuclear-conquistadors-military-colonialism-in-nuclear-test-site-selection-during-the-cold-war>.

<sup>131</sup> Mari Faines, “No Justice Is Possible without Studying the Injustices of Nuclear Weapons”, *Bulletin of the Atomic Scientists*, 2 February 2023, <https://thebulletin.org/2023/02/no-justice-is-possible-without-studying-the-injustices-of-nuclear-weapons>.

conflict resolution and peacebuilding processes.<sup>132</sup> Bringing gender to the fore eventually led some states to codify feminist approaches to foreign policy, under which a gender lens would be used beyond conflict and conflict resolution and would include considerations of equal participation in all areas of international security. However, equal participation is yet to be achieved in the nuclear realm.<sup>133</sup>

Sweden, in 2014, was the first country to explicitly bring in a feminist approach to its foreign policy.<sup>134</sup> Three themes have been noted in the development of the approach in Sweden: feminist ethical principles of inclusion and human security (i.e. greater inclusion of women and girls in security considerations); gender cosmopolitanism (i.e. security for all human beings and communities); and empathetic cooperation (i.e. emphasizing dialogue).<sup>135</sup> In terms of inclusion, the Swedish government highlighted the importance of “listen[ing] to stories of women and other marginalized groups subjected to violence and conflict”,<sup>136</sup> an important factor in developing a survivor-centric nuclear justice framework.

Germany has also pursued a feminist foreign policy, with government guidance from 2023 highlighting the inclusivity and intersectionality:

Feminist foreign policy is...for all members of a society. It is inclusive rather than exclusive. It takes into account the fact that discrimination is never one-dimensional. And therefore it stands up for everyone who is pushed to societies' margins because of their gender identity, origin, religion, age, disability or sexual orientation or for other reasons.<sup>137</sup>

Significantly, the German guidelines for feminist foreign policy note the necessity of “fac[ing] up to historical responsibility, including for our colonial past”,<sup>138</sup> an important point for nuclear justice. The German guidance states: “We support efforts to recognise and compensate the victims of nuclear tests. We strengthen humanitarian arms control and advocate for a safe world without nuclear weapons.”<sup>139</sup> Other countries with feminist foreign policies include Canada, Chile, Colombia, France, Luxembourg, Mexico, the Kingdom of the Netherlands, Slovenia and Spain.<sup>140</sup>

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<sup>132</sup> Louise Olsson and Theodora-Ismene Gizelis, “An Introduction to UNSCR 1325”, *International Interactions* 39, no. 4 (2013): 425–434, <https://doi.org/10.1080/03050629.2013.805327>.

<sup>133</sup> See, for example, Renata Hessmann Dalaqua, Kjølv Egeland and Torbjørn Graff Hugo, *Still Behind the Curve: Gender Balance in Arms Control, Non-Proliferation and Disarmament Diplomacy* (Geneva, UNIDIR: 2019), <https://unidir.org/files/publication/pdfs/still-behind-the-curve-en-770.pdf>.

<sup>134</sup> Though Sweden was an innovator in pursuing a feminist foreign policy, the new government elected in 2022 disavowed the policy. See, for example, Merlyn Thomas, “Sweden Ditches ‘Feminist Foreign Policy’”, BBC News, 19 October 2022, <https://www.bbc.com/news/world-europe-63311743>.

<sup>135</sup> Karin Aggestam and Annika Bergman-Rosamond, “Swedish Feminist Foreign Policy in the Making: Ethics, Politics, and Gender”, *Ethics & International Affairs* 30, no. 3 (2016): 326, <https://doi.org/10.1017/S0892679416000241>.

<sup>136</sup> Aggestam and Bergman-Rosamond, “Swedish Feminist Foreign Policy in the Making”, 326.

<sup>137</sup> Federal Foreign Office, “Shaping Feminist Foreign Policy”, (Federal Government of Germany, 2023), 3, <https://www.auswaertiges-amt.de/en/aussenpolitik/themen/ffp-guidelines/2585074>.

<sup>138</sup> Federal Foreign Office, “Shaping Feminist Foreign Policy”, 3.

<sup>139</sup> Federal Foreign Office, “Shaping Feminist Foreign Policy”, 16.

<sup>140</sup> For more on the connection between nuclear weapons policy as a feminist issue, see Laura Rose Brown, “Feminist Foreign Policy and Nuclear Weapons: Contributions and Implications”, *Non Proliferation and Disarmament Papers* 86 (2023),

## 2.4 Intergenerational justice

Intergenerational justice is another key perspective that can influence the development of nuclear justice. While legal scholars note that intergenerational justice is not yet “standard” for international law, “questions of intergenerational justice pervade many international legal problems, from climate change to human rights to the law of war.”<sup>141</sup> Generations following those exposed to radiation face hardships in terms of health, economics and the environment. They may face unhealthy land and water and the loss of cultural heritage sites that remain polluted.

## 2.5 Relevance to nuclear justice

As the above discussion attests, values and mechanisms from other justice perspectives could be useful in informing a survivor-centric nuclear justice framework. Restorative justice highlights the importance of making victims whole to the extent possible and restoring relationships undermined by a history of distrust. Transitional justice emphasizes moving beyond the harms caused by human rights abuses and brings attention to the importance of information and truth-telling. Intersectionality is inclusive and historically responsible; it highlights a holistic interpretation of security. Intergenerational perspectives take into account the harms that continue across generations.

With these perspectives and values in mind, this article develops a survivor-centric form of nuclear justice based on the claims made by survivors themselves. The approach is consistent with restorative justice, transitional justice, the intersectional lens and intergenerational justice as it focuses on human security in terms of restoring physical, community, economic and environmental well-being; emphasizes listening to and engaging in dialogue with survivors and pursuing data collection; notes present and historical circumstances that may increase the challenges faced by survivors; and envisages transitioning to a system that provides justice for all people.

# 3. Nuclear justice claims from nuclear victims

What mechanisms do victims seek when providing testimonials about the harms caused by nuclear use and testing? The discussion in this section is based on 68 English language (or translated into English) testimonials available online, in articles and in books from survivors of nuclear use and testing. Geographic diversity was a prime consideration in sourcing these testimonials, which cover cases of nuclear weapons use and testing in Algeria, Australia, China, French Polynesia, Japan, Kazakhstan, Kiribati (specifically, Kiritimati – formerly known as Christmas Island), the Marshall Islands and the United States. Civilian and military survivors are both represented among the 68 individuals, encompassing 45 men and 23 women.<sup>142</sup> Though limited, this sample provides representation across several demographic categories: geography, gender, Indigenous identity, age, and civilian or military status.

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[https://www.nonproliferation.eu/wp-content/uploads/2023/11/EUNPDC\\_no-86.pdf](https://www.nonproliferation.eu/wp-content/uploads/2023/11/EUNPDC_no-86.pdf).

<sup>141</sup> Hirokazu Miyazaki and Annelise Riles, “Theorizing Intergenerational Justice in International Law: The Case of the Treaty on the Prohibition of Nuclear Weapons”, *UC Irvine Journal of International, Transnational, and Comparative Law* 7, no. 122 (2022): 122–145, <https://scholarship.law.uci.edu/ucijil/vol7/iss1/6>.

<sup>142</sup> A list of these testimonials is presented in Appendix A.

The analysis of these testimonials is useful to better understand justice claims and identify potential mechanisms that could address the harms of nuclear use and testing. These mechanisms were divided into five categories: compensation for victims<sup>143</sup> (to include the provision of health care); acknowledgement of harm by those responsible; more available data and information regarding the harm and the circumstances of the harm; apologies; and policy change. Table 1 indicates how many times survivors made reference to each justice claim.

**Table 1. Justice mechanisms identified in testimonials by 68 survivors of nuclear weapons use and testing**

JUSTICE CLAIM	TIMES MENTIONED
Compensation	16
Policy change	14
Acknowledgement of harm	9
Apology	6
More data/information	5

### 3.1 Compensation

Of the justice mechanisms discussed in the testimonials, the provision of compensation was the most sought by survivors. In several testimonials, individuals called for compensation for victims, while others called for increasing the amount already provided. American veteran Francis Lincoln Grahlf, who served at Operation Crossroads in the Marshall Islands, defends the idea of compensation:

Compensating nuclear testing survivors should not be controversial. In many ways, the communities subjected to nuclear testing are unacknowledged casualties of World War II and the Cold War. Their country has sacrificed their health and that of their loved ones, without as much as a draft or any of the benefits we offer our veterans. People ought to be recompensed for what they were put through, through no choice of their own.<sup>144</sup>

Providing compensation is an often-used transitional justice mechanism in cases of human rights abuses. Indeed, a nuclear detonation and its associated radiation “is likely to result in the finding of a violation of...human rights” including “the rights to life, to humane treatment, to a healthy environment and to the highest attainable standard of health”.<sup>145</sup> In other words, nuclear use during times of conflict and nuclear testing at any time both undermine human security, a key focus of feminist foreign policy. In addition, compensation in the form of direct payments, the provision of health care and other

<sup>143</sup> The term “compensation” is used here instead of “reparation”, as reparation generally implies the acknowledgement of wrongdoing. While reparations are appropriate in nuclear justice, some nuclear-armed states do not acknowledge responsibility and so, at minimum, compensation should be awarded.

<sup>144</sup> Francis Lincoln Grahlf, “Veterans of US Atomic Age Deserve Compensation”, *The Military Times*, 2 December 2021, <https://www.militarytimes.com/opinion/commentary/2021/12/02/veterans-of-us-atomic-age-deserve-compensation>.

<sup>145</sup> Quoted in Stuart Casey-Maslen, “The Use of Nuclear Weapons and Human Rights”, *International Review of the Red Cross* 97, no. 899 (2015): 671–672, [https://international-review.icrc.org/sites/default/files/irc97\\_10.pdf](https://international-review.icrc.org/sites/default/files/irc97_10.pdf).

assistance, and environmental remediation all serve intergenerational justice by improving conditions for the next generations.

The responsibility to address the harm experienced by all survivors of nuclear use and testing<sup>146</sup> is recognized in the TPNW's Article 6, which calls for assistance to include "medical care, rehabilitation and psychological support as well as...social and economic inclusion."<sup>147</sup> As a result of this treaty language, scholars and treaty parties have explored this nuclear justice mechanism in the most detail to date. The first meeting of TPNW states parties in June 2022 established an informal working group, led by Kazakhstan and Kiribati, to begin working on the treaty's implementation of victim assistance and environmental remediation.<sup>148</sup> Many of those involved in the discussions have recommended the development of a trust fund to aid victims. This recommendation was reflected in the Vienna Action Plan, adopted at the first Meeting of States Parties of the TPNW, in July 2022:

Action 29: To discuss the feasibility of, and propose possible guidelines for, establishing an international trust fund for States that have been affected by the use or testing of nuclear weapons, taking into account relevant precedents for such a trust fund. The purpose of such a fund would be, inter alia, to provide aid to assist survivors and to support measures toward environmental remediation.<sup>149</sup>

Since then, TPNW states parties have held discussions to explore the establishment of such a fund,<sup>150</sup> and several organizations have offered recommendations.<sup>151</sup> According to a decision taken by the second meeting of TPNW states parties, the informal working group will prepare a report on the "feasibility of, and possible guidelines for, the establishment of an international trust fund for victim assistance and environmental remediation".<sup>152</sup> The report will be presented at the third meeting of TPNW states parties, in 2025, where further discussions are expected to take place.

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<sup>146</sup> Of course, defining who is a victim in these instances is another challenge for nuclear justice. As one example, those in Japan exposed to "black rain" following the Hiroshima bombing fought for recognition for years, only receiving this recognition in 2020–2021. See Eric Johnston, "Hiroshima Hibakusha Have Won Their 'Black Rain' Lawsuit. This Is How They Got There", *Japan Times*, 27 July 2021, <https://www.japantimes.co.jp/news/2021/07/27/national/hibakusha-black-rain-ruling-precedent>. I thank Jaroslav Krosny for this point.

<sup>147</sup> Treaty on the Prohibition of Nuclear Weapons, 2017.

<sup>148</sup> Joint Statement on behalf of Kiribati and Kazakhstan, 2023 NPT Preparatory Committee, General Debate, Delivered by H.E. Ambassador Teburoro Tito, 31 July 2023, [https://docs-library.unoda.org/Treaty\\_on\\_the\\_Non-Proliferation\\_of\\_Nuclear\\_Weapons\\_-\\_Preparatory\\_Committee\\_for\\_the\\_Eleventh\\_Review\\_ConferenceFirst\\_session\\_\(2023\)/Kiribati\\_and\\_Kazakhstan\\_Joint\\_Statement\\_General\\_Debate.pdf](https://docs-library.unoda.org/Treaty_on_the_Non-Proliferation_of_Nuclear_Weapons_-_Preparatory_Committee_for_the_Eleventh_Review_ConferenceFirst_session_(2023)/Kiribati_and_Kazakhstan_Joint_Statement_General_Debate.pdf).

<sup>149</sup> Report of the First Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons, TPNW/MSP/2022/6 (Vienna, 21–23 June 2022), 15, <https://undocs.org/Home/Mobile?FinalSymbol=tpnw%2Fmsp%2F2022%2F6&Language=E&DeviceType=Desktop&LangRequested=False>.

<sup>150</sup> On these meetings, see: International Campaign to Abolish Nuclear Weapons, "Article 6 & 7 Informal Working Group Meetings", [https://www.icanw.org/tpnw\\_article\\_6\\_7\\_meetings#14-09-2023](https://www.icanw.org/tpnw_article_6_7_meetings#14-09-2023).

<sup>151</sup> Elliot Serbin and Laila Ujayli, "Designing a Trust Fund for the Treaty on the Prohibition of Nuclear Weapons: Report Examines Precedent and Offers Proposals", Harvard Law School International Human Rights Clinic, 19 January 2023, <https://human-rightsclinic.law.harvard.edu/designing-a-trust-fund-for-the-treaty-on-the-prohibition-of-nuclear-weapons-report-examines-precedent-and-offers-proposals>; ICRC, "The Obligation to Assist Victims and Remediate the Environment within a Framework of Shared Responsibility under the Treaty on the Prohibition of Nuclear Weapons", (ICRC, 2023), <https://www.icrc.org/en/publication/4702-obligation-assist-victims-and-remediate-environment-within-framework-shared>; ICAN, "Recommendations on an International Trust Fund for Victim Assistance and Environmental Remediation", (Geneva: ICAN, 2023), [https://www.icanw.org/international\\_trust\\_fund\\_recommendations](https://www.icanw.org/international_trust_fund_recommendations).

<sup>152</sup> Report of the Second Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons, TPNW/MSP/2023/14 (New York, 27 November–1 December 2023), 13 <https://undocs.org/Home/Mobile?FinalSymbol=TPNW%2FMSP%2F2023%2F14&Language=E&DeviceType=Desktop&LangRequested=False>.

The mixed record of state-based compensation programmes illustrates the need for a single trust fund to provide aid and assistance. Some governments that tested or hosted nuclear tests have compensated survivors, but few – if any – receive adequate aid to address their struggles.

For a long time, the French government argued that no individuals received a harmful dose of radiation from its nuclear tests in Algeria and French Polynesia.<sup>153</sup> In 2001 and 2002, French nuclear veterans and members of the affected communities began to advocate for compensation. The French government eventually passed a compensation law in 2010, which states: “Full reparation for harm can be obtained by any person (military, civilian and residents of the surrounding area) suffering from radiation-induced diseases listed in decree (18 cancers) that resulted from exposure to ionizing radiation due to French nuclear testing, or by their rightful claimant.”<sup>154</sup> The most recent French government report available indicated the country had compensated 616 individuals and rejected 1,645 claims.<sup>155</sup> The United Kingdom of Great Britain and Northern Ireland also has a compensation plan for veterans but argues that its studies have found no link between those serving in testing sites and higher rates of many types of cancer.<sup>156</sup>

The US government passed a law in 1990 for those affected by the US testing programme, the Radiation Exposure and Compensation Act. The act provides “compassionate compensation” to uranium millers, miners and ore transporters, to test workers, and to downwinders, with lump sums of \$100,000, \$75,000, and \$50,000, respectively, but only if they develop the cancers included on a specific list.<sup>157</sup> Victims do not need to prove causality, but they must have held the specified jobs or lived in the vicinity of tests. As of January 2023, the US government had paid out over \$2.5 billion to over 40,000 individuals harmed by testing.<sup>158</sup> For those in the Marshall Islands, the United States has paid out lump sums over the years through the Compact of Free Association agreements between the two states. Though a new agreement was signed in 2022, the Marshallese government is currently arguing that more money is necessary, given the legacy of US nuclear testing.<sup>159</sup>

The most comprehensive care for victims appears to come from governments that were not responsible for nuclear use or testing: Japan and Kazakhstan. These programmes provide a combination of compensation and social welfare. Japan has the most elaborate programme, dating back to the 1950s, after

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<sup>153</sup> Sébastien Philippe, Sonya Schoenberger and Nabil Ahmed, “Radiation Exposures and Compensation of Victims of French Atmospheric Nuclear Tests in Polynesia”, *Science & Global Security* 30, no. 2 (2022): 62–94, <https://doi.org/10.1080/08929882.2022.2111757>. Also see Sebastien Philippe and Tomas Stadius, *Toxique: Enquête sur les essais nucléaires français en Polynésie* (Presses universitaires de France and Disclosure, 2021).

<sup>154</sup> Government of France, “LOI no 2010-2 du 5 janvier 2010 relative à la reconnaissance et à l’indemnisation des victimes des essais nucléaires français”, *Journal Officiel de la République Française* (2010), [https://inis.iaea.org/collection/NCLCollectionStore/\\_Public/45/087/45087591.pdf?r=1](https://inis.iaea.org/collection/NCLCollectionStore/_Public/45/087/45087591.pdf?r=1).

<sup>155</sup> Comité d’Indemnisation des Victimes des Essais Nucléaires, *Rapport d’Activité, 2022* (Paris, 2022), <https://www.vie-publique.fr/files/rapport/pdf/290358.pdf>.

<sup>156</sup> See, for example, this UK government leaflet for military veterans: Ministry of Defence, “Information for British Nuclear Test Veterans”, 26 August 2020, <https://assets.publishing.service.gov.uk/media/5f461d0ae90e074c4d303333/NTVleaflet.pdf>.

<sup>157</sup> US Department of Justice, “Radiation Exposure Compensation Act”, <https://www.justice.gov/civil/common/reca>.

<sup>158</sup> US Department of Justice, “Awards to Date 01/13/2023”, <https://www.justice.gov/civil/awards-date-01132023>.

<sup>159</sup> David Brunnstrom, “Marshall Islands Seeks More U.S. Nuclear Legacy Funds to Settle Strategic Deal”, *Reuters*, 13 July 2023, <https://www.usnews.com/news/world/articles/2023-07-13/marshall-islands-see-more-u-s-nuclear-legacy-funds-to-settle-strategic-deal>. Also see Daryl G. Kimball, “U.S., Marshall Islands Sign Deal on Nuclear Testing Impacts”, *Arms Control Today*, March 2023, <https://www.armscontrol.org/act/2023-03/news/us-marshall-islands-sign-deal-nuclear-testing-impacts>.

strong advocacy by *hibakusha* – those in Japan affected by the nuclear bombings in Hiroshima and Nagasaki in 1945. The Japanese government provides health care and a monthly financial allowance for the victims of the Hiroshima and Nagasaki bombings.<sup>160</sup>

A 1992 Kazakh law provides several forms of compensation for victims of the Soviet nuclear testing at the Semipalatinsk site. Unlike many other compensation plans, including those in France and the United States, the Kazakh government provides compensation for individuals who were proximate to the tests and not just for those who show symptoms or have specific types of cancer.<sup>161</sup> In fact, Kazakh residents who live close to the test site report many different negative health impacts including arthralgia, arthritis, high-blood pressure, heart disease and digestive system disease.<sup>162</sup>

Though it did not provide as much compensation as Japan and Kazakhstan, it is notable that the Government of Fiji also compensated its soldiers who were involved in the British thermonuclear tests on Kiritimati in the 1950s, after the British refused and the Fijian government found the United Kingdom was not meeting its responsibility to these veterans.<sup>163</sup> The Fijian prime minister explained at the time, “Fiji is not prepared to wait for Britain to do the right thing.”<sup>164</sup>

Detailed information about compensation plans in other states can be difficult to find. In China, the government began providing compensation to some military personnel involved in nuclear testing in 2007 (after advocacy by veterans)<sup>165</sup> but not to the local Uyghur population.<sup>166</sup>

In many of these cases, seeking compensation is made extra difficult by the long period of time between exposure and the development of cancers, by difficulties in proving a causal link in these instances, and by challenging bureaucratic processes that require proof of exposure and of an individual’s location at the time of testing. Moreover, the long delay between nuclear testing and the establishment of compensation plans – where they exist – means many victims never had the chance to seek compensation before they passed away. There is little, if any, evidence that these compensation plans take known gender differences into consideration or otherwise address the specific hardships faced by the intersecting identities of victims. Poverty, lack of local health care options, and isolated locations are common challenges that can make access to proper medical care difficult, especially in states with private health insurance.

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<sup>160</sup> Hibakusha Stories, “Who Are the Hibakusha?” <https://hibakushastories.org/who-are-the-hibakusha>.

<sup>161</sup> Kyoko Hirabayashi, “Support Measures for Victims of Soviet Nuclear Testing in Kazakhstan”, *CPHU Research Report Series* 35 (2022): 82–92, <https://ir.lib.hiroshima-u.ac.jp/00052461>.

<sup>162</sup> Noriyuki Kawano, Kyoko Hirabayashi, Masatsugu Matsuo, Yasuyuki Taooka, Takashi Hiraoka, Kazbek N. Apsalikov, Talgat Moldagaliev and Masaharu Hoshi, “Human Suffering Effects of Nuclear Tests at Semipalatinsk, Kazakhstan: Established on the Basis of Questionnaire Surveys”, *Journal of Radiation Research* 47 (2006): A209–A217, <https://doi.org/10.1269/jrr.47.A209>.

<sup>163</sup> Agence France Presse, “Fiji Compensates Its Veterans of British Nuclear Tests in the Pacific”, *The Guardian*, 30 January 2015, <https://www.theguardian.com/world/2015/jan/30/fiji-compensates-its-veterans-of-british-nuclear-tests-in-the-pacific>.

<sup>164</sup> “Nuclear Test Veterans: Britain Urged to Compensate Fijians over 1950s Christmas Island Tests”, ABC News, 2 February 2015, <https://www.abc.net.au/news/2015-02-03/britain-urged-to-compensate-fijian-nuclear-test-veterans/6066296>.

<sup>165</sup> David Lague, “China Now Pays Troops Involved in Nuclear Tests”, *New York Times*, 28 January 2008, <https://www.nytimes.com/2008/01/28/world/asia/28china.html>.

<sup>166</sup> Yang Xiaoping, “Compensation Measures for Victims of Nuclear Testing in China”, *CPHU Research Report Series* 35 (2022): 47–62, <https://ir.lib.hiroshima-u.ac.jp/00052459>.

After reading or listening to the stories of survivors of nuclear use and testing, it is clear that no amount of money can bring back their lost relatives or make up for the suffering of facing various cancers, sometimes many times over. Scholars of transitional justice note the inadequacies of many reparation programmes in other areas caused by implementation challenges and financial limitations. In her study of reparations in the transitional justice context, Lauren Marie Balasco argues for thinking of reparations as a mechanism not just for redressing the past but for putting “the reparation of lost life opportunities at the centre of their [the reparations’] concerns.”<sup>167</sup> In this way, compensation can take on a gendered and intersectional focus by examining what individuals have lost through their exposure, such as reproductive health.

Balasco also calls for community reparations, which is relevant for communities where radiation polluted the land and water. Taking the community into account is necessary for a truly intersectional approach to compensation. Moreover, in line with restorative justice, environmental remediation must be part of justice if communities are to be restored. The remediation of the environment is paramount for Indigenous groups whose sacred and traditional lands were poisoned.

### 3.2 Policy change

The second most common justice mechanism sought by victims in their testimonials was policy change aimed at making sure that no one else would suffer as they and their communities had. For this reason, most of these claims called for the abolition of nuclear weapons, though a few called for an end to all nuclear testing. In this context, many of the victims discussed their children and grandchildren and wanting to protect future generations from the effects of radiation. For example, like many *hibakusha*, Lee Gyuyeo, a survivor of the Hiroshima bombing, advocates for nuclear abolition. He explains:

No words can describe the gravity of the aftereffects on the second and third generations, not to mention on us, the first generation of nuclear victims. Our children and grandchildren, the second and third generations of the survivors, continue to suffer from unexplained illnesses and are in unspeakable pain.<sup>168</sup>

Similarly, the late Marshallese leader Tony DeBrum stated, “Our people have suffered the catastrophic and irreparable damage of these weapons, and we vow to fight so that no one else on Earth will ever again experience these atrocities.”<sup>169</sup> These survivors may have faced significant injustices, but they do not want the next generations to suffer.

As survivors, many individuals feel a deep obligation to make policy change while they are able. Keiko Ogura, another Hiroshima survivor, tells visitors to the city that she worries what she will tell those who perished as a result of the bombing when she meets them after death – “What did you do?” she imagines

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<sup>167</sup> Lauren Marie Balasco, “Reparative Development: Re-Conceptualising Reparations in Transitional Justice Processes”, *Conflict, Security & Development* 17, no. 1 (2017): 2, <http://dx.doi.org/10.1080/14678802.2016.1231842>.

<sup>168</sup> Peace Boat, “Lee Gyuyeo”, World Nuclear Survivors Forum 2021, streamed live 2–3 December 2021, YouTube video, <https://www.youtube.com/watch?v=kG5nPzZVZ7c&feature=youtu.be>.

<sup>169</sup> Dan Zak, “He Saw a Nuclear Blast at 9, then Spent His Life Opposing Nuclear War and Climate Change”, *Washington Post*, 24 August 2017, [https://www.washingtonpost.com/local/he-saw-a-nuclear-blast-at-9-then-spent-his-life-opposing-nuclear-war-and-climate-change/2017/08/24/5b6d10e6-882e-11e7-a94f-3139abce39f5\\_story.html](https://www.washingtonpost.com/local/he-saw-a-nuclear-blast-at-9-then-spent-his-life-opposing-nuclear-war-and-climate-change/2017/08/24/5b6d10e6-882e-11e7-a94f-3139abce39f5_story.html).

they will ask – an added burden for survivors to carry.<sup>170</sup> Ogura’s testimony indicates that justice is not just for present and future generations, but for past victims as well.

In a sense, policy change would be the ultimate form of acknowledgement. Governments making policy changes to reduce or eliminate the chance of nuclear use or testing in response to the stories of survivors (after *listening* to them) indicates that officials truly reflected on what they heard and recognized the pain and the harms caused by nuclear use and testing. Policy change would be a form of restorative justice as it would help repair relationships in society. Today, many victims of nuclear use and testing advocate for states to join the Comprehensive Nuclear-Test-Ban Treaty to end all nuclear testing and the TPNW, as it is a treaty that delegitimizes nuclear weapons, seeks abolition, and provides for victim assistance and environmental remediation.

### 3.3 Acknowledgement of harm

Presumably, all the individuals who provided public testimony about their family’s experiences with nuclear use and testing are seeking acknowledgement. They hope that sharing their stories will spread awareness of the dangers associated with nuclear weapons and help change policy. Nonetheless, the category was only coded for those individuals who explicitly called for the responsible government’s recognition. These victims felt the relevant governments never truly acknowledged the harm caused or the extent of suffering, especially in the cases of nuclear testing.

Without acknowledgement, victims feel almost invisible, as if their sacrifices or burdens did not occur. As one former British soldier who served during the Kiritimati tests expressed, “[I’m] so angry about our government not recognising us, our cause. Our children are affected and their genes are affected and... their children are going to be affected. And this radiation isn’t going to go away.”<sup>171</sup> The British government has explicitly rejected the acknowledgement of harm, noting in a 2020 pamphlet about veteran compensation related to testing: “The policy is however not an acknowledgement that those present at the tests were exposed to harm.”<sup>172</sup>

This sense of invisibility is compounded because many victims of nuclear testing are already part of a community or communities on the periphery of nuclear-armed states’ power structures or are otherwise marginalized due to their race, ethnicity, poverty, gender, location or a combination thereof.<sup>173</sup> For example, several Indigenous communities in the western United States live nestled among environmental pollution from nuclear tests, uranium mines and nuclear waste facilities.

In Australia, the United Kingdom tested amid First Nations communities, perceiving that the land was uninhabited,<sup>174</sup> and then tested in the South Pacific, and has long claimed that no First Nations people were affected. The French government claimed the area of its first test, close to Reggane, Algeria, was

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<sup>170</sup> Atomic Heritage Foundation, “Keiko Ogura’s Interview”, <https://ahf.nuclearmuseum.org/ranger/tour-stop/keiko-ogura-interview>.

<sup>171</sup> Peace Boat, “Gordon Coggon”, World Nuclear Survivors Forum 2021, streamed live 2–3 December 2021, YouTube video, [https://www.youtube.com/watch?v=KC\\_vn1nU4RM](https://www.youtube.com/watch?v=KC_vn1nU4RM).

<sup>172</sup> “Information for British Nuclear Test Veterans”, Ministry of Defence, <https://assets.publishing.service.gov.uk/media/5f461d0ae90e074c4d303333/NTVleaflet.pdf>.

<sup>173</sup> Jacobs, “Nuclear Conquistadors”.

<sup>174</sup> Jon Donnison, “Lingering Impact of British Nuclear Tests in the Australian Outback”, BBC News, 31 December 2014, <https://www.bbc.com/news/world-australia-30640338>.

selected for its isolation, despite the fact that a community of 6,000 Algerians lived close by.<sup>175</sup> China's Lop Nor nuclear test site is situated in the Xinjiang Province of western China, the homeland of the Uyghurs. While access to data is limited, scholars and journalists report higher levels of cancer and birth defects in the communities surrounding Lop Nor, at which 47 nuclear tests have been conducted.<sup>176</sup> Nuclear testing in Pakistan occurred in Baluchistan, which has the highest poverty rate in Pakistan.<sup>177</sup> An intersectional perspective means recognizing that communities harmed by nuclear testing have commonly already been underserved by their governments and are facing numerous challenges.

Acknowledgement is especially important for nuclear justice because of the devastating consequences of radiation and the limited knowledge of these effects among the broader public. The suffering from radiation sickness is just the beginning. In testimonials, victims recount their many cancers or the litany of people in their families and communities who have died of cancers and suffered other health problems.

Then there are the ways in which parents uniquely suffer, with women giving birth to stillborn babies or babies who cannot survive long once born. There are reports of an increase in infant mortality in New Mexico following the Trinity test<sup>178</sup> and in Australia following the Maralinga tests.<sup>179</sup> At the time, many of the parents did not know the cause of their immense losses. Some survivors did understand the possible effects of radiation on infants and, for those survivors, pregnancy and labour after exposure took on added psychological stress. As Hiroshima survivor Keiko Ogura recounts:

Before I delivered my baby until the last moment, I was so scared, you know. Everybody had a hard time. "My baby, my child, is he okay or not?" always mothers are thinking. [With nuclear weapons stays future fear. Not all casualties are burned or have scars. No, fear. Yes, fear, so deep in our hearts. Everybody had fear.<sup>180</sup>

This fear continues among those affected by nuclear use and testing to this day. A British veteran explains, "When a grandchild is born, [other atomic veterans] don't ask if it's a boy or a girl, but if it's okay."<sup>181</sup> While there is scientific debate over the generational effects of exposure to radiation, many victims believe the illnesses and birth defects in their children and grandchildren are connected to their original exposure to radiation.

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<sup>175</sup> BBC News, "France-Algeria Relations: The Lingering Fallout from Nuclear Tests in the Sahara", 27 April 2021, <https://www.bbc.com/news/world-africa-56799670>.

<sup>176</sup> Becky Alexis-Martin, "The Nuclear Imperialism-Necropolitics Nexus: Contextualizing Chinese-Uyghur Oppression in Our Nuclear Age", *Eurasian Geography and Economics* 60, no. 2 (2019): 158, <https://doi.org/10.1080/15387216.2019.164561>.

<sup>177</sup> World Bank, "Poverty & Equity Brief, Pakistan", April 2019, [https://databankfiles.worldbank.org/public/ddpext\\_download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Archives-2019/Global\\_POVEQ\\_PAK.pdf](https://databankfiles.worldbank.org/public/ddpext_download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Archives-2019/Global_POVEQ_PAK.pdf).

<sup>178</sup> Kathleen M. Tucker and Robert Alvarez, "Trinity: 'The most significant hazard of the entire Manhattan Project'", *Bulletin of the Atomic Scientists*, 15 July 2019, <https://thebulletin.org/2019/07/trinity-the-most-significant-hazard-of-the-entire-manhattan-project>.

<sup>179</sup> Megan Palin, "Children of Maralinga Atomic Bomb Test Veterans 'Suffering Deformities and Early Deaths' because of 'Genetic Transfer'", news.com.au, 10 March 2016, <https://www.news.com.au/national/south-australia/new-generations-of-australian-families-suffering-deformities-and-early-deaths-because-of-genetic-transfer/news-story/6e1e0328063fe48142234c7c74848fea>.

<sup>180</sup> Atomic Heritage Foundation, "Keiko Ogura's Interview", <https://ahf.nuclearmuseum.org/ranger/tour-stop/keiko-oguras-interview>.

<sup>181</sup> Chris Wood, "Nuclear Test Veterans: 'My Dad Was Treated Like a Guinea Pig'", BBC News, 31 May 2021, <https://www.bbc.com/news/uk-wales-57157476>.

There are different ways in which governments can acknowledge victims of nuclear use and testing. The city of Hiroshima holds an annual remembrance ceremony on 6 August, in which the prime minister often addresses the participants, including many *hibakusha*. This ceremony is in addition to the Hiroshima Peace Memorial Museum and Peace Memorial Park, which do much to commemorate victims. Nagasaki hosts a similar ceremony on 9 August and maintains a peace park and a public museum.

The British government recently created a symbolic means to acknowledge veterans who worked on nuclear testing. In 2022, the government agreed to the creation of the nuclear test medal, which one veteran called a “massive step” in terms of recognition.<sup>182</sup>

In 2023, the United Nations General Assembly approved a resolution entitled “Addressing the legacy of nuclear weapons: providing victim assistance and environmental remediation to Member States affected by the use or testing of nuclear weapons”<sup>183</sup> – another means of recognition. The resolution, which explicitly acknowledges the many physical and psychological harms caused by nuclear use and testing, received overwhelming support from countries around the world, but not from the nine countries that possess nuclear weapons.

For many survivors, acknowledgement appears necessary for restorative justice – for repairing relationships between victims and their governments or the governments that tested nuclear weapons. Providing compensation is another form of acknowledgement in that it directly addresses the harm caused by exposure to radiation, though some governments have not officially acknowledged harm even when paying compensation. The call of acknowledgement appears to be about more than resources, a human desire to have one’s suffering and sacrifice recognized by others. Victims are no longer invisible when governments publicly acknowledge the harm of nuclear use and testing. A speech acknowledging harm, or a monument to victims and survivors, could go a long way in beginning to repair relations between governments and those harmed by nuclear use and testing.

### 3.4 Apology

Going beyond seeking recognition, some victims want the governments involved in nuclear use and testing to apologize for the harm they caused through these activities.<sup>184</sup> The 2001 United Nations International Law Commission report on reparations includes the need for “satisfaction”, which it notes, “may consist in an acknowledgement of the breach, an expression of regret, a formal apology or another appropriate modality.”<sup>185</sup>

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<sup>182</sup> Graeme Baker, “Nuclear Test Medal: UK Veterans to Receive Recognition after Years-Long Campaign”, BBC News, 28 July 2023, <https://www.bbc.com/news/uk-politics-66330471>.

<sup>183</sup> United Nations General Assembly, “Addressing the legacy of nuclear weapons: providing victim assistance and environmental remediation to Member States affected by the use or testing of nuclear weapons” A/RES/78/240, 28 December 2023, <https://digitallibrary.un.org/record/4033026>.

<sup>184</sup> Some scholars consider apology a subset of acknowledgement, but this article maintains them as analytically distinct and argues that apologies represent a more significant step than a simple acknowledgement of harm.

<sup>185</sup> Quoted in Michael R. Marrus, “Official Apologies and the Quest for Historical Justice”, *Journal of Human Rights* 6, no. 1 (2007): 87, <https://doi.org/10.1080/14754830601098402>.

Several nuclear victims in the sample mentioned the importance of governments apologizing. As one French Polynesian anti-nuclear activist explained, “We would like the French state to apologize for the many nuclear tests that transformed our island paradise into hell.”<sup>186</sup> Some victims of the Japanese bombings also seek apologies. In the words of one Hiroshima survivor, “It’s a very unbelievable thing that U.S. presidents after Truman have never even thought of apologizing for dropping A-bombs on two cities.”<sup>187</sup>

Despite a recent increase in government apologies for many types of historical wrongs,<sup>188</sup> nuclear-armed states thus far have resisted the call to apologize for nuclear activities. In 2016, when President Obama became the first US president to visit Hiroshima since the Second World War, some survivors called for him to apologize for the 1945 bombing.<sup>189</sup> In response to these justice claims, Obama’s deputy national security adviser explained, “He will not revisit the decision to use the atomic bomb at the end of World War II. Instead, he will offer a forward-looking vision focused on our shared future.”<sup>190</sup> Even without making any apology, President Obama’s 2016 visit to Hiroshima was attacked by domestic critics, who saw it as being part of a “shameful apology tour”.<sup>191</sup> In other words, the domestic politics of apologizing can appear too costly for leaders.<sup>192</sup>

Nonetheless, some form of apology is warranted in many cases, given the long-term harm caused by radiation from nuclear use and testing. Civilians were either not told about the potential harm or told it was nothing to be concerned about. At the very least, governments that have engaged in nuclear testing could express that, recognizing what humanity now knows, they apologize for the inadvertent harm they caused decades ago. They could acknowledge the multitude of ways in which people of all ages and genders suffered physically and psychologically from nuclear use and testing. Apologies serve the goals of transitional justice, restorative justice and intergenerational justice by helping communities make peace with the past and anticipate a different future.

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<sup>186</sup> Nic Maclellan, “‘We Would Like France to Apologise’: Nuclear Test Survivors in French Polynesia”, DiaNuke.org, 28 July 2020, <https://www.dianuke.org/we-would-like-france-to-apologise-nuclear-test-survivors-in-french-polynesia>.

<sup>187</sup> David E. Decosse, “An Interview with a Survivor of the Hiroshima Bombing”, *National Catholic Reporter*, 19 December 2016, <https://www.ncronline.org/blogs/ncr-today/interview-survivor-hiroshima-bombing>.

<sup>188</sup> Marrus, “Official Apologies and the Quest for Historical Justice”, 75; Juliette Schaafsma, Marieke Zoodsma and Thia Sagherian-Dickey, “Closing Chapters of the Past? Rhetorical Strategies in Political Apologies for Human Rights Violations across the World”, *Journal of Human Rights* 20, no. 5 (2021): 582–597, <https://doi.org/10.1080/14754835.2021.1977919>.

<sup>189</sup> For example, see Abigail Leonard, “Hiroshima Survivors Want Obama to Apologize. But the Japanese Government Probably Doesn’t”, *VOX*, 27 May 2016, <https://www.vox.com/2016/5/27/11791766/obama-hiroshima-apology>.

<sup>190</sup> Susan Heavey, Matt Spetalnick and Minami Funakoshi, “Obama to Visit Hiroshima, Will Not Apologize for World War Two Bombing”, *Reuters*, 10 May 2016, <https://www.reuters.com/article/us-usa-japan-obama/obama-to-visit-hiroshima-will-not-apologize-for-world-war-two-bombing-idUSKCN0Y11KC>.

<sup>191</sup> John R. Bolton, “Obama’s Shameful Apology Tour Lands in Hiroshima”, *New York Post*, 26 May 2016, <https://www.aei.org/articles/obamas-shameful-apology-tour-lands-in-hiroshima>. See also, Callum Borchers, “Obama’s Trip to Hiroshima, and the Looming ‘Apology Tour’ Narrative”, *Washington Post*, 10 May 2016, <https://www.washingtonpost.com/news/the-fix/wp/2016/05/10/obamas-trip-to-hiroshima-and-the-looming-apology-tour-narrative>.

<sup>192</sup> Risa Kitagawa and Jonathan A. Chu, “The Impact of Political Apologies on Public Opinion”, *World Politics* 73, no. 3 (2021): 441–481, <https://doi.org/10.1017/S0043887121000083>.

### 3.5 More data and information

Some survivors seek more information about the circumstances around nuclear use and testing, as well as data about radiation doses and effects. This desire is understandable as many nuclear-armed governments have kept information about tests and their effects classified. The lack of candour around nuclear effects and the many examples of missing data can breed distrust towards governments that tested nuclear weapons.

In one example from 2023, British veterans involved in nuclear testing said newly found UK government documents indicated that the government knew more about the damage from radiation at the time of its early nuclear testing than it had admitted.<sup>193</sup> Indeed, the British military took samples of blood and urine from those involved in nuclear testing, but the results are missing from veterans' medical files.<sup>194</sup>

Or take the example of the French government. France long denied that individuals were harmed by its nuclear testing, which delayed victims from receiving compensation for decades. French government documents declassified in 2013 indicated greater radioactive active fallout from French Polynesian nuclear testing than had previously been admitted.<sup>195</sup>

The United States recognized victims of radiation earlier than its allies, but there were also instances in the early nuclear age in which the government may have withheld information from the public. One Utah resident, for example, remembers government officials coming to her school with Geiger counters to test the students. They were told the tests were related to recent dental X-rays, which she knew she had not had.<sup>196</sup> The residents in the area were told that the nuclear testing would not have effects beyond the test site's perimeter.<sup>197</sup>

The US government also made incorrect assumptions about the radioactive fallout during the tests conducted in the Marshall Islands.<sup>198</sup> For instance, in 1968, the US government told Bikinians they could return to Bikini Atoll (they left at the request of the US government in 1946 for nuclear testing), only to reverse course ten years later and tell those who had moved back that the atoll was unsafe for humans. In 2016, scientists determined that levels of radiation were still too high for human habitation on the atoll.<sup>199</sup> The Bikinians lost their ancestral homeland, including the graves of their family members as well as their traditional way of life, in what has become a permanent relocation.

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<sup>193</sup> Dominic Casciani, "Nuclear Bomb Test Veterans Relaunch Legal Action", BBC News, 20 September 2023, <https://www.bbc.com/news/uk-66869017>.

<sup>194</sup> Casciani, "Nuclear Bomb Test Veterans Relaunch Legal Action".

<sup>195</sup> Adrian Cho, "France Grossly Underestimated Radioactive Fallout from Atom Bomb Tests, Study Finds", *Science*, 11 March 2021, <https://www.science.org/content/article/france-grossly-underestimated-radioactive-fallout-at-om-bomb-tests-study-finds>.

<sup>196</sup> Lesley M.M. Blume, "U.S. Nuclear Testing's Devastating Legacy Lingers, 30 Years after Moratorium", *National Geographic*, 26 September 2022, <https://www.nationalgeographic.co.uk/history-and-civilisation/2022/09/us-nuclear-testings-devastating-legacy-lingers-30-years-after-moratorium>.

<sup>197</sup> Blume, "U.S. Nuclear Testing's Devastating Legacy Lingers".

<sup>198</sup> Walter Pincus, *Blown to Hell: America's Deadly Betrayal of the Marshall Islanders* (New York: Diversion Books, 2021).

<sup>199</sup> Bob Yirka, "Radiation Levels on Bikini Atoll Found to Exceed Safety Standard", *Phys.org*, 7 June 2016, <https://phys.org/news/2016-06-bikini-atoll-safety-standard.html>. For a compilation of studies on radiation levels in the Marshall Islands, see <https://k1project.columbia.edu/news/marshall-islands-radiological-studies-2017-2019>.

In other cases, it is difficult to find any information about testing and radiation doses. The Chinese government continues to refuse to acknowledge harmful radiation affecting civilians in its Xinjiang Province, while medical researchers (using models of nuclear tests elsewhere) believe “conservatively” that “1.2 million received doses high enough to induce leukemia, solid cancers and fetal damage” in China.<sup>200</sup> The Soviet Union collected health data from individuals around the Semipalatinsk test site in present-day Kazakhstan, but these data – now held by the Russian government – have not been made available to the Kazakh government, despite “repeated plead[ing] with Russian authorities.”<sup>201</sup> The villages adjacent to the Indian nuclear test site report higher instances of cancer as well as trouble with livestock and agriculture in the aftermath of the 1974 test and the 1998 tests and have requested that their government study the effects of radiation.<sup>202</sup> The story appears similar in neighbouring Pakistan, where those living in Baluchistan also claim significant illnesses following the 1998 tests.<sup>203</sup>

Seeking information about nuclear use and testing from relevant governments is another way to make survivors’ suffering more visible to the public at large. Data collected about radiation doses can help make the case that victims should be acknowledged and that governments should contribute to compensation schemes that address differential effects depending on gender and other relevant factors. Data collection could perhaps contribute to arguments in favour of government apologies (as well as the acknowledgement and compensation schemes already mentioned) and may ultimately contribute to policy change. Just as with truth commissions in the transitional justice setting, part of the goal of truth-telling is to acknowledge suffering at the hands of the state and to ensure these harms never happen again.

## 4. Conclusions and recommendations

Pursuing nuclear justice for survivors of nuclear use and testing is long overdue. Many of the victims have passed away in the decades since the nuclear age began. Nonetheless, a system of nuclear justice mechanisms is worth contemplating and creating. Influenced by a broadly defined conception of restorative justice, the theory and relevant mechanisms of transitional justice, gender and intersectional perspectives, feminist foreign policy, and intergenerational justice, this article has sought to develop a survivor-centric form of nuclear justice by using the words of survivors themselves. The justice mechanisms of compensation, policy change, acknowledgement, apology and data collection can work in tandem to create a system of nuclear justice. These mechanisms could help inform the ongoing inter-sessional work of TPNW states parties on victim assistance and environmental remediation.

Though nuclear-armed states and their allies have rejected the TPNW thus far, this is an area in which some non-treaty members could also become involved. To truly provide justice for survivors,

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<sup>200</sup> Zeeya Merali, “Did China’s Nuclear Tests Kill Thousands and Doom Future Generations?” *Scientific American*, 1 July 2009, <https://www.scientificamerican.com/article/did-chinas-nuclear-tests>.

<sup>201</sup> Togzhan Kassenova, *Atomic Steppe: How Kazakhstan Gave Up the Bomb* (Stanford, CA: Stanford University Press, 2022), 266–267.

<sup>202</sup> Swati Vashishtha, “Give Peace a Chance, Say Villagers Near Nuclear Test Sites in Pokhran”, CNN-News18, 5 October 2016, <https://www.news18.com/news/india/give-peace-a-chance-say-villagers-near-nuclear-test-sites-in-pokhran-1298772.html>.

<sup>203</sup> Shah Meer Baloch, “The Fallout from Pakistan’s Nuclear Tests”, *The Diplomat*, 29 May 2017, <https://thediplomat.com/2017/05/the-fallout-from-pakistans-nuclear-tests>.

significant funding will be necessary, and many states will need to contribute. Non-TPNW members, such as Germany<sup>204</sup> and Norway,<sup>205</sup> have expressed some interest in participating in discussions on victim assistance and environmental remediation, suggesting a meaningful avenue for bridge-building between members and non-members of the TPNW regime. An important forum to foster dialogue and cooperation between these groups of states are the conferences on the humanitarian impacts of nuclear weapons. While these conferences have become linked to the TPNW, they are valuable independently of the treaty. They help to inform young people and diplomats, among others, about the detrimental effects of nuclear weapons. The continuation of these conferences could offer an opportunity to discuss issues like victim assistance with a diverse group of states.

The NPT is also a potential forum for discussions on the impact of nuclear weapons and what could be done to address harm caused to individuals and communities. Despite recent disagreements, it is important to remember that, in 2010, NPT states parties were able to agree to language on the devastating effects of nuclear weapons. The outcome document of the Review Conference of the NPT adopted in 2010 noted the “catastrophic humanitarian consequences” of nuclear weapon use.<sup>206</sup> Moreover, if the TPNW membership continues to expand, NPT states parties may feel additional pressure to take seriously its goals. In such a scenario, NPT states parties, including the nuclear-weapon states, may look for ways to behave consistently with the norms of the TPNW, even if they do not join the treaty. This type of pressure mechanism has been observed in other humanitarian disarmament treaties, illustrating the power of global norms to influence the behaviour of states.<sup>207</sup>

Going beyond the nuclear regimes, it is worth highlighting that many states have signed on to United Nations General Assembly resolutions expressing concerns regarding the harmful effects of nuclear use and testing. To address those concerns, it is important that states cooperate and put in place mechanisms such as compensation, policy change, acknowledgements, apologies and data collection. With enough interest, perhaps even those states responsible for nuclear use and testing will eventually agree as well.

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<sup>204</sup> Federal Foreign Office, “Statement by Foreign Minister Annalena Baerbock at the 10th Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons”, 1 August 2022, <https://www.auswaertiges-amt.de/en/newsroom/news/-/2545450>. Baerbock stated: “We want to improve dialogue and cooperate in addressing the humanitarian consequences of nuclear weapons – in the field of victim assistance or the remediation of areas contaminated by nuclear testing”.

<sup>205</sup> Nuclear Weapons Ban Monitor, “The Obligation to Assist Victims”, <https://banmonitor.org/positive-obligations-1/the-obligation-to-assist-victims>.

<sup>206</sup> 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Final Document, Volume I, Part I (New York, 2010), <https://www.un.org/en/conf/npt/2010>.

<sup>207</sup> An example of this pressure mechanism can be seen with the 1997 Anti-Personnel Mine Ban Convention. The United States did not join the treaty, but the Obama administration reviewed its anti-personnel landmine policy in line with the convention and limited the use of landmines to the Korean peninsula. See Andrew Feickert and Paul K. Kerr, “U.S. Antipersonnel Landmine Use Policy”, Congressional Research Service, 29 September 2022, <https://crsreports.congress.gov/product/pdf/IF/IF11440>.

# III. Public opinion on nuclear weapons: Is there a gender gap?

by Ellen Willio and Michal Onderco<sup>208</sup>

## 1. Introduction

The recent decision of the Science and Security Board of the *Bulletin of the Atomic Scientists* to place the symbolic Doomsday Clock to 90 seconds before midnight – the closest it has ever come to global catastrophe – highlights the rising nuclear risks.<sup>209</sup> As weapons of mass destruction persistently dominate international discourse and debate, it is crucial to recognize that these weapons can affect any and all citizens. Hence, this paper aims to examine the crucial significance of public opinion in the context of nuclear arms. An important but relatively unexplored issue is that attitudes towards nuclear weapons can vary significantly between different demographic groups within society.

This paper focuses specifically on gender. Academics have long studied gender gaps in public opinion in other policy domains, but little research has yet been conducted on this issue in relation to nuclear weapons. The aim of this paper, therefore, is to examine whether and to what extent a gender gap exists in attitudes towards nuclear weapons. This research adopts the definition of gender employed by the United Nations Statistics Division: “socially constructed differences in attributes and opportunities associated with being female or male”.<sup>210</sup> Specifically, the paper aims to answer the following research questions: Is there a gender gap in attitudes towards nuclear weapons? What do existing public opinion polls and academic surveys reveal about how men and women view the proliferation and use of nuclear weapons and nuclear disarmament?

The research conducted for this paper systematized existing public opinion polls and academic surveys on issues related to nuclear weapons. The findings indicate that women tend to be more opposed than men to nuclear proliferation and express greater discomfort about the existence of nuclear weapons. Results on opinions about the use of nuclear weapons are conflicting: some studies suggest that men are more inclined to approve than women, while others argue the opposite, that women are more likely to approve than men. In relation to arms control and nuclear disarmament, no distinct gender differences in public opinion were identified.

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<sup>208</sup> We thank Andrey Baklitsky, Dr Stephen Herzog, Dr Renata Hessmann Dalaqua and Paula Jou Fuster for their suggestions on the framing of our paper. We thank Tom Etienne for helpful methodological tips.

<sup>209</sup> “A moment of historic danger: It is *still* 90 seconds to midnight”, *Bulletin of the Atomic Scientists*, 2024, <https://thebulletin.org/doomsday-clock/current-time/>.

<sup>210</sup> See “Integrating a Gender Perspective into Statistics: Glossary of Terms”, UN Statistics Wiki, 2020, <https://unstats.un.org/wiki/display/genderstatmanual/Glossary+of+terms>. While this paper recognizes that gender goes beyond the binary notion of men and women, it restricts itself to these two categories. It does so in view of the limitations of existing surveys, which rarely offer other options of gender identification.

Understanding the gendered differences in attitudes towards nuclear weapons matters for two primary reasons. Firstly, if there are systematic differences in opinion between men and women, this would underscore that gender diversity among decision makers is a means to achieve diversity of perspectives, a proven asset in decision-making. Thus, such as finding would strengthen the case for advocating for diverse teams in nuclear policymaking institutions.<sup>211</sup>

Secondly, in democracies, policy responsiveness to public opinion plays an important role in policy-making. An issue as grave and impactful as nuclear weapons makes this responsiveness even more relevant. Examining demographic differences in public opinion sheds light on potential polarization, which could influence policymaking. By highlighting these potential gender differences, this paper aims to contribute to a more informed and nuanced understanding of public opinion on nuclear weapons.

## 2. Public opinion and policy change

Public opinion often serves as an important driving force for policy change within democracies.<sup>212</sup> The magnitude of this influence is contingent on factors such as the nature of public opinion and the type of policy issue.

Policies typically move in a similar direction to public opinion when that change in opinion is substantial and remains stable.<sup>213</sup> Additionally, the effect of public opinion on policy is more pronounced for issues that are highly salient than for those of lesser significance,<sup>214</sup> because when citizens exhibit a significant level of concern about a particular issue, they are more inclined to consider the actions of elected officials on that issue when voting. By implication, responsiveness to public opinion tends to be higher in issues of high public salience, given the limited attention capacity of both the public and legislative bodies.<sup>215</sup>

The literature is divided on the relationship between responsiveness and type of policy issue. Earlier studies found the responsiveness of governments to be higher on domestic issues than on foreign affairs, attributed to the heightened salience of domestic issues. However, more recent research has shown that the influence of public opinion on policy is notably more pronounced in areas of defence, foreign policy and economic policies than on other issues.<sup>216</sup> Existing work has shown that public opinion can influence how military leaders<sup>217</sup> and elected officials<sup>218</sup> think about policy options.

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<sup>211</sup> For more on this topic, see Louis Reitmann's chapter in this edited volume, "The scientific case for diversity in nuclear weapons policymaking".

<sup>212</sup> Paul Burstein, "The Impact of Public Opinion on Public Policy: A Review and an Agenda", *Political Research Quarterly* 56, no. 1 (2003): 29–40, <https://doi.org/10.1177/106591290305600103>.

<sup>213</sup> Benjamin I. Page and Robert Y. Shapiro, "Effects of Public Opinion on Policy", *American Political Science Review* 77, no. 1 (1983): 175–190, <https://doi.org/10.2307/1956018>.

<sup>214</sup> Page and Shapiro, "Effects of Public Opinion on Policy", 175–190.

<sup>215</sup> Bryan D. Jones, *Reconceiving Decision-Making in Democratic Politics* (Chicago: University of Chicago Press, 1994), 432–433.

<sup>216</sup> Burstein, "Impact of Public Opinion".

<sup>217</sup> Erik Lin-Greenberg, "Soldiers, Pollsters, and International Crises: Public Opinion and the Military's Advice on the Use of Force", *Foreign Policy Analysis* 17, no. 3 (2021), <https://doi.org/10.1093/fpa/orab009>.

<sup>218</sup> Jonathan Chu and Stefano Recchia, "Does Public Opinion Affect the Preferences of Foreign Policy Leaders? Experimental Evidence from the UK Parliament", *Journal of Politics* 84, no. 3 (2022): 1874–1877, <https://ssrn.com/abstract=4016051>.

In the United States of America, as an example, the salience of nuclear weapons as a policy issue has been largely dependent on public concern about nuclear weapons. Consequently, its salience has shifted several times since the Trinity test in 1945.<sup>219</sup> During the Cold War, its salience was very high: nuclear weapons were perceived as a great threat and nuclear issues were a matter not only of foreign policy but of domestic policy, since the public was confronted with them in their daily lives through duck-and-cover drills.<sup>220</sup> Following the collapse of the Soviet Union, however, popular perception of the threat declined, rendering nuclear disarmament less important and decreasing the need to discuss nuclear weapons issues.<sup>221</sup>

Over the past decade, public interest and concern have increased again as a result of international events, such as the threat of the Islamic Republic of Iran's nuclear ambitions;<sup>222</sup> a series of heated exchanges between then US President Trump and the leader of the Democratic People's Republic of Korea Kim Jong Un, which led to a comparison of the magnitude of their nuclear buttons;<sup>223</sup> and, most recently, the war in Ukraine, which brought the nuclear issue back to the forefront of the international political scene.<sup>224</sup>

Among the general public in the United States, substantial gender disparities have been reported in policy preferences on issues related to violence and the use of force.<sup>225</sup> Indeed, existing studies drawing on long-term trends in primarily the United States indicate a pronounced gender gap in support for military intervention in overseas conflicts, with women being less likely than men to endorse the government's use of force and showing greater sensitivity to the humanitarian aspects of conflict.<sup>226</sup> This inclination can be attributed to concerns about both the financial and human costs of war,<sup>227</sup> as well as to fears of potential retaliation or further escalation.<sup>228</sup>

Moreover, existing work argues that the gender gap in attitudes towards the use of violence could be attributed to widespread, gender-specific early cognitive learning and to potentially affective orientations

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<sup>219</sup> Jacob M. Nebel, "The Nuclear Disarmament Movement: Politics, Potential, and Strategy", *Journal of Peace Education* 9, no. 3 (2012): 225–247, <https://doi.org/10.1080/17400201.2012.668494>.

<sup>220</sup> Eleonora Mattiacci, "How Nuclear Issue Salience Shapes Counterproliferation", *Global Studies Quarterly* 1, no. 3 (2021): 23–33, <https://doi.org/10.1093/isagsq/ksab026>.

<sup>221</sup> Alexander K. Bollfrass and Stephen Herzog, "The War in Ukraine and Global Nuclear Order", *Survival* (2022): 7–32.

<sup>222</sup> Mattiacci, "Nuclear Issue Salience".

<sup>223</sup> Ashley Lytle and Kristyn Karl, "Understanding Americans' Perceptions of Nuclear Weapons Risk and Subsequent Behavior", *International Journal of Communication* 14 (2020): 299–323, <https://ijoc.org/index.php/ijoc/article/view/12369/2909>.

<sup>224</sup> Bollfrass and Herzog, "War in Ukraine and Global Nuclear Order".

<sup>225</sup> Pamela Johnston Conover and Virginia Sapiro, "Gender, Feminist Consciousness, and War", *American Journal of Political Science* 37, no. 4 (1993): 1079–1099, <https://doi.org/10.2307/2111544>.

<sup>226</sup> Richard C. Eichenberg, "Gender Differences in Public Attitudes toward the Use of Force by the United States, 1990–2003", *International Security* 28, no. 1 (2003): 110–141, <https://www.jstor.org/stable/4137577>; Richard C. Eichenberg, "Gender Difference in American Public Opinion on the Use of Military Force, 1982–2013", *International Studies Quarterly* 60, no. 1 (2016): 138–148, <https://doi.org/10.1093/isq/sqv019>; Val Burris, "From Vietnam to Iraq: Continuity and Change in Between-Group Differences in Support for Military Action", *Social Problems* 55, no. 4 (2008): 443–479. <https://doi.org/10.1525/sp.2008.55.4.443>.

<sup>227</sup> Mary E. Bendyna, Tamara Finucane, L. G. Kirby, John P. O'Donnell and Clyde Wilcox, "Gender Differences in Public Attitudes toward the Gulf War: A Test of Competing Hypotheses", *Social Science Journal* 33, no. 1 (1996): 1–22, [https://doi.org/10.1016/S0362-3319\(96\)90002-6](https://doi.org/10.1016/S0362-3319(96)90002-6).

<sup>228</sup> Lisa Brandes, "Public Opinion, International Security, and Gender: The United States and Great Britain since 1945" (PhD diss., Yale University, 1994), <https://www.proquest.com/openview/ba569c44c5c9fd922184cd5d3a4b8257/1>.

towards the use of violence.<sup>229</sup> A study in the US indicates that these gender differences are context specific and socially constructed. Indeed, even when other explanatory elements are controlled for, the differences cannot be eliminated, suggesting that they result from socialization and the adoption of gender roles. Women tend to delay resorting to violence during conflict, escalate its use more gradually and experience more emotional distress as a result.<sup>230</sup> Research in the United States argues that men may feel more comfortable with the use of violence due to a socialization that emphasizes physical aggression.<sup>231</sup>

### 3. Measuring the gender gap in attitudes towards nuclear weapons

For this paper, a systematic effort was made to catalogue academic articles and public opinion polls<sup>232</sup> that investigated attitudes towards nuclear weapons in which gender was considered as a variable. The search terms included “nuclear weapons attitudes”, “gender gap”, “public opinion” and variations thereof. The search was limited to polls published worldwide over the past three decades and papers from journals published by major international publishers and/or journals ranked in Journal Citation Reports, an annual publication by Clarivate which features bibliographic and bibliometric data on social science journals.<sup>233</sup> In total, 39 academic articles and opinion polls were surveyed, spanning from 1990 to 2023 and covering 47 countries and territories in all United Nations regional groups. The complete list of polls can be found in the online appendix.<sup>234</sup>

Instead of a full meta-analysis, this paper provides a systematic review of public opinion regarding nuclear weapons, considering gender as a significant variable, throughout different countries and contexts. The questions asked in these surveys were categorized as follows: “proliferation”, “use” and “arms control and disarmament”. The questions covered a range of opinions and attitudes relating to nuclear weapons, with the outcomes being measured in proportional terms, that is, the share of men and women respondents who agreed or disagreed with a given question.

If the prior research (academic study or poll) reported the effect of gender on attitudes, those findings are included here as well. If the prior research did not report the effect of gender on attitudes, it was calculated using the existing data. The Z Score calculation for two population proportions was used

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<sup>229</sup> Patrice M. Miller, Dorothy L. Danaher and David Forbes, “Sex-related Strategies for Coping with Interpersonal Conflict in Children Aged Five and Seven”, *Development Psychology* 22 (1986): 543–548, <https://doi.org/10.1037/0012-1649.22.4.543>.

<sup>230</sup> Conover and Sapiro, “Gender, Feminist Consciousness, and War”.

<sup>231</sup> Amanda B. Diekmann and Monica C. Schneider, “A Social Role Theory Perspective on Gender Gaps in Political Attitudes”, *Psychology of Women Quarterly* 34, no. 4 (2010): 486–497, <https://doi.org/10.1111/j.1471-6402.2010.01598.x>.

<sup>232</sup> The main difference between the data from academic surveys and from public opinion polls is that the academic surveys have often been developed with a particular hypothesis in mind. This translates to very specific questions. Furthermore, academics often do not report descriptive findings and, even less so, results by gender. By contrast, the public opinion surveys conducted by pollsters might be designed in cooperation with their client and hence might have somewhat leading questions, but they often do report descriptive findings and specific results by gender.

<sup>233</sup> Papers published in Journal Citation Reports tend to exhibit a strong Western bias, which is very strongly tilted towards data on and from the United States. See also Målfrid Braut-Hegghammer, “Proliferating Bias? American Political Science, Nuclear Weapons, and Global Security”, *Journal of Global Security Studies* 4, no. 3 (2019): 384–392, <https://doi.org/10.1093/jogss/ogz025>.

<sup>234</sup> The online appendix is available at <https://doi.org/10.25397/eur.24995684>.

to determine whether the differences observed in the responses of men and women were statistically significant.<sup>235</sup> A 95% confidence interval was used as the standard, and a 99% confidence interval was also employed for a more stringent assessment. The proportions and population sizes reported in surveys were used for the Z Score calculations. If the population size was not reported, an equal split between men and women was assumed.<sup>236</sup> These surveys are presented in the online appendix, where the statistically significant differences between the responses of men and women are highlighted in different colours.<sup>237</sup>

## 4. So, what is the gap?

Let us now dive into the existing work on the gender gap in attitudes towards nuclear weapons. The existing work is not unequivocal about this. Each section first discusses the existing literature and then explores the data from the polls.

### 4.1 Proliferation

In the existing academic studies and polls, there is a clear pattern of higher aversion to nuclear proliferation among women than among men in various geographical settings.

Studies in the United Kingdom of Great Britain and Northern Ireland and the United States show that women are generally more against nuclear proliferation than men are.<sup>238</sup> In 1994, a study examined all polls in the United Kingdom and the United States from 1945 to 1988 regarding attitudes towards nuclear weapons; notable gender differences emerged. The study found that women were generally less supportive than men of the production of nuclear weapons. Specifically, during the 1950s and 1960s, fewer women endorsed the proliferation of nuclear weapons, especially those weapons associated with high radiation risks, such as the neutron bomb. Additionally, women in the United Kingdom exhibited significant reluctance to approve the deployment of US cruise missiles in the United Kingdom due to concerns about the risk of attack and the loss of control. The research highlighted that men were more likely than women to express a sense of increased security thanks to nuclear weapons, while women were more likely to see these weapons as hazardous. The perception of potentially catastrophic and uncontrollable consequences associated with nuclear weapons led to greater disapproval among women regarding their acquisition.<sup>239</sup> A 2020 study that explored public attitudes towards nuclear technologies in the United States similarly revealed that women were notably more likely than men to have a

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<sup>235</sup> This method was applied to the following studies: Simons Foundation, *Global Public Opinion on Nuclear Weapons*; International Committee of the Red Cross, “They Didn’t Start the Fire”; Körber Stiftung, “Eine Studie von Kantar”; Baron and Herzog, “What the American Public Likes and Hates”; Greenpeace, “Umfrage zu Atomwaffen”, (Greenpeace, 2019, 2020, 2021); IPPNW, “Meinungen zu Atomwaffen”; British Pugwash, “2023 UK Public Opinion Survey”; YouGov, “Which of the Following”; YouGov, “What Should Happen”; YouGov, “As Far as You Are Aware”; YouGov, “Study of War”; YouGov, “Would You Support?”

<sup>236</sup> This method was applied to the following study: Jonathon Baron and Stephen Herzog, “Poll: What the American Public Likes and Hates about Trump’s Nuclear Policies”, *Bulletin of the Atomic Scientists*, 27 April 2020, <https://thebulletin.org/2020/04/poll-what-the-american-public-likes-and-hates-about-trumps-nuclear-policies>.

<sup>237</sup> The online appendix is available at <https://doi.org/10.25397/eur.24995684>.

<sup>238</sup> Brandes, “Public Opinion, International Security”; Jonathan Baron and Stephen Herzog, “Public Opinion on Nuclear Energy and Nuclear Weapons: The Attitudinal Nexus in the United States”, *Energy Research and Social Science* 68: 101567 (2020), <https://doi.org/10.1016/j.erss.2020.101567>.

<sup>239</sup> Brandes, “Public Opinion, International Security”.

negative attitude towards the continuing research into, development of and storage of nuclear weapons in their country.<sup>240</sup>

In a different geographical context, namely India and Japan, signs of a gender gap were also found, though less clearly than in the United Kingdom and the United States. In India, research on the views of individuals within high social circles found that men were less likely than women to be opponents of nuclear weapon acquisition. Yet the differences were slight, and the sample of women respondents was small, reflecting the dominance of men in high social circles in Indian society.<sup>241</sup>

In Japan, a 2023 study examined the influence of external threats on public opinion about the acquisition of nuclear weapons. In particular, the study looked at whether aversion to the acquisition of nuclear weapons was unconditional or could erode in the face of events that would worsen Japan's security situation, such as the withdrawal of the US security–nuclear umbrella or more nuclear weapon tests by the Democratic People's Republic of Korea. The study found that regardless of a hypothetical worsening in the external security environment, men were more supportive than women of the acquisition of nuclear weapons. However, the study also showed that women responded more forcefully than men to a deterioration in Japan's external security environment. The study concluded that women in Japan appear to start with a lower level of support than men for a Japanese nuclear option, yet women may be more inclined to offer such support when there is a raised perception of international threat.<sup>242</sup>

Studies conducted in the Republic of Korea, however, show no significant gender differences, nor even a reserved pattern, in opinions on nuclear proliferation: No significant differences between men and women were found when researching public opinion about whether the Republic of Korea should pursue nuclear capabilities<sup>243</sup> or when examining the underlying factors influencing public opinion on nuclear weapon acquisition.<sup>244</sup> One study found that childhood experience of war violence influences individuals' preferences for nuclear proliferation, with people in war zones being more supportive of nuclear weapons and seeing them as a deterrent to invasion. However, there was no significant difference when gender was controlled for.<sup>245</sup> Moreover, a 2020 study found that an increase in the credibility of the US nuclear security guarantee led to more support for nuclear proliferation among the respondents in the Republic of Korea; the same study found a positive relationship between women and support for proliferation.<sup>246</sup>

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<sup>240</sup> Jonathan Baron and Stephen Herzog, "Public Opinion on Nuclear Energy and Nuclear Weapons: The Attitudinal Nexus in the United States", *Energy Research and Social Science* 68: 101567 (2020), <https://doi.org/10.1016/j.erss.2020.101567>.

<sup>241</sup> David Cortright and Amitabh Mattoo, "Elite Public Opinion and Nuclear Weapons Policy in India", *Asian Survey* 36, no. 6 (1996): 545–560, <https://www.jstor.org/stable/pdf/2645790.pdf>.

<sup>242</sup> Naoko Matsumura, Atsushi Tago and Joseph M. Grieco, "External Threats and Public Opinion: The East Asian Security Environment and Japanese Views on the Nuclear Option", *Journal of East Asian Studies* 23, no. 1 (2023): 23–44, <https://doi.org/10.1017/jea.2022.40>.

<sup>243</sup> Sangyong Son and Man-Sung Yim, "Correlates of South Korean Public Opinion on Nuclear Proliferation", *Asian Survey* 61, no. 6 (2021): 1028–1057, <https://doi.org/10.1525/as.2021.1429174>; Keunsik Jung et al., *2016 Unification Perception Survey*, SNU IPUS Unification Research Series 32 (Seoul: Institute for Peace and Unification Studies, 2017), <https://ipus.snu.ac.kr/wp-content/uploads/files/attach/binaries/12865/101/087/334e968d3cc5a71eb03915f261460da1>.

<sup>244</sup> Kyung Suk Lee, "The Microfoundations of Nuclear Proliferation: Evidence from South Korea", *International Journal of Public Opinion Research* 35, no. 4 (2023): 13–15, <https://doi.org/10.1093/ijpor/edad033>.

<sup>245</sup> James D. Kim, "The Long-Run Impact of Childhood Wartime Violence on Preferences for Nuclear Proliferation", *Journal of Conflict Resolution* 68, no. 1 (2023): 108–137, <https://doi.org/10.1177/00220027231159287>.

<sup>246</sup> Lauren Sukin, "Credible Nuclear Security Commitments Can Backfire: Explaining Domestic Support for Nuclear Weapons Acquisition in South Korea", *Journal of Conflict Resolution* 64, no. 6 (2020): 1011–1042, <https://doi.org/10.1177/002200272095287>.

The Millennials on War survey, commissioned by the International Committee of the Red Cross (ICRC) in 2019, shows a general pattern of women being more likely than men to oppose nuclear proliferation. There were few differences between men and women when it came to endorsement of the core non-proliferation norm (“Countries which don’t have nuclear weapons should not develop or obtain them”), except for in Ukraine, where women were more likely than men to endorse the norm, and in the United States, where men were more likely to endorse it than women. In the same survey, women in most countries<sup>247</sup> were less likely than men to indicate that possession of nuclear weapons would make their country safer. With two exceptions where there was no difference (Malaysia and the Syrian Arab Republic), women were additionally much less likely than men to support their country in developing or keeping nuclear weapons.<sup>248</sup>

In other polls, women were less likely than men to endorse the proliferation norm. In France, Germany, Israel, Italy, the United Kingdom and the United States, men were more likely than women to express that nuclear weapons make them feel safe,<sup>249</sup> and in a nuclear host country – Germany, in the sample examined for this paper – men were more likely than women to be opposed to the replacement of the delivery vehicles.<sup>250</sup> In the United Kingdom, men were more likely than women to support their country possessing nuclear weapons<sup>251</sup> and allowing the United States to deploy nuclear weapons on British soil.<sup>252</sup> Women in the United Kingdom were less likely to report knowing that their country has nuclear weapons.<sup>253</sup>

Overall, the results from the academic studies and the polls indicate that the nuclear non-proliferation norm is more strongly held by women than by men. Despite some surveys and countries in which this pattern does not hold, the general tendency is clear, and applies to studies conducted in nuclear-weapon states (primarily the United Kingdom and the United States and, to a lesser degree, France), in countries that are allies of the nuclear-weapon states (mainly European NATO states that host nuclear weapons on their territory), and in other geographical settings.

## 4.2 Use

When it comes to public views on the use of nuclear weapons, the results are more mixed, and whether a gendered pattern emerges depends on the study.

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[org/10.1177/0022002719888689](https://doi.org/10.1177/0022002719888689).

<sup>247</sup> France, Indonesia, Israel, Nigeria, Russian Federation, South Africa, Switzerland, Syrian Arab Republic, Ukraine, United Kingdom and United States.

<sup>248</sup> “They Didn’t Start the Fire: Millennial Views on War and Peace”, International Committee of the Red Cross, 2019, <https://www.icrc.org/en/millennials-on-war>.

<sup>249</sup> Simons Foundation, *Global Public Opinion on Nuclear Weapons* (Simons Foundation, 2017), [https://www.thesimons-foundation.ca/sites/default/files/2007%20Poll%20on%20Global%20Public%20Opinion%20on%20Attitudes%20Towards%20Nuclear%20Weapons\\_0.pdf](https://www.thesimons-foundation.ca/sites/default/files/2007%20Poll%20on%20Global%20Public%20Opinion%20on%20Attitudes%20Towards%20Nuclear%20Weapons_0.pdf); Greenpeace, “Umfrage zu Atomwaffen”, (Greenpeace, 2019, 2020, 2021).

<sup>250</sup> IPPNW, “Meinungen zu Atomwaffen”, IPPNW, 2016, [https://www.ippnw.de/commonFiles/pdfs/Atomwaffen/forsaumfrage\\_Atomwaffen\\_2016.pdf](https://www.ippnw.de/commonFiles/pdfs/Atomwaffen/forsaumfrage_Atomwaffen_2016.pdf); Greenpeace, “Umfrage zu Atomwaffe”, (Greenpeace, 2019, 2020, 2021).

<sup>251</sup> “2023 UK Public Opinion Survey on Nuclear Weapons: Article and Data”, British Pugwash, 9 May 2023, <https://british-pugwash.org/2023-uk-public-opinion-survey-on-nuclear-weapons-article-and-data>.

<sup>252</sup> “Would You Support or Oppose Allowing the US to Station Nuclear Weapons in Britain?” YouGov, 31 August 2023, <https://yougov.co.uk/topics/politics/survey-results/daily/2023/08/31/4b0b8/1>.

<sup>253</sup> “As Far as You are Aware, Does the UK Have Nuclear Weapons?” YouGov, 18 June 2020, <https://yougov.co.uk/topics/politics/survey-results/daily/2020/06/18/a9715/3>.

Early research on public opinion of and approval for the use of nuclear weapons in Australia, Sweden, the United Kingdom and the United States shows a clear gender gap, with women more opposed than men and showing more fear of a nuclear escalation. A 1990 study in Australia on the relationship between gender and nuclear attitudes found that men were more likely than women to favour the phrase “some nuclear weapons are necessary for use in extreme threats”.<sup>254</sup> A 1994 study found that in both the United Kingdom and the United States, significantly fewer women than men approved of the use of nuclear weapons. The genders differed most in their support for a nuclear strike when the circumstances involved greater uncertainty or risk. Far more men than women favoured the use of nuclear weapons to stop a conventional attack, escalating a conventional conflict into a nuclear one. Yet men and women did not differ much on whether they would strike back if their country had been hit by a nuclear attack – in other words, once the damage had already been done and uncertainty had been removed.<sup>255</sup> Additionally, a study in 1990 conducted in Sweden, the United Kingdom and the United States concluded that men showed much less nuclear anxiety than women, less concern about the use of nuclear weapons or nuclear conflict, more nuclear denial,<sup>256</sup> and less fear for the future.<sup>257</sup>

More recent studies have shown negative attitudes among women towards the use of nuclear weapons. Research conducted in Germany and the Kingdom of the Netherlands, both of which are nuclear umbrella countries, and a study in Israel revealed that women tend to be less inclined than men to support a nuclear strike.<sup>258</sup> An experimental study in Japan tested the strength of the nuclear taboo, and it was found that gender was one of the key factors in explaining who supported the use of nuclear weapons, with men showing more endorsement than women.<sup>259</sup> Moreover, women in the United States showed a more negative attitude than men when asked whether the use of nuclear weapons was an appropriate option to defend national security interests.<sup>260</sup>

However, contrary findings were offered by a 2017 study, which revealed that women in the United States were just as likely as men, or in some cases more likely than men, to support the idea of sacrificing large numbers of foreign civilians to prevent the death of US soldiers. The interaction between gender and the context of nuclear or conventional scenarios was only marginally significant; nonetheless, it was concluded that the findings provided rather surprising evidence of a reversed pattern.<sup>261</sup>

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<sup>254</sup> Candida C. Peterson, Jeanette A. Lawrence and Irene Dawes, “The Relationship of Gender, Sex Role, and Law-and-Order Attitudes to Nuclear Opinions”, *Sex Roles* 22 (1990): 283–292, <https://doi.org/10.1007/BF00288334>.

<sup>255</sup> Brandes, “Public Opinion, International Security”.

<sup>256</sup> Nuclear denial occurs when governments and the nuclear power industry, as well as individuals, downplay the harmful effects of radiation from nuclear weapons and nuclear power plants (Charles Perrow, “Nuclear Denial: From Hiroshima to Fukushima”, *Bulletin of the Atomic Scientists* 69, no. 5 (2013): 56–67, <https://doi.org/10.1177/0096340213501369>).

<sup>257</sup> Jerome Rabow, Anthony Hernández and Michael D. Newcomb, “Nuclear Fears and Concerns among College Students: A Cross-National Study of Attitudes”, *Political Psychology* 11, no. 4 (1990): 681, <https://doi.org/10.2307/3791478>.

<sup>258</sup> Michal Onderco, Tom W. Etienne and Michal Smetana, “Ideology and the Red Button: How Ideology Shapes Nuclear Weapons’ Use Preferences in Europe”, *Foreign Policy Analysis* 18, no. 4 (2022): orac022, <https://doi.org/10.1093/fpa/orac022>; Doreen Horschig, “Israeli Public Opinion on the Use of Nuclear Weapons: Lessons from Terror Management Theory”, *Journal of Global Security Studies* 7, no. 2 (2022), <https://doi.org/10.1093/jogss/ogac006>.

<sup>259</sup> Yanyuan Cheng, Ryoma Eguchi, Haruki Nakagawa, Tatsuru Shibata and Atsushi Tago, “Another Test of Nuclear Taboo: An Experimental Study in Japan”, *International Area Studies Review* (2023): 1–13, <https://doi.org/10.1177/22338659231212417>.

<sup>260</sup> Baron and Herzog, “Public Opinion on Nuclear Energy and Nuclear Weapons”.

<sup>261</sup> Scott D. Sagan and Benjamin A. Valentino, “Revisiting Hiroshima in Iran: What Americans Really Think about Using Nuclear Weapons and Killing Noncombatants”, *International Security* 42, no. 1 (2017): 41–79, [https://doi.org/10.1162/ISEC\\_a\\_00284](https://doi.org/10.1162/ISEC_a_00284).

Other studies found no significant gender differences. In a 2022 study that examined national differences in attitudes towards nuclear weapons in France, Israel, the United Kingdom and the United States, no significant disparities between men and women were found.<sup>262</sup> A 2013 study examining the strength of the nuclear taboo in the United States detected no gender differences.<sup>263</sup> A further study (2020) found no difference between men and women when it came to choosing which type of strike to launch (nuclear or conventional) to defend US interests.<sup>264</sup>

In contrast, a survey conducted in the Russian Federation indicated that although women in the Russian Federation have a clear aversion to any proposed military attack in a conflict, men seem relatively supportive of conventional attacks but are more opposed to nuclear attacks, narrowing the gender gap.<sup>265</sup>

When looking at (extended) deterrence,<sup>266</sup> mixed results again emerge. Research in Morocco found that women are more likely than men to trust an ally's nuclear umbrella, explaining that women perceive more risks in the possession of nuclear arms and energy.<sup>267</sup> However, findings from the United States indicate that men are more likely than women to support the nuclear umbrella and the stationing of nuclear weapons in Europe, as well as efforts by the United States to strengthen itself as a deterrent.<sup>268</sup> In Australia, men have been found more likely than women to say that the use of nuclear weapons as a deterrent is the best path towards peace.<sup>269</sup>

The large-scale public opinion surveys show some evidence of gender gap when it comes to the use of nuclear weapons; however, the evidence is not unequivocal. In the Millennials on War survey, in half of the countries and territories,<sup>270</sup> women were more likely than men to say that it is never acceptable to use nuclear weapons in a war. In the other half,<sup>271</sup> there was no discernible difference between women and men (although there is no clear pattern of countries in which the public thinks that use of nuclear weapons might be acceptable).<sup>272</sup>

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<sup>262</sup> Janina Dill, Scott D. Sagan and Benjamin A. Valentino, "Kettles of Hawks: Public Opinion on the Nuclear Taboo and Non-combatant Immunity in the United States, United Kingdom, France, and Israel", *Security Studies* 31, no. 1 (2022): 1–31, <https://doi.org/10.1080/09636412.2022.2038663>.

<sup>263</sup> Daryl G. Press, Scott D. Sagan and Benjamin A. Valentino, "Atomic Aversion: Experimental Evidence on Taboos, Traditions, and the Non-Use of Nuclear Weapons", *American Political Science Review* 107, no. 1 (2013): 188–206, <https://doi.org/10.1017/S0003055412000597>.

<sup>264</sup> Lisa Langdon Koch and Matthew Wells, "Still Taboo? Citizens' Attitudes toward the Use of Nuclear Weapons", *Journal of Global Security Studies* 6, no. 3 (2020), <https://doi.org/10.1093/jogss/ogaa024>.

<sup>265</sup> Michal Onderco and Michal Smetana, "From Moscow with a Mushroom Cloud? Russian Public Attitudes to the Use of Nuclear Weapons in a Conflict with NATO", *Journal of Conflict Resolution* 67, no. 2–3 (2022): 183–209, <https://doi.org/10.1177/00220027221118815>.

<sup>266</sup> Deterrence is a strategy aimed at preventing undesirable actions through the threat of severe consequences, and extended deterrence involves the extension of this deterrent umbrella to protect allies or partners.

<sup>267</sup> Matt Buehler and Arjun Banerjee, "Who Would Trust a Nuclear Umbrella? Results from an Original Survey on Public Confidence in Future Nuclear Guarantees in Morocco", *The Nonproliferation Review* (2023): 1–21, <https://doi.org/10.1080/10736700.2023.2205299>.

<sup>268</sup> Baron and Herzog, "What the American Public Likes and Hates".

<sup>269</sup> Peterson, Lawrence and Dawes, "The Relationship of Gender".

<sup>270</sup> Colombia, France, Israel, Mexico, Russian Federation, Switzerland, United Kingdom and United States.

<sup>271</sup> Afghanistan, Indonesia, Malaysia, Nigeria, South Africa, Syrian Arab Republic and Ukraine, and the Occupied Palestinian Territory.

<sup>272</sup> International Committee of the Red Cross, "They Didn't Start the Fire".

In a different survey, women were more likely than men to consider that the use of nuclear weapons by their country<sup>273</sup> would never be justified.<sup>274</sup> In a survey conducted in the United Kingdom there was, however, no gender difference found when respondents were asked whether the use of nuclear weapons would ever be justified.<sup>275</sup> Men in the United Kingdom were also less likely than women to expect that a nuclear attack would happen in the coming 5, 10 or 20 years.<sup>276</sup>

When it comes to (extended) deterrence, the data suggest a more negative attitude among women. Men in Germany, for instance, were more likely than women to indicate that Germany should rely on the nuclear umbrella of the United States in the future.<sup>277</sup> In two thirds of the countries and territories surveyed by the ICRC<sup>278</sup> women were less likely to say that nuclear weapons were an effective instrument of deterrence.<sup>279</sup>

Overall, evidence was found in the literature for a gender gap in opinion on the use of nuclear weapons, although there was no uniformity. Results from public opinion polls painted a clearer picture, with women more likely than men to disapprove of the use of nuclear weapons, even in the case of a counter-attack. Men, however, were more likely than women to find the use of nuclear weapons in a war unlikely in the coming years, which could indicate less nuclear anxiety and more nuclear denial.

### 4.3 Arms control and disarmament

Academic articles and opinion polls generally did not show clear differences between the opinions of men and women on arms control and disarmament. A 1994 study found significant gender differences in support for the proliferation and use of nuclear weapons; however, it found no gender gap when focusing on nuclear disarmament. The study concluded that neither women nor men were more likely than the other to agree with arms control and disarmament proposals.<sup>280</sup>

Similarly, no gender gap was found when asking respondents in Morocco whether nuclear weapons should be globally banned.<sup>281</sup> A 2017 study that examined the attitudes of the younger generation of European Union citizens towards nuclear weapons also found no gender gap when it came to respondents' awareness of the dangers of nuclear weapons, their involvement in debates on nuclear weapons and their support for nuclear weapon policies.<sup>282</sup> Moreover, a study examining public support for the Comprehensive Nuclear-Test-Ban Treaty in the United States in 2017 found no significant differences in support levels between men and women.<sup>283</sup>

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<sup>273</sup> France, Germany, Israel, Italy or the United Kingdom.

<sup>274</sup> Simons Foundation, *Global Public Opinion on Nuclear Weapons*.

<sup>275</sup> British Pugwash, "2023 UK Public Opinion Survey".

<sup>276</sup> YouGov, "Study of War".

<sup>277</sup> Körber Stiftung, "Eine Studie von Kantar im Auftrag der Körber-Stiftung. Deutsche Außenpolitik", Körber Stiftung, 2019, <https://koerber-stiftung.de/site/assets/files/18600/pulse-umfrage.pdf>.

<sup>278</sup> Colombia, France, Israel, Nigeria, Russian Federation, South Africa, Switzerland, Syrian Arab Republic, Ukraine, United Kingdom and United States.

<sup>279</sup> International Committee of the Red Cross, "They Didn't Start the Fire".

<sup>280</sup> Brandes, "Public Opinion, International Security".

<sup>281</sup> Buehler and Banerjee, "Who Would Trust".

<sup>282</sup> Benoît Pelopidas, "The Next Generation(s) of Europeans Facing Nuclear Weapons: Forgetful, Indifferent, but Supportive?" in *Non-Proliferation Papers* (Brussels: EU Non-Proliferation Consortium, 2017), 1–15.

<sup>283</sup> Jonathon Baron and Stephen Herzog, "Public Support, Political Polarization, and the Nuclear-Test Ban: Evidence from a

However, a few other studies did find such differences. A 2022 study observed that support for the retention of the United Kingdom's nuclear deterrent is associated with men,<sup>284</sup> and in further studies looking at support for disarmament treaties, women in Israel, Japan, the Kingdom of the Netherlands and the United Kingdom were found to be more supportive than men of joining the Treaty on the Prohibition of Nuclear Weapons (TPNW).<sup>285</sup>

Mixed results emerge from the polling data when looking at disarmament treaties. In a series of polls conducted in Germany, no significant gender differences were found in support for joining the TPNW.<sup>286</sup> However, in Afghanistan, Nigeria, South Africa and the United Kingdom, it is men who are more likely to support joining the TPNW.<sup>287</sup> In all 16 countries and territories included in the Millennials on War survey,<sup>288</sup> men were also much more likely than women to indicate being familiar with the TPNW.<sup>289</sup> This is not surprising, as studies have shown that women respondents are more inclined to select “don't know” when answering questions related to foreign policy, especially in the context of nuclear weapons.<sup>290</sup>

Women were in some surveys found to be more supportive than men of the principles of nuclear disarmament, when examined on their own, rather than within the context of disarmament treaties. In a survey conducted in Germany, women were more likely than men to indicate that nuclear weapons should be banned under international law.<sup>291</sup> Moreover, over a decade ago, a Simons Foundation poll covering six countries found that, in four of the polled countries, women were more likely than men to indicate that nuclear weapons should be eliminated worldwide,<sup>292</sup> the exceptions were in Israel and the United States. Additionally, in all six polled countries, women felt that nuclear weapons made the world a more dangerous place.<sup>293</sup> In contrast, in France, the United Kingdom and the United States, men said they felt safer knowing their country had nuclear weapons.<sup>294</sup> In the United Kingdom, women have been found more likely than men to indicate that “on the whole nuclear weapons make the world a more dangerous place by increasing the chance that any war involving nuclear-armed countries may escalate into a nuclear war”.<sup>295</sup>

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New US National Survey”, *The Nonproliferation Review* 24, no. 3–4 (2017): 357–371, <https://doi.org/10.1080/10736700.2018.1429884>.

<sup>284</sup> Ben Clements and Catarina P. Thomson, “The ‘Ultimate Insurance’ or an ‘Irrelevance’ for National Security Needs? Partisanship, Foreign Policy Attitudes, and the Gender Gap in British Public Opinion towards Nuclear Weapons”, *European Journal of International Security* 7, no. 3 (2022): 360–381, <https://doi.org/10.1017/eis.2021.17>.

<sup>285</sup> Michal Onderco, Michal Smetana, Sico van der Meer and Tom W. Etienne, “When Do the Dutch Want to Join the Nuclear Ban Treaty? Findings of a Public Opinion Survey in the Netherlands”, *The Nonproliferation Review* 28, no. 1–3 (2021): 149–163, <https://doi.org/10.1080/10736700.2021.1978156>; Jonathon Baron, Rebecca Davis Gibbons and Stephen Herzog, “Japanese Public Opinion, Political Persuasion, and the Treaty on the Prohibition of Nuclear Weapons”, *Journal for Peace and Nuclear Disarmament* 3, no. 2 (2020): 299–309, <https://doi.org/10.1080/25751654.2020.1834961>.

<sup>286</sup> Greenpeace, “Umfrage zu Atomwaffen”, (Greenpeace, 2019, 2020, 2021).

<sup>287</sup> British Pugwash, “2023 UK Public Opinion Survey”; International Committee of the Red Cross, “They Didn't Start the Fire”.

<sup>288</sup> Afghanistan, Colombia, France, Israel, Indonesia, Malaysia, Mexico, Nigeria, Russian Federation, South Africa, Switzerland, Syrian Arab Republic, Ukraine, United Kingdom, United States and the Occupied Palestinian Territory.

<sup>289</sup> International Committee of the Red Cross, “They Didn't Start the Fire”.

<sup>290</sup> Brandes, “Public Opinion, International Security”; Michal Onderco, “When It Comes to Nuclear Weapons, Women ‘Don't Know’ A Lot. Why Is It a Problem?” in *Crossing Borders: Liber Amicorum for Professor A. Geske Dijkstra*, ed. Markus Haverland, Wil Hout and Michal Onderco (Rotterdam: Erasmus School of Social and Behavioural Sciences, 2023), 27–41.

<sup>291</sup> IPPNW, “Meinungen zu Atomwaffen”.

<sup>292</sup> France, Germany, Italy and United Kingdom.

<sup>293</sup> Simons Foundation, *Global Public Opinion on Nuclear Weapons*.

<sup>294</sup> Simons Foundation, *Global Public Opinion on Nuclear Weapons*.

<sup>295</sup> “Which of the Following Comes Closest to Your View on Nuclear Weapons?” YouGov, 9 August 2017, <https://yougov.co.uk/topics/politics/survey-results/daily/2017/08/09/25dfa/1>.

In the Millennials on War survey, however, there is no clear pattern of gender gap in opinions held in the 16 countries and territories considered. In seven countries, women were more in favour than men of the elimination of nuclear weapons.<sup>296</sup> Also in seven countries,<sup>297</sup> women were more likely than men to consider the existence of nuclear weapons to be a threat to humanity. In Nigeria and South Africa, this trend was reversed, as men were more likely than women to consider the existence of nuclear weapons to be a threat to humanity.<sup>298</sup> Additionally, in other surveys, women in the United Kingdom were not more likely than men to support giving up nuclear weapons completely.<sup>299</sup>

In conclusion, while gendered patterns are clear when it comes to the opinions of men and women on the proliferation and use of nuclear weapons, the gendered patterns are much less clear when it comes to arms control and disarmament.

## 5. Conclusions and recommendations

The aim of this paper was to investigate whether and to what extent a gender gap exists in attitudes towards nuclear weapons. Based on the review of existing literature and public opinion polls, there is evidence that the views of men and women on nuclear weapons are not uniform. However, it was not possible to find a clear pattern among the various countries included, making it difficult to generalize the findings.

The paper first looked at proliferation and found that the norm against nuclear proliferation applies more strongly to women than to men. Although the magnitude of the effect is not uniform, most academic studies and polls show that women are indeed more opposed than men to nuclear proliferation<sup>300</sup> and are more likely than men to express that they do not feel safe with nuclear weapons.<sup>301</sup> Only studies in the Republic of Korea found no significant gender differences.<sup>302</sup> One study even found a reversed pattern in the Republic of Korea.<sup>303</sup>

The paper then examined the gender gap in attitudes towards the use of nuclear weapons, on which the literature was more divided. Some studies found men more inclined than women to approve of the use

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<sup>296</sup> Colombia, France, Israel, Russian Federation, Switzerland, Ukraine and United Kingdom.

<sup>297</sup> Colombia, France, Israel, Russian Federation, Switzerland, United Kingdom and United States.

<sup>298</sup> International Committee of the Red Cross, "They Didn't Start the Fire".

<sup>299</sup> "What Should Happen to Trident at the End of Its Useful Life?" YouGov, <https://yougov.co.uk/topics/economy/trackers/what-should-happen-to-trident-at-the-end-of-its-useful-life?crossBreak=female>.

<sup>300</sup> Brandes, "Public Opinion, International Security"; Baron and Herzog, "Public Opinion on Nuclear Energy and Nuclear Weapons"; Cortright and Mattoo, "Elite Public Opinion"; Matsumura, Tago and Grieco, "External Threats and Public Opinion"; International Committee of the Red Cross, "They Didn't Start the Fire"; IPPNW, "Meinungen zu Atomwaffen"; Greenpeace, "Umfrage zu Atomwaffen" (Greenpeace, 2019, 2020, 2021); British Pugwash, "2023 UK Public Opinion Survey"; YouGov, "Would You Support or Oppose".

<sup>301</sup> Brandes, "Public Opinion, International Security"; International Committee of the Red Cross, "They Didn't Start the Fire"; Simons Foundation, *Global Public Opinion on Nuclear Weapons*; YouGov, "Study of War"; Greenpeace, "Umfrage zu Atomwaffen", (Greenpeace, 2019).

<sup>302</sup> Son and Yim, "Correlates of South Korean Public Opinion"; Jung et al., *2016 Unification Perception Survey*; Kim, "Long-Run Impact of Childhood Wartime Violence"; Lee, "Microfoundations of Nuclear Proliferation".

<sup>303</sup> Sukin, "Credible Nuclear Security".

of nuclear weapons.<sup>304</sup> Yet others did not<sup>305</sup> or found that it was women who would approve more of the use nuclear weapons.<sup>306</sup> The issue of (extended) deterrence also produced mixed results.<sup>307</sup>

The public opinion polls showed more evidence of a gender gap in attitudes, although the findings were not uniform across countries. In most polls, women were more likely than men to say that the use of nuclear weapons is never justified.<sup>308</sup> Men, on the contrary, were more likely than women to indicate that nuclear weapons are an effective tool for deterrence<sup>309</sup> and were less likely to worry about their potential use during war.<sup>310</sup>

With regard to arms control and disarmament, no clear gender differences in attitude were found, either in the literature or in the public opinion polls. Although women in some countries did indicate more often than men that nuclear weapons should be eliminated,<sup>311</sup> they were in most research no more supportive than men of disarmament treaties such as the TPNW or the Comprehensive Nuclear-Test-Ban Treaty.<sup>312</sup>

The only clear difference was that men were much more likely than women to indicate that they were aware of the existence of the TPNW.<sup>313</sup> This comes as no surprise since analytical studies have identified that women respondents are more inclined to select “don’t know” when answering questions related to foreign policy, especially in the context of nuclear weapons.<sup>314</sup> Possible explanations for this phenomenon have been put forward, focusing on differences in socialized expectations; in other words, that men are more culturally expected to be knowledgeable about international security.<sup>315</sup> Another explanation may be related to women’s reluctance to answer questions related to specialized knowledge, in this case on defence and foreign policy, in contrast to men’s greater eagerness to demonstrate expertise on such topics.

These findings are relevant to policymaking, as public opinion, especially in democracies, can have a significant influence on policy.<sup>316</sup> The effect of public opinion is, however, dependent on the degree

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<sup>304</sup> Peterson, Lawrence and Dawes, “The Relationship of Gender”; Rabow, Hernández and Newcomb, “Nuclear Fears”; Brandes, “Public Opinion, International Security”; Onderco, Etienne and Smetana, “Ideology and the Red Button”; Horschig, “Israeli Public Opinion”; Baron and Herzog, “Public Opinion on Nuclear Energy and Nuclear Weapons”.

<sup>305</sup> Press, Sagan and Valentino, “Atomic Aversion”; Dill, Sagan and Valentino, “Kettles of Hawks”; Koch and Wells, “Still Taboo?”

<sup>306</sup> Sagan and Valentino, “Revisiting Hiroshima in Iran”.

<sup>307</sup> Buehler and Banerjee, “Who Would Trust”; Baron and Herzog, “What the American Public Likes and Hates”; Peterson, Lawrence and Dawes, “The Relationship of Gender”; Körber Stiftung, “Eine Studie von Kantar”; International Committee of the Red Cross, “They Didn’t Start the Fire”.

<sup>308</sup> International Committee of the Red Cross, “They Didn’t Start the Fire”; Simons Foundation, *Global Public Opinion on Nuclear Weapons*; YouGov, “As Far as You Are Aware”.

<sup>309</sup> International Committee of the Red Cross, “They Didn’t Start the Fire”.

<sup>310</sup> International Committee of the Red Cross, “They Didn’t Start the Fire”; YouGov, “As Far as You Are Aware”.

<sup>311</sup> International Committee of the Red Cross, “They Didn’t Start the Fire”; Simons Foundation, *Global Public Opinion on Nuclear Weapons*.

<sup>312</sup> International Committee of the Red Cross, “They Didn’t Start the Fire”; Simons Foundation, *Global Public Opinion on Nuclear Weapons*; Greenpeace, “Umfrage zu Atomwaffen”, (Greenpeace, 2019, 2020, 2021); Baron and Herzog, “Public Support, Political Polarization”; British Pugwash, “2023 UK Public Opinion Survey”.

<sup>313</sup> International Committee of the Red Cross, “They Didn’t Start the Fire”.

<sup>314</sup> Brandes, “Public Opinion, International Security”; Onderco, “When It Comes to Nuclear Weapons”.

<sup>315</sup> Brandes, “Public Opinion, International Security”; Onderco, “When It Comes to Nuclear Weapons”.

<sup>316</sup> Burstein, “Impact of Public Opinion”.

of salience the issue has.<sup>317</sup> As studies have indicated, the salience of nuclear weapons is increasing again due to events such as the war in Ukraine, which caused a rise in public concern surrounding these weapons.<sup>318</sup> However, the growing awareness surrounding these weapons of mass destruction does not necessarily translate to increased support for nuclear disarmament.<sup>319</sup> Recent opinion polls in Germany, for example, indicate that 52% of Germans now want US tactical nuclear weapons (long unpopular) to remain in their country.<sup>320</sup> To focus this increased awareness on nuclear disarmament rather than proliferation, there is a need for enhanced engagement of disarmament advocates.

Given that gender differences have been found in attitudes towards nuclear weapons, it is important for policymakers to keep this in mind. The findings also underscore the importance of gender balance in the decision-making structures linked to nuclear weapons and nuclear disarmament. Women continue to be under-represented in these structures, comprising, on average, only a third of diplomats accredited to nuclear non-proliferation and disarmament conferences.<sup>321</sup>

Efforts are needed to improve gender equality in decision-making and to ensure that women's perspectives and concerns are taken into account. Since women are found to oppose the spread of nuclear weapons more than men and have greater concerns about these weapons' effects (which translates into less willingness to support their use), civil society actors advocating for nuclear disarmament might find women a more receptive audience than men. Here, campaigners for nuclear disarmament could emphasize the humanitarian consequences of nuclear proliferation and use, as women were found to be more concerned than men about these issues. Civil society actors might also want to consider designing specific strategies and messaging to engage more men in their campaigns. In all cases, it would be important to present credible arguments about how nuclear disarmament would not lead to increased risks or uncertainty.

Academic research related to public opinion and policy response, gender gaps in public opinion and research on attitudes towards nuclear weapons is still mainly focused on the United States and the West in general. This paper has tried to broaden the geographical scope by including research carried out in almost 50 countries. More research is needed, however, to properly explore the patterns across different countries. Future work could also study papers published outside the journals catalogued in major databases such as Journal Citation Reports. This will help the existing research go beyond the Western bias in general and the US bias in particular.<sup>322</sup> Scholars could also consider developing a multilingual database of surveys and survey questions to facilitate future scholarship.

One pattern noticed during the review of academic articles on public opinion was the underlying assumption that men's attitudes represent the "norm", while women's views are regarded as deviant from this "norm". Researchers should be aware of this bias and avoid perpetuating such assumption.

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<sup>317</sup> Page and Shapiro, "Effects of Public Opinion".

<sup>318</sup> Bollfrass and Herzog, "War in Ukraine and Global Nuclear Order".

<sup>319</sup> Ibid

<sup>320</sup> Robert Bongen, Hans-Jakob Rausch and Jonas Schreijäg, "For the First Time, a Majority is in Favour of Keeping Nuclear Weapons", Tagesschau, 2022, <https://www.tagesschau.de/investigativ/panorama/umfrage-atomwaffen-deutschland-101.html>.

<sup>321</sup> Renata Hessman Dalaqua, Kjølv Egeland and Torbjorn Graff Hugo, *Still behind the Curve: Gender Balance in Arms Control, Non-Proliferation and Disarmament Diplomacy* (UNIDIR, 2019), <http://www.unidir.org/files/publications/pdfs/still-behind-the-curve-en-770.pdf>.

<sup>322</sup> See also Braut-Hegghammer, "Proliferating Bias?"

Recent research in political science has showed that notions of masculinities and patriarchal attitudes play an important role in opinions on the use of force.<sup>323</sup> In empirical studies of attitudes towards nuclear weapons, similar research is thus far missing. Future work on attitudes towards nuclear weapons would benefit from adopting a gendered perspective, which would allow researchers to interrogate patriarchal views that may be present in public opinion.

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<sup>323</sup> Elin Bjarnegård, Anders Engvall, Srisompob Jitpiromsri and Erik Melander, “Armed Violence and Patriarchal Values: A Survey of Young Men in Thailand and Their Military Experiences”, *American Political Science Review* 117, no. 2 (2022): 439–453, <https://doi.org/10.1017/S0003055422000594>.

# IV. Foreign policy, gender, nuclear disarmament and the environment: Perspectives from the South

by María Pía Devoto, Mariel R. Lucero Baigorria and Ana Levintan<sup>324</sup>

## 1. Introduction

Concerns about the production, testing, and use of nuclear weapons have been on the international agenda since the bombings of Hiroshima and Nagasaki. But according to the Doomsday Clock of the *Bulletin of the Atomic Scientists*, the world now is closer than ever to a global catastrophe.<sup>325</sup> Renewing efforts towards nuclear disarmament is of utmost urgency. The same is true for addressing nuclear threats in conjunction with gender equality and environmental security.

As noted by Ray Acheson, “nuclear weapons are gendered. They have gendered impacts; their existence is predicated on and perpetuated in part due to gendered norms about power, violence, and security; and their abolition is challenged by the lack of gender and other forms of diversity in discussions and negotiations related to nuclear policy”.<sup>326</sup> Building on this point, the main objective of this document is to give visibility to the intricate relationship between nuclear disarmament, gender, and the environment on the agendas of States in Latin America and the Caribbean. In order to do so, the paper will focus on selected States that have implemented a feminist foreign policy (FFP) or a foreign policy with a gender perspective (FPGP).

The emergence and advancement of the FFP and FPGP phenomena are still recent in the region, although they can be taken as a reference for the development of foreign policy with a gender equality focus from the Global South. This article provides an overview and discussion of central concepts regarding FFP and FPGP. It then identifies States in the region that are aligned with these concepts; namely Argentina, Barbados, Chile, Colombia, Costa Rica, the Dominican Republic, Mexico, Panama, Trinidad and Tobago, and Uruguay.<sup>327</sup> The analysis focus on each State’s position on nuclear disarmament and non-proliferation, as well as on environmental policies.

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<sup>325</sup> “A moment of historic danger: It is *still* 90 seconds to midnight”, *Bulletin of the Atomic Scientists*, 2024, <https://thebulletin.org/doomsday-clock/current-time/>.

<sup>326</sup> Ray Acheson, “The Treaty on the Prohibition of Nuclear Weapons and Gender, Feminism, and Intersectionality”, *Reaching Critical Will*, February 2023, <https://reachingcriticalwill.org/resources/publications-and-research/publications/16762-the-treaty-on-the-prohibition-of-nuclear-weapons-and-gender-feminism-and-intersectionality>.

<sup>327</sup> The Latin American and Caribbean States chosen are those that have officially declared their adoption of an FFP, as well as States that have strong national action plans on Women, Peace and Security.

The methodology used in this work is qualitative, involving analysis of academic articles, related news, speeches, official documents and international treaties, complemented by information obtained through semi-structured interviews with 15 key informants from the academic and political spheres, specialists, activists, and members of non-governmental organizations from various countries.<sup>328</sup>

So far, official documents on Latin American and Caribbean FFP and FPGP do not establish a direct relationship between gender, the environment and nuclear disarmament. These areas are not addressed together in terms of preventive responsibility, nor in terms of analysing the causes of these phenomena, nor their impact on women.

Therefore, it is necessary to strengthen the linkages between the three topics and place them on the international agenda, and for this, we consider that FFP and FPGP are the valid interlocutors possessing the appropriate tools for their effective activation. The Latin American and Caribbean States analysed here demonstrate interest and expertise in gender policies, in addition to extensive background in conventional disarmament and the environment, coupled with the regional nuclear disarmament trajectory, which provides them with the necessary legitimacy to lead the proposals presented at the end of the analysis.

## 2. Feminist foreign policy and foreign policy with a gender perspective

While FFP and FPGP generate debates and resistance in the face of a strong advance of autocratic and conservative governments, the reality is that there is a slow but steady growth in the adoption of these foreign policies in various parts of the world.

The initial push came in 2014 with the proposal from the Swedish government,<sup>329</sup> based on its experience in mainstreaming gender policies domestically, and its participation in international forums for the promotion of women's rights, thanks to the contributions of then Minister of Foreign Affairs Margot Wallström. This initiative was followed by Canada in 2017, with the partial adoption of the model, specifically applied to international cooperation through the Feminist International Assistance Policy. Then, France and Luxembourg followed suit in 2018; Mexico in 2020; Libya and Spain in 2021; Chile, Germany, Liberia and the Kingdom of the Netherlands in 2022; and Argentina, Colombia, Mongolia and Slovenia in 2023.<sup>330</sup> Similarly, there are more interested States that are still preparing their statements and positions.

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<sup>328</sup> For further information regarding the interviews, please see Appendix B.

<sup>329</sup> The FFP proposal is organized around three "R's": Rights—active advocacy in defence of the rights of women and girls at the international level, combating all forms of violence and discrimination; Representation—promotion of women's representation in dialogue and decision-making at all levels, in civil service and in civil society, particularly in peace processes; and Resources—promotion of the allocation of resources to promote equal opportunities and gender equality at a global level. A fourth "R" was added, Research, which refers to empirical research, data collection and reporting as inputs for foreign policy formulation. Government Offices of Sweden. Ministry for Foreign Affairs, "Swedish Foreign Service Action Plan for Feminist Foreign Policy 2015–2018 including focus areas 2016", 2016, <https://www.peacewomen.org/sites/default/files/action-plan-feminist-foreign-policy-2015-2018.pdf>.

<sup>330</sup> In this regard, we mention the States that maintain this position through official documents and speeches by their ministers for Foreign Affairs. Among them, the "Handbook: Sweden's Feminist Foreign Policy", 2022, Ministry for Foreign Affairs, <https://fojo.se/wp-content/uploads/2022/03/handbook-swedens-feminist-foreign-policy.pdf> [NB: Sweden has currently abandoned this position]; "Canada's Feminist International Assistance Policy", Global Affairs Canada, 2017, <https://www.international.gc.ca/world-monde/assets/pdfs/iap2-eng.pdf>; "France's International Strategy on Gender Equality", Ministry for Europe and Foreign Affairs, 2018, <https://www.diplomatie.gouv.fr/en/french-foreign-policy/human-rights/women-s-rights/france-s-international-strategy-for-gender-equality-2018-2022/>; "Feminist Foreign Policy of the Government of Mexico", Foreign Affairs, 2020, <https://embamex.sre.gob.mx/grecia/images/politicos/PDF/POLEXTFEM.pdf>; "Spain's

The context that favoured the promotion and impact of FFP and FPGP had key international sources, such as the Convention on the Elimination of All Forms of Discrimination against Women (1979), the Beijing Declaration and Platform for Action (1995) and its follow-ups, and United Nations Security Council resolution 1325 on Women, Peace, and Security (2000) and the nine subsequent resolutions. It is also connected to transnational feminist movements, particularly since 2015, with the emergence of #NiUnaMenos in Argentina, the “green tide”<sup>331</sup> and its impact at the local, regional and international levels, followed later by #MeToo, and the International Women’s Strike adopted every 8 March since 2016.

There are various debates and definitions surrounding the idea of FFP. However, for practical purposes, we will take what we consider to be the most comprehensive, drafted by Lyric Thompson, Gayatri Patel, Gawain Kripke and Megan O’Donnell, who argue that:

[Feminist foreign policy is the] policy of a state that defines its interactions with other states, as well as with movements and other non-state actors, in a manner that prioritizes peace, gender equality, and environmental integrity; enshrines, promotes, and protects the human rights of all; seeks to disrupt colonial, racist, patriarchal, and male-dominated power structures; and allocates significant resources, including research, to achieve that vision. Feminist foreign policy is coherent in its approach across all levers of influence, anchored by the exercise of those values at home and co-created with feminist activists, groups and movements, at home and abroad.<sup>332</sup>

This definition, which includes peace as a priority and the protection of human rights, focuses on issues in the Global North and lacks a precise mention of the fight against the various forms of violence against women; the latter being one of the most relevant issues in the Global South, marked by poverty and distinct types of exploitation.

There is also no explicit mention of intersectionality (and the multiple voices of the South that characterize it), homogenizing the concept of feminism, with scarce analysis of the multiple oppressions that women suffer. Neither disarmament nor nuclear disarmament is mentioned, but the environmental issue is acknowledged in general terms.

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Feminist Foreign Policy: Promoting Gender Equality in Spain’s External Action”, Ministry of Foreign Affairs, 2021, [https://www.exteriores.gob.es/es/PoliticaExterior/Documents/PoliticaExteriorFeminista/2023\\_10\\_PLAN%20ACCION%20POLITICA%20EXTERIOR%20FEMINISTA%20v3.pdf](https://www.exteriores.gob.es/es/PoliticaExterior/Documents/PoliticaExteriorFeminista/2023_10_PLAN%20ACCION%20POLITICA%20EXTERIOR%20FEMINISTA%20v3.pdf); “Luxembourg’s Foreign Policy Address”, Ministry of Foreign and European Affairs, 2019, [https://maee.gouvernement.lu/content/dam/gouv\\_maee/minist%C3%A8re/d%C3%A9clarations-de-politique-%C3%A9trang%C3%A8re/2019/EN-Declaration-de-politique-etrangere-2019.pdf](https://maee.gouvernement.lu/content/dam/gouv_maee/minist%C3%A8re/d%C3%A9clarations-de-politique-%C3%A9trang%C3%A8re/2019/EN-Declaration-de-politique-etrangere-2019.pdf); “Shaping Feminist Foreign Policy. Germany’s Federal Foreign Office Guidelines”, Federal Foreign Office, 2022, <https://www.auswaertiges-amt.de/blob/2585076/4d2d295dad8fb1c41c6271d2c1a41d75/ffp-leitlinien-data.pdf>; “Política Exterior Feminista de Chile”, Chile en el Exterior, 2023, <https://politicaexteriorfeminista.minrel.gob.cl/inicio>; Ministry of Foreign Affairs, International Trade and Worship of Argentina, “Agenda para la progresiva institucionalización de una Política Exterior Feminista en Argentina”, 2023, [https://www.cancilleria.gob.ar/userfiles/ut/hoja\\_de\\_ruta\\_repef.pdf](https://www.cancilleria.gob.ar/userfiles/ut/hoja_de_ruta_repef.pdf). Following the change of government in Argentina in December 2023, the institutional changes and public statements of the current administration suggest that the government will not continue with an FFP. For Libya, Liberia, Slovenia, Colombia and Mongolia, no official documents had been published at the time of drafting of this paper, but they have publicly stated their intention to adopt this foreign policy.

<sup>331</sup> The women’s pro-abortion movement in Argentina is known as the “green tide”.

<sup>332</sup> Lyric Thompson et al., *Defining Feminist Foreign Policy: The 2023 Edition*, (Feminist Foreign Policy Collaborative 2023): p. 1, <https://static1.squarespace.com/static/637d4cec8d2cf97e81431a25/t/650afcebdad5b336f49db48c/1695218925596/Defining+Feminist+Foreign+Policy-finalized.pdf>.

In contrast to FFP, FPGPs are positioned in a gradualist manner, understanding that the various characteristics encompassed by their definition are applied step by step, attempting to achieve a balanced combination of improvements in various areas of both foreign and internal policy, allowing for a credible and solid definition of a State with FPGP.

Among the conceptual differences, FPGPs highlight the importance of including, as central elements in the construction of the concept of insecurity, the everyday violence (institutional, intrafamily, workplace, economic, physical, sexual, etc.) suffered by women. They also emphasize the importance of not emptying the concept of feminism of its content<sup>333</sup> and, therefore, specifying what type of feminism is being referred to when talking about FFP, incorporating intersectionality so as not to homogenize what is understood by women and their concerns.

In this sense, it is useful to consider the definition proposed by Juan Martín Barbas, Dulce Chaves and Mariel R. Lucero for FPGP as a better fit to represent States that either are in the process of having an internal debate on FFPs or even question the representativeness of FFPs. An example is Costa Rica, with a long history of implementing gender perspective policies but which did not adopt FFP. As such, FPGP refers to:

A set of decisions and actions taken by a government, in coherence with both internal and external policies, guided by a feminist perspective of diversity and intersectionality [in defence of the environment], weighing strategies and discourses that contribute to the economic, social, political, and cultural emancipation of women and LGBTQ+ individuals, people with disabilities, Afro-descendant identities, peasants, indigenous peoples, migrants, ethnic and/or religious minorities (...) in the confrontation against the structures that sustain 'multiple oppressions' (...) anti-capitalist, anti-militarist, anti-colonial, anti-racist, anti-xenophobic (...). These are policies that recognize gender inequality and promote actions seeking greater formal representation and presence of women, [while adding] the importance of including substantive representation (...) and symbolic representation.<sup>334</sup>

The emphasis here is placed on resistance from a post-colonial perspective, accentuating the relevance of intersectionality and a gradual and coherent articulation between internal and external gender policies, in line with local and regional needs to build the legitimacy of the proposal and avoid gender washing. This phenomenon occurs when an actor adopts the feminist struggle as its own without making real or coherent changes in other areas of its internal or external policy.

The content of this definition, built from dialogue, gives dynamics to the concept and emphasizes the commitment to involve various internal actors (Indigenous Peoples, the LGBTQ+ community, people with disabilities, and a range of social movements such as feminist movements, civil organizations and grassroots organizations). Daira Arana Aguilar, director of Global Thought, agrees with this, highlighting the importance of having resources that allow for dialogue with diverse counterparts.<sup>335</sup>

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<sup>333</sup> There is a broad debate about the use of the term feminism in the singular or plural, since adopting the singular implies essentializing women and their diverse issues; in other words, it leaves out the intersectionality that it claims to pursue and proposes a feminism identified with issues of the Global North.

<sup>334</sup> Juan Martín Barbas, Dulce Daniela Chaves and Mariel R. Lucero, "Problematizar y deconstruir el concepto hegemónico de Política Exterior Feminista desde Abya Yala: hacia una propuesta de gradualidad en la implementación", *Relaciones Internacionales*, 49 (2022): pp. 84-6, <https://revistas.uam.es/relacionesinternacionales/article/view/14003>.

<sup>335</sup> Interview conducted with Daira Arana Aguilar on 22 September 2023.

While this definition also does not explicitly mention conventional and nuclear disarmament, it expresses concern and importance about opposing the multiple forms of violence suffered by women—mainly physical, economic, and institutional<sup>336</sup>—and a general defence of the environment linked to regional ancestral cosmogonies and cultures, a manifestation of which is the opposition to the extensive exploitation of natural resources and the defence of water, including food sovereignty.

For the authors, these concepts are not interchangeable, and the definitions and differentiation of FFP and FPGP matter because, as Celia Amorós argues, “the effectiveness of the concept (...) accounts for the reality it names”.<sup>337</sup> Despite their differences, these frameworks of FFP and FPGP agree that the concept of the State is interpreted, in the terms of Carole Pateman,<sup>338</sup> as masculinized. The State regulatory system is constructed taking men as the reference, as occurs in the symbolic world—which is reflected both domestically and internationally, and even in issues related to nuclear policies.

In this sense, the use of a gendered framework in policy formulation alerts us and allows us to identify large inequalities between women and men, highlight women’s current subalternity and/or marginalization, visualize the presence of women, and propose planning for substantive and symbolic women’s representation to achieve equality, both in nuclear disarmament and environmental matters.

There are different definitions of FFP as conceived in the Global North that relegate the issues of the various ‘Souths’. The implication of language in the definition seems central to us. Therefore, and in the face of various works questioning FFPs, and States proclaiming themselves as fervent defenders (believing that merely mentioning FFP lends them the characteristics that define such foreign policy), some States would prefer to develop new concepts, such as FPGP.

However, we consider that the objective of this work forces us to overcome theoretical discussions about these issues since at the core of both policies are elements that facilitate their empirical application. From here, we can focus on linking them with the environment and nuclear disarmament.

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<sup>336</sup> Latin America and the Caribbean have the second highest rate (1.4%) of physical violence against women compared to other continents: Africa 2.5%; Oceania 1.2%; Asia 0.8% and Europe 0.6%; data extracted from UNODC/UNWOMEN, “Gender-related Killings of Women and Girls Improving (Femicide/Feminicide)”, UNODC Research, March 2022.

<sup>337</sup> Rosa Cobo Bedia, “El género en las ciencias sociales”, *Cuadernos de Trabajo Social*, Vol. 18 (2005): p. 250.

<sup>338</sup> Carole Pateman, *The Sexual Contract* (Barcelona: Anthropos; Mexico: Universidad Autónoma Metropolitana, 1995).

### 3. Why should States with a feminist foreign policy or with a foreign policy with a gender perspective support nuclear disarmament?

States with FFP and with FPGP are the actors that, in the current context, have the values and impetus to reactivate global alliances in order to renew efforts for nuclear disarmament, highlighting the unequal impacts that radiation and nuclear weapons have not only on women's health but also on their social integration.

FFP and FPGP present a two-fold advantage: they promote leadership and participation, still scarce, of women in decision-making on nuclear disarmament policies, and they incorporate a gender perspective that the mere presence of women does not guarantee.<sup>339</sup>

In the document "Gender, Development, and Nuclear Weapons", produced in 2016 by the Institute of International Law and Policy (ILPI) and UNIDIR, a series of health impacts are listed for women exposed to radiation generated by the impact of nuclear weapons, including cancers and problems affecting reproductive health. These data were collected from the experiences of Hiroshima and Nagasaki, and the accidents of Chernobyl and Fukushima.<sup>340</sup>

Although detonations and radiation exposure have severe permanent effects on a population's health, studies in recent years have pointed out that women are 50 per cent more vulnerable than men, particularly given the incidence of breast, ovarian or thyroid cancers.<sup>341</sup> In this regard, nuclear engineer and director of INVAP S.A., Verónica Garea, argues that "there is no significant difference in the radiosensitivity of cells between men and women, although, for example, sperm are produced and disappear, while eggs are permanently housed in a woman's body".<sup>342</sup> On the other hand, exposure to large volumes of ionizing radiation reduces fertility rates, increases the risks of spontaneous abortion, and results in a high rate of birth defects,<sup>343</sup> all of which mainly affect women's sexual and reproductive health—while also deepening women's stigmatization in societies with strong patriarchal cultural connotations, which exclude impacted women, turning them into outcasts.

Garea also points out that it is significant to ask "what were women doing at that moment—it may have more to do with gender roles than with radiation itself".<sup>344</sup> Gender-based division of labour finds women in charge of cleaning in contaminated areas and/or in direct contact with people exposed to radiation who are under their care. Women's higher exposure due to gender-role stereotypes compromises their health and employability.

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<sup>339</sup> Laura Rose Brown, "Feminist Foreign Policy and Nuclear Weapons: Contributions and Implications", *Non Proliferation and Disarmament Papers*, no. 86, November 2023, [https://www.nonproliferation.eu/wp-content/uploads/2023/11/EUNPDC\\_no-86.pdf](https://www.nonproliferation.eu/wp-content/uploads/2023/11/EUNPDC_no-86.pdf).

<sup>340</sup> John Borrie et al., *Gender, Development and Nuclear Weapons: Shared Goals, Shared Concerns*, ILPI & UNIDIR, 2016, <https://unidir.org/publication/gender-development-and-nuclear-weapons-shared-goals-shared-concerns>.

<sup>341</sup> Anne Guro Dimenn, *Gendered Impacts: The Humanitarian Impacts of Nuclear Weapons from a Gender Perspective*, ILPI & UNIDIR, 2014, <https://unidir.org/publication/gendered-impacts-the-humanitarian-impacts-of-nuclear-weapons-from-a-gender-perspective/>.

<sup>342</sup> Interview conducted with Verónica Garea on 26 September 2023.

<sup>343</sup> Borrie et al., *Gender, Development and Nuclear Weapons*, pp. 11-2.

<sup>344</sup> Interview cited ut supra.

To this, another factor must be added, which is the displacement forced by nuclear explosions due to the effects of radiation, further accentuating existing processes of feminization of migrations,<sup>345</sup> which overlap with processes of feminization of poverty.

In this context, situations of discrimination and sexual and psychological violence are exacerbated, and the rights to health, housing and property are severely violated. Hibakusha—a term used to refer to survivors of the atomic bombings in Japan—were stigmatized and segregated, even by Japanese society itself, being considered ‘contaminated’.<sup>346</sup>

The 1945 Project,<sup>347</sup> driven by photographer Haruka Sakaguchi, collects testimonies from some survivors of Hiroshima and Nagasaki. Below, we quote one of them:

“This will put you at a disadvantage for marriage”, my father warned me. (...) I married at the age of 24 (...) I never told anyone that I was a hibakusha. “You’ll be better off if you don’t tell anyone”, another hibakusha once told me. (...) When I turned 46, I was diagnosed with retinal detachment. The costs of the operation were, to say the least, formidable. Later, it was revealed that the retinal damage had been caused by the radiation from the atomic bomb. After 44 years, I finally applied for the hibakusha *techou* [health care subsidies available to atomic bombing survivor].<sup>348</sup>

The main humanitarian consequences of the use of nuclear weapons were highlighted and addressed in intergovernmental conferences prior to the development of the Treaty on the Prohibition of Nuclear Weapons (TPNW) in 2017. Some of the most significant meetings were in Oslo, Norway, in 2013, and in Nayarit, Mexico, in 2014. Among the conclusions of both meetings, it was emphasized that it is unlikely that any State or international body can adequately address the humanitarian emergency caused by the detonation of a nuclear weapon. Hence the urgency to develop tools and preventive measures.

The historical experiences of the use and testing of nuclear weapons have demonstrated immediate and long-term devastating effects. These effects are not limited to national borders but affect other countries and populations in multiple ways, at regional and global levels, causing impacts that hinder and severely damage socioeconomic and environmental development. A report by the International Physicians for the Prevention of Nuclear War indicates that “the detonation of nuclear weapons produce incinerating heat, powerful shockwaves, overpressures, ionizing radiation, and massive amounts of smoke and soot that can alter the Earth’s climate”.<sup>349</sup>

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<sup>345</sup> In this sense, the process of feminization of migration refers to a new and sexual international division of labour that places women in the most precarious and poorly paid jobs, which is particularly harmful to migrant women. International Organization for Migration (IOM) and the Ministry of Social Development of the Government of the Autonomous City of Buenos Aires, “Las mujeres migrantes y la violencia de género. Aportes para la reflexión y la intervención”, 2014, p. 77, [https://www.iom.int/sites/g/files/tmzbd1486/files/2018-07/Manual\\_OIM-digital.pdf](https://www.iom.int/sites/g/files/tmzbd1486/files/2018-07/Manual_OIM-digital.pdf).

<sup>346</sup> Borrie et al., Gender, Development and Nuclear Weapons, pp. 14-5.

<sup>347</sup> Haruka Sakaguchi, “About”, 1945 Project, 2017, <https://www.1945project.com/about/>.

<sup>348</sup> Testimonial by Kiyoko Koizumi, 1945 Project, <https://www.1945project.com/portfolio-item/kiyoko-koizumi/#1498206302968-41dc96a7-7877>.

<sup>349</sup> International Physicians for the Prevention of Nuclear War, World Medical Association, World Federation of Public Health Associations, International Council of Nurses, “The Health and Humanitarian Case for Banning and Eliminating Nuclear Weapons”, 2016, pp. 1-2, <https://www.ipnw.org/wp-content/uploads/2020/07/HealthEnvironmentalCase2016.pdf>.

A report by the Director-General of the World Health Organization in 1993, emphasized that the effects of nuclear explosions can cause severe damage to the atmosphere, aquifers and land, with extensive long-term effects, affecting biodiversity irreversibly, leaving follow-on effects for several decades in the health of survivors and their offspring.<sup>350</sup>

In other words, the harmful impact of the use and testing of nuclear weapons must be recognized, which deepens the crisis of climate change and its effects on societies (increased global warming, extreme temperatures, land and water contamination, etc.). Following this line, various economic activities would also be affected globally, deepening concerns about food sovereignty, particularly in southern countries, as well as the lives of the population in general, and especially of women. All the aforementioned consequences expose the urgency of an issue that cannot be postponed.

## 4. The panorama in Latin America and the Caribbean

### 4.1 Analytical Focus: Nuclear disarmament

In the documents of FFP and FPGP in Latin America and the Caribbean, there is no explicit commitment to nuclear disarmament, and this is also not observed in other international experiences. However, the documents of the States analysed in this study show a strong commitment to the Women, Peace, and Security (WPS) agenda and to conventional disarmament.

The WPS agenda has been promoted since the approval of resolution 1325 in 2000,<sup>351</sup> which recognizes the significant role of women in sustaining peace and the need for States to promote their participation in decision-making processes to prevent and resolve conflicts. Since then, States have been encouraged to develop their national action plans (NAPs). The development of NAPs on WPS is one of the tools available to States to integrate disarmament topics into the WPS agenda. This was recognized in the recommendations of the Fifth Annual Meeting of the WPS Focal Points Network (2023), where the emphasis is on “increased focus on the prevention pillar of [resolution] 1325 (...) and investment in arms control, non-proliferation, and disarmament and a range of human security interventions”.<sup>352</sup>

Disarmament is intertwined with the historical pacifist legacy of Latin America and the Caribbean, crystallized in the establishment of the first nuclear-weapons-free zone, along with the fight against violence against women and environmental concerns. However, the analysis of official documents and statements from the following Latin American and Caribbean States with FFP and FPGP shows that attention to the issue of nuclear disarmament varies from one State to another.

#### ► Argentina

In the case of Argentina, the roadmap of the Ministry of Foreign Affairs, International Trade and Worship for the institutionalization of FFP (2023) recognizes women as key and necessary participants

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<sup>350</sup> World Health Assembly, 46, “Health and Environmental Effects of Nuclear Weapons”, WHO, 1993, <https://iris.who.int/handle/10665/176493>.

<sup>351</sup> Security Council, S/RES/1325, 2000, p. 1. <http://unscr.com/en/resolutions/doc/1325>.

<sup>352</sup> WPS Focal Point Network, “5th Capital-Level Meeting – Joint Communique”, 2023, <https://wpsfocalpointsnetwork.org/2023/11/01/5th-capital-level-meeting-joint-communique/>.

in disarmament processes, conflict prevention and peacekeeping. It also highlights the Arms Trade Treaty as a fundamental pillar in its strategy on arms control.<sup>353</sup>

#### ► Barbados

Barbados does not have a specific document on its FPGP, but in recent years, gendered policies have been promoted following the assumption of office by Prime Minister Mia Mottley.<sup>354</sup> Regarding disarmament, Barbados participates in various thematic forums as a member of the Caribbean Community (CARICOM).<sup>355</sup>

#### ► Chile

In relation to Chile's FFP, the WPS agenda is among its priority topics. It is worth noting that Chile was the first State in the region to begin work to implement resolution 1325 through a NAP.<sup>356</sup> Currently, it is in the process of developing its third NAP on WPS.<sup>357</sup> Chile is also active in promoting gender perspectives in nuclear regimes, especially within TPNW discussions. It has acted as the gender focal point of the TPNW (2022-2023), organizing discussions and events and presenting a report with recommendations to strengthen gender mainstreaming efforts.<sup>358</sup>

#### ► Colombia

At the end of 2022, Colombia began the process of developing its NAP,<sup>359</sup> through which it seeks to “promote gender equality, protect the human rights of women and girls in conflict and post-conflict situations, and strengthen peace and security in the country with the ultimate purpose of achieving Total, Sustainable and Lasting Peace”.<sup>360</sup> Although it is not finalized, much of the guidance on these issues can be identified in the Final Agreement to End the Armed Conflict and Build a Stable and Lasting Peace (2016) and its Framework Plan for Implementation, which includes the gender approach with 122 specific measures.<sup>361</sup>

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<sup>353</sup> Ministry of Foreign Affairs, International Trade and Worship of Argentina, “Agenda para la progresiva institucionalización de una Política Exterior Feminista en Argentina”, 2023, pp. 26-31, [https://www.cancilleria.gob.ar/userfiles/ut/hoja\\_de\\_ruta\\_repef.pdf](https://www.cancilleria.gob.ar/userfiles/ut/hoja_de_ruta_repef.pdf).

<sup>354</sup> United Nations Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean (UNLIREC), “Fuerzas de cambio IV: Mujeres de América Latina y el Caribe promueven el desarme, la no proliferación y el control de armas”, 2020, <https://unlirec.org/wp-content/uploads/2020/12/Fuerza-de-Cambio-IV-CASTELLANO.pdf>.

<sup>355</sup> For example “Non-Nuclear-Armed States Get Nothing in Return for Fulfilling Commitments Except Threat of Potential Annihilation”, Meetings Coverage and Press Releases of the United Nations, 14 October 2022, <https://press.un.org/en/2022/gadis3690.doc.htm>.

<sup>356</sup> Ministry of Foreign Affairs of Chile, “Feminist Foreign Policy”, June 2023, p. 34, <https://politicaexteriorfeminista.minrel.gob.cl/>.

<sup>357</sup> Chilean Ministry of Foreign Affairs, “Ministra (s) inaugura el primer encuentro con la sociedad civil para la elaboración del III Plan de Acción Nacional para la implementación de la Resolución 1325”, 25 August 2023, <https://minrel.gob.cl/noticias-antiores/ministra-s-inaugura-el-primer-encuentro-con-la-sociedad-civil-para-la>.

<sup>358</sup> Report of the gender focal point (Chile): 2nd Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons, New York, 27 November-1 December 2023, <https://digitallibrary.un.org/record/4025818>.

<sup>359</sup> Ministry of Foreign Affairs of Colombia, “Por primera vez Colombia presenta avances de la agenda de Mujeres, Paz y Seguridad y de la Resolución 1325 ante la ONU”, 25 October 2023, <https://www.cancilleria.gov.co/newsroom/news/primer-vez-colombia-presenta-avances-agenda-mujeres-paz-seguridad-resolucion-1325>.

<sup>360</sup> Chancellery of Colombia, “Con tres foros macrorregionales y cofinanciación internacional, el Gobierno de Colombia avanza en el Plan de Acción Nacional de la Resolución 1325: Mujeres, Paz y Seguridad”, 18 May 2023, <https://www.cancilleria.gov.co/newsroom/news/tres-foros-macrorregionales-cofinanciacion-internacional-gobierno-colombia-avanza>.

<sup>361</sup> Final Agreement to End the Armed Conflict and Build a Stable and Lasting Peace, 24 November 2016, <https://www.refworld.org/legal/agreements/natlegbod/2016/en/121520>.

Furthermore, the Colombian Foreign Ministry announced the design of its FFP in July 2023, in collaboration with women's organizations and LGBTQI+ communities, but it has not yet been published for further analysis.<sup>362</sup>

### ► Costa Rica

Costa Rica is internationally recognized for its efforts in various disarmament processes, and for the inclusion of a gender perspective in its proclamations and declarations at multilateral meetings and forums,<sup>363</sup> although it has not adopted a NAP on WPS.

In her statements during the Eighth Biennial Meeting of States (BMS8) on the United Nations Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in June 2022, Ambassador Maritza Chan emphasized the need for the instruments and agreements that are concluded to include a gender perspective and guarantee the full participation of women in arms control and peace and security initiatives.<sup>364</sup>

Costa Rica also stated in the First Committee of the General Assembly that the under-representation of women in disarmament is one of the root causes of the problem in nuclear issues: "Without incorporating a gender lens, the world would run the risk of never fully understanding the gendered impact of ionizing radiation".<sup>365</sup> Furthermore, it emphasized that the TPNW is the democratization of nuclear disarmament, stating that Latin America and the Caribbean were the launching platform for this Treaty, with the support of the Community of Latin American and Caribbean States (CELAC).<sup>366</sup>

It is worth recalling the leadership of Costa Rican women in nuclear disarmament matters, as illustrated by Gioconda Úbeda Rivera, former Secretary-General of the Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL), and Elayne Whyte, who presided over the TPNW negotiations.

### ► Dominican Republic

In the case of the Dominican Republic, an official document on its FPGP has not been found. However, there appears to be an increased collaboration between the Ministry of Foreign Affairs and the Ministry of Women in monitoring and fulfilling international treaties with a gender approach.<sup>367</sup> With respect to its disarmament work, Dominican Republic is active in the prevention of weapons of mass destruction.<sup>368</sup>

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<sup>362</sup> Ministry of Foreign Affairs of Colombia, "Cancillería inicia el diseño de la Política Exterior Feminista, de la mano de organizaciones de mujeres y personas LGTBIQ+", 6 July 2023, <https://www.cancilleria.gov.co/newsroom/news/cancilleria-inicia-diseno-politica-externo-feminista-mano-organizaciones-mujeres>.

<sup>363</sup> Statement by Maritza Chan, representative of the Permanent Mission of Costa Rica to the United Nations, at the General Debate of the First Committee, Reaching Critical Will, 3 October 2022, [https://reachingcriticalwill.org/images/documents/Disarmament-fora/1com/1com22/statements/4Oct\\_CostaRica.pdf](https://reachingcriticalwill.org/images/documents/Disarmament-fora/1com/1com22/statements/4Oct_CostaRica.pdf).

<sup>364</sup> The Eighth Biennial Meeting of States (BMS8), "Joint Statement - Costa Rica", 30 June 2022. Document provided courtesy of Maritza Chan.

<sup>365</sup> "World Must Step Back from 'Brink of Nuclear Madness' Amid Growing Risk of Miscalculation, Accidental Use", Meetings Coverage and Press Releases of the United Nations, 17 October 2022, <https://press.un.org/en/2022/gadis3691.doc.htm>.

<sup>366</sup> Interview conducted with Maritza Chan on 27 September 2023.

<sup>367</sup> Ministry of Women of the Dominican Republic, Directorate of International Relations, <https://mujer.gob.do/index.php/departamentos/unidades-consultivas/item/296-direccion-de-relaciones-internacionales>. Ministry of Women's Affairs of the Dominican Republic, "Plan Nacional de Igualdad y Equidad de Género - PLANEG III 2020-2030", 2019, <https://mujer.gob.do/transparencia/phocadownload/Publicaciones/Planeg/PLANEG%20III%202020-2030.pdf>.

<sup>368</sup> UNLIREC, "Fuerzas de cambio IV".

## ► Mexico

In the official document of Mexico's FFP, there is no explicit mention of nuclear disarmament and arms control in the main thematic areas. However, Chancellor Alicia Bárcena Ibarra stated in July 2023 “that Mexico's priorities include promoting initiatives such as the prohibition of nuclear weapons, combating the illicit trafficking of small arms and light weapons, eradicating the illegal trade in cultural goods, and recovering the cultural heritage of indigenous peoples”.<sup>369</sup> Mexico's contributions to nuclear disarmament include its leadership during the negotiations of the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean, known as Treaty of Tlatelolco, which opened for signature in 1967.<sup>370</sup>

Mexico participates actively in initiatives aimed at integrating gender perspectives into the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and at strengthening the gendered provisions of the TPNW.<sup>371</sup> In 2023, Mexico succeeded Chile as the TPNW's gender focal point.

## ► Panama

Panama does not have a specific document on its FPGP, but its commitment to gender equality in its foreign policy is mentioned in the Plan Misión Panamá (2021).<sup>372</sup> Regarding the gender–disarmament nexus, it should be noted that Panama participates in various initiatives aimed at integrating gender perspective into the NPT.<sup>373</sup>

## ► Trinidad and Tobago

An official document from Trinidad and Tobago on its FPGP has not been found, but strong participation in policies linked to the WPS agenda is observed. Additionally, since 2010, Trinidad and Tobago has led the resolution on women, disarmament, non-proliferation, and arms control in the First Committee of the General Assembly. This biennial resolution urges Member States to promote “equal opportunities for the representation of women in all decision-making processes with regard to matters related to disarmament, non-proliferation and arms control”.<sup>374</sup> In 2022, the resolution was co-sponsored by

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<sup>369</sup> Mexican Ministry of Foreign Affairs, “Comunicado N° 289. El gobierno de México ejecutará una política exterior responsable, humana y feminista: Alicia Bárcena”, 7 July 2023, <https://mision.sre.gob.mx/oea/index.php/actividades/45-actividades-2023/887-el-gobierno-de-mexico-ejecutara-una-politica-exterior-responsable-humana-y-feminista-alicia-barcena-07-jul-23>.

<sup>370</sup> It should be noted that the signing of this Treaty inspired the creation of other nuclear-weapon-free zones such as the Treaty of Rarotonga (1985) in the South Pacific; the Treaty of Bangkok (1995) in South-East Asia; the Treaty of Pelindaba (1996) in Africa; the Treaty of Semipalatinsk (2006) in Central Asia; and the nuclear-weapon-free status of Mongolia (1998)—agreements covering 50% of the planet's surface with the commitment of 116 United Nations Member States.

<sup>371</sup> United Nations, “From pillars to progress : gender mainstreaming in the Treaty on the Non-Proliferation of Nuclear Weapons”, working paper submitted by Australia, Canada, Columbia, Spain, the Philippines, Ireland, Mexico, Namibia, Panama, Sweden and the United Nations Institute for Disarmament Research, Digital Library, 17 May 2022, <https://digitallibrary.un.org/record/3976139>; United Nations, “Operationalizing the gender provisions of the Treaty on the Prohibition of Nuclear Weapons” (TPNW/MSP/2022/WP.2), working paper submitted by Ireland, Mexico, and the United Nations Institute for Disarmament Research, 08 June 2022, <https://undocs.org/en/TPNW/MSP/2022/WP.2>.

<sup>372</sup> United Nations Development Programme, “Plan Misión Panamá: Fortaleciendo la política exterior y el posicionamiento internacional de Panamá para contribuir al desarrollo sostenible del país”, 2021, p. 6, [https://info.undp.org/docs/pdc/Documents/PAN/PRODOC\\_00129007-%20Plan%20Mision%20Panama.pdf](https://info.undp.org/docs/pdc/Documents/PAN/PRODOC_00129007-%20Plan%20Mision%20Panama.pdf).

<sup>373</sup> United Nations, “From pillars to progress : gender mainstreaming in the Treaty on the Non-Proliferation of Nuclear Weapons”, working paper submitted by Australia, Canada, Columbia, Spain, the Philippines, Ireland, Mexico, Namibia, Panama, Sweden and the United Nations Institute for Disarmament Research, Digital Library, 17 May 2022, <https://digitallibrary.un.org/record/3976139>.

<sup>374</sup> “Women, disarmament, non-proliferation and arms control”, resolution adopted by the General Assembly on 7 December 2022 (A/RES/77/55), para. 1, <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/RES/77/55&Lang=E>.

45 States and mentioned issues such as the impact of the illicit proliferation of small arms and light weapons on women and girls, the relevance of NAPs on WPS, and the need to collect disaggregated data by gender, age and geographical area, among others, to better understand the effects of armed violence.

#### ► Uruguay

Presently, Uruguay's five-year strategic plan for its foreign policy does not include an approach to disarmament or gender in particular, but it does establish among its general principles "the peaceful resolution of disputes" and "the maintenance of international peace and security".<sup>375</sup> Its participation in various disarmament forums (including nuclear) has acknowledged the relevant role of women in disarmament and the importance of incorporating gender equity in these matters are highlighted.<sup>376</sup>

## 4.2 Analytical focus: Environment

Regarding environmental issues, we observe that in the official documents of Latin American and Caribbean States with FFP and FPGP, there are no mentions related to the relationship with nuclear disarmament. However, these States have a long history of adherence to international treaties on environmental matters such as biodiversity, land and agriculture, water, climate change, and the atmosphere. Examples of these are the Paris Agreement and the region's participation in the Conferences of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) of 1994. The latest advancement was the Escazú Agreement, which entered into force in 2021<sup>377</sup> with the aim of guaranteeing access to information, public participation, and access to justice in environmental matters in the region, with an emphasis on the importance of protecting environmentalists.<sup>378</sup> In many of these official documents, there is greater reference to climate change, and in others, it extends to other more general environmental issues.

In summary, none of the documents of the analysed States allude to the link between the environment and nuclear disarmament. However, in the vast majority, there is explicit mention of the connection between the climate and environmental action and gender policies.

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<sup>375</sup> Ministry of Foreign Affairs of Uruguay, "Plan Estratégico de Política Exterior 2020-2025: Objetivos estratégicos, objetivos específicos, indicadores e identificación de prioridades", 2 August 2021, p. 1, <https://www.gub.uy/ministerio-relaciones-exteriores/institucional/plan-estrategico/bases-para-politica-externior-del-uruguay>.

<sup>376</sup> Uruguay, "Intervention by Uruguay for the General Debate of the First Committee of the United Nations", Reaching Critical Will, 4 October 2023, [https://www.reachingcriticalwill.org/images/documents/Disarmament-fora/1com/1com23/statements/4Oct\\_Uruguay.pdf](https://www.reachingcriticalwill.org/images/documents/Disarmament-fora/1com/1com23/statements/4Oct_Uruguay.pdf). Uruguay, "Debate temático sobre Armas Convencionales del Primer Comité de Naciones Unidas", Reaching Critical Will, 20 and 21 October 2022, [https://reachingcriticalwill.org/images/documents/Disarmament-fora/1com/1com22/statements/24Oct\\_Uruguay.pdf](https://reachingcriticalwill.org/images/documents/Disarmament-fora/1com/1com22/statements/24Oct_Uruguay.pdf).

<sup>377</sup> Observatory on Principle 10 in Latin America and the Caribbean, "Acuerdo Regional sobre el Acceso a la Información, la Participación Pública y el Acceso a la Justicia en Asuntos Ambientales en América Latina y el Caribe", CEPAL, n.d., <https://observatoriop10.cepal.org/es/tratado/acuerdo-regional-acceso-la-informacion-la-participacion-publica-acceso-la-justicia-asuntos>.

<sup>378</sup> This agreement is relevant given the fact that the Latin American–Caribbean region is one of the most violent regions for environmental leaders and groups. According to the non-governmental organization Global Witness (2023), 88% of the murders perpetrated against environmentalists worldwide in 2022 occurred in Latin America—the majority of which were concentrated in Colombia (60), Brazil (34), Mexico (31) and Honduras (14). For more information, see <https://www.global-witness.org/es/standing-firm-es/>.

### ► Argentina

In the case of Argentina, its third priority issue in the roadmap towards the institutionalization of the FFP is: “Sustainable development as equality” (2023), based on the Escazú Agreement and the UNFCCC.<sup>379</sup>

### ► Barbados

Although no specific documents have been found regarding its environmental policy linked to gender, Barbados stands as one of the main actors against the climate crisis in various international forums.<sup>380</sup>

### ► Chile

Chile presents “Climate change and gender” (2023) as one of its priority issues of the FFP, recognizing the unequal impact that the former has on society, severely affecting women and girls, who are more vulnerable to a series of factors that historically place them in a situation of structural inequality.<sup>381</sup> In this regard, Chile was one of the States pushing for the Escazú Agreement. Among other actions, it promotes the participation of women in climate change deliberations, strengthens the work of environmental defenders, and promotes their protection, along with that of other vulnerable sectors.

### ► Colombia

Colombia, through the Ministry of Environment and Sustainable Development, published in 2023 its roadmap for a plan of action of gender and climate change, in collaboration with the German Development Cooperation (GIZ).<sup>382</sup>

### ► Costa Rica

Costa Rica published its national climate and gender action plan in 2023, developed in cooperation with the United Nations Development Programme.<sup>383</sup>

### ► Dominican Republic

The Dominican Republic has a gender action plan, linked to programmes for reducing carbon emissions from deforestation and forest degradation.<sup>384</sup>

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<sup>379</sup> Ministry of Foreign Affairs, International Trade and Worship of Argentina, “Agenda para la progresiva institucionalización de una Política Exterior Feminista en Argentina”, 2023, pp. 16-20, [https://www.cancilleria.gob.ar/userfiles/ut/hoja\\_de\\_ruta\\_repef.pdf](https://www.cancilleria.gob.ar/userfiles/ut/hoja_de_ruta_repef.pdf).

<sup>380</sup> United Nations Environment Programme, “Barbados PM leads the charge against climate change”, 7 December 2021, <https://www.unep.org/es/noticias-y-reportajes/reportajes/la-primera-ministra-de-barbados-lidera-la-batalla-contra-el-cambio>. Spencer Feingold, “Prime Minister of Barbados Calls for ‘Urgent Action’ on Climate Crisis”, World Economic Forum, 27 June 2023, <https://www.weforum.org/agenda/2023/06/amnc-2023-mia-mottley-prime-minister-of-barbados-call-for-urgent-action-on-the-climate-crisis>.

<sup>381</sup> Chilean Ministry of Foreign Affairs, “Feminist Foreign Policy”, June 2023, p. 35, [https://drive.google.com/file/d/1N-3jfEOMn-mxT4nFfg\\_wTOkmM\\_-bwwCGw/view](https://drive.google.com/file/d/1N-3jfEOMn-mxT4nFfg_wTOkmM_-bwwCGw/view).

<sup>382</sup> Colombian Ministry of Environment and Sustainable Development, Fundación Internacional y para Iberoamérica de Administración y Políticas Públicas (FIIAPP), ProNDC Support to Colombia’s climate goals by the German Technical Development Cooperation (GIZ), “Hoja de Ruta: Plan de Acción de Género y Cambio Climático de Colombia”, 2022, [https://www.minambiente.gov.co/wp-content/uploads/2023/03/GIZ\\_Genero\\_Hoja-de-Ruta\\_Final-2023-Baja.pdf](https://www.minambiente.gov.co/wp-content/uploads/2023/03/GIZ_Genero_Hoja-de-Ruta_Final-2023-Baja.pdf).

<sup>383</sup> National Women’s Institute, Ministry of Environment and Energy and the United Nations Development Programme, “Plan de Acción Nacional sobre Igualdad de Género en la Acción por el Clima”, 25 September 2023, <https://www.undp.org/es/costa-rica/publicaciones/plan-de-accion-nacional-sobre-igualdad-de-genero-en-la-accion-por-el-clima>.

<sup>384</sup> World Bank, “Plan de acción de género: Programa de Reducción de Emisiones de REDD+ República Dominicana”, 2021, <https://ambiente.gob.do/app/uploads/2022/08/Plan-de-Accion-de-Genero-Programa-REDD-Republica-Dominicana.pdf>.

## ► Mexico

Although in its official document on FFP Mexico does not explicitly mention the link between environment and gender, the Ministry of Foreign Affairs has worked in numerous spaces related to climate action and gender, and in reviewing programmes that recognize the differential impact of climate change on women.<sup>385</sup> In 2022, then Undersecretary for Multilateral Affairs and Human Rights, Martha Delgado Peralta, stated that “as part of its human rights foreign policy and its feminist foreign policy, Mexico has promoted the incorporation of a cross-cutting perspective of gender equality and human rights in all multilateral negotiation topics for effective climate action”.<sup>386</sup>

## ► Panama

In the case of Panama, there is a national climate and gender action plan (2021) being carried out in conjunction with the United Nations Development Programme.<sup>387</sup>

## ► Trinidad and Tobago

Trinidad and Tobago, in the publication of its National Environmental Policy in 2018, recognized the interaction between environmental sustainability and gender equality, and the negative impact on women due to pre-existing structural disparities, in terms of lack of access to land, low representation and poverty.<sup>388</sup>

## ► Uruguay

In its latest strategic plan for foreign policy (2020–2025), among its priority issues Uruguay only alludes to the protection of the environment but does not indicate any connection with gender or nuclear disarmament.<sup>389</sup>

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<sup>385</sup> Ministry of Foreign Affairs of Mexico, Under-Secretary for Multilateral Affairs and Human Rights, “La Política Exterior Feminista del Gobierno de México”, n.d., <https://embamex.sre.gob.mx/grecia/images/politicos/PDF/POLEXTFEM.pdf>.

<sup>386</sup> Secretary of Foreign Affairs of Mexico, “Comunicado N° 437. México presenta su Plan Nacional de Acción de Género y Cambio Climático”, 14 November 2022, <https://www.gob.mx/sre/prensa/mexico-presenta-su-plan-nacional-de-accion-de-genero-y-cambio-climatico>.

<sup>387</sup> Ministry of Environment of Panama and the United Nations Development Programme, “Plan Nacional de Género y Cambio Climático de Panamá”, September 2021, <https://www.undp.org/es/panama/publications/plan-nacional-de-g%C3%A9nero-y-cambio-clim%C3%A1tico>.

<sup>388</sup> Government of Trinidad and Tobago, “National Environmental Policy of Trinidad & Tobago 2018”, 2018, p. 2, <https://www.planning.gov.tt/sites/default/files/National%20Environmental%20Policy%20%28NEP%29%20T%26T%202018.pdf>.

<sup>389</sup> Ministry of Foreign Affairs of Uruguay, “Plan Estratégico de Política Exterior 2020-2025: Objetivos estratégicos, objetivos específicos, indicadores e identificación de prioridades”, 2021, p. 1, <https://www.gub.uy/ministerio-relaciones-exteriores/institucional/plan-estrategico/bases-para-politica-externior-del-uruguay>.

## 5. Conclusions and recommendations

Gender perspectives provide a particular approach to analysing reality and addressing problems, allowing for the visibility of the current subalternity of women and emphasizing the importance of their inclusion, both in resolving these problems and in considering the solutions themselves.

Incorporating nuclear disarmament issues into FFP and FPGP allows not only the participation of women but also the identification of specific problems associated with gender roles assigned in relation to the nuclear issue, and areas of health that affect women in distinct ways, which have been excluded until now. In this sense, incorporating a gender perspective through FFP and FPGP goes beyond a focus on numerical representation of women or the counting the number of women victims of a nuclear explosion, but aims for a substantive incorporation of the gender issue.

As Karen Hallberg, a researcher at the National Scientific and Technical Research Council of Argentina (CONICET), maintains, “the trend is towards highly risky peace, where a minimal human error can cause total destruction. We have already witnessed what the two nuclear bombs dropped on the towns of Nagasaki and Hiroshima were. This cannot happen again. And for this, the only solution is the total abolition of nuclear weapons. And to achieve this, the participation of women is fundamental”.<sup>390</sup> Moreover, the integration of gender perspectives is also of critical importance.

There is an interrelationship between gender, environment and nuclear disarmament, although all three topics appear disconnected in official documents, and even disjointed in political proposals. If we find any stated connection, it is only a partial approach to two of the three aspects. Consequently, one of the conclusions we reach is that this connection is weakly recognized by the regional community, and we could even say internationally. However, several Latin American and Caribbean States present expertise in gender policies, reinforced by the adoption of FFP or FPGP, a pacifist trajectory regarding nuclear disarmament, and environmental commitment, all of which provide them with the necessary legitimacy to lead a gender approach to nuclear disarmament.

Another conclusion we can draw is that these States with FFP and FPGP in Latin America and the Caribbean share, in their official documents, values associated with the fight against violence and in favour of pacifism as consolidated bases to work on the issue, in addition to the agreements signed at regional and international levels. This, together with their commitment to the WPS agenda, offers a valuable path to promote the linkages between gender and disarmament in the region. Moreover, the agenda of FFP and FPGP in Latin America and the Caribbean can lead the promotion of alliances with other foreign policies of similar characteristics in different regions, linking the inclusion of nuclear disarmament and arms control policies.

The interviews carried out for this research demonstrate that, more often than not, gender issues are interpreted as merely descriptive (numerical) representation, rather than substantive and symbolic. Many still think that incorporating women on a numerical basis in some areas implies incorporating a gender perspective. Therefore, we underscore the importance of training in gender analysis for both men and women as a way of strengthening FFPs and FPGPs. Another important aspect is the need for institutionalization, to avoid interruptions of these policies in the face of government changes.

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<sup>390</sup> Interview conducted with Karen Hallberg on 22 September 2023.

Finally, another conclusion refers to a perceived appropriation of the discourse on FFP by the Global North, which brings the risk of replicating a colonialist model in the Global South, without considering intersectionality and regional differential contexts. In this sense, in one of the interviews, a key actor deemed it necessary for “Latin America and the Caribbean to have their own FFP model”.<sup>391</sup> This would position the region as a reference in gender equality issues internationally and would allow it to shape feminist agendas on nuclear disarmament and the environment.

► **Proposals to advance nuclear disarmament through feminist foreign policies and foreign policies with a gender perspective:**

1. Encourage dialogue through various regional and international forums to build binding nuclear disarmament policies from feminist foreign policies and foreign policies with a gender perspective.
2. Facilitate the organization of meetings at the Latin American and Caribbean regional level to build consensus on integrating gender perspectives into nuclear disarmament as a priority among States.
3. Develop joint strategies for nuclear disarmament and strengthen exchanges of best practices through South–South cooperation with Asia and Africa. This has the potential to increase the number of States in the Global South incorporating a gender perspective into their foreign policy and connecting with nuclear disarmament and environmental issues.
4. Promote the inclusion of disarmament and nuclear disarmament in the WPS agenda, including through the adoption of NAPs.
5. Participate in and encourage discussions on these topics by presenting papers and hosting side events at meetings of the NPT and the TPNW, as well as meetings, seminars and events on FFP and FPGP. Utilize mass media campaigns to raise awareness among the general public.

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<sup>391</sup> Interview with official of the Ministry of Foreign Affairs of the Government of Mexico on 26 September 2023.

# V. Gender-transformative change in nuclear disarmament: Challenges and opportunities in the Treaty on the Prohibition of Nuclear Weapons

by Peixuan Xie<sup>392</sup>

## 1. Introduction

The incomparably destructive nature of nuclear weapons, starkly observed in Hiroshima, Nagasaki and elsewhere, led to initial waves of reflection on the human consequences of nuclear use in conflict, and generations of policies and mechanisms were subsequently drawn up to put limits on the use of nuclear weapons.<sup>393</sup>

The call for the comprehensive dismantling of nuclear weapons is not only a humanitarian endeavour but also a feminist anti-colonial one. Burgeoning academic and policy-level inquiries have shed light on the gendered social, economic, environmental and health impacts that nuclear weapons can have on different groups of society.<sup>394</sup>

With heightened attention on the human and environmental implications of nuclear use past and present, often at Indigenous sites, voices calling for justice – with special focus on women and girls – are being amplified in anti-nuclear advocacy.<sup>395</sup> In tandem, the under-representation of women in nuclear

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<sup>392</sup> The author is grateful to Dr Renata Hessmann Dalaqua, Paula Jou Fuster and Dr Jana Wattenberg for their helpful feedback on this paper and to Dr Simone Wisotzki at PRIF for her kind encouragement.

<sup>393</sup> See, for example, R.D. Gibbons, “The Humanitarian Turn in Nuclear Disarmament and the Treaty on the Prohibition of Nuclear Weapons”, *Nonproliferation Review* 25, no. 1–2 (July 2018): 11–36, <https://doi.org/10.1080/10736700.2018.1486960>; E. Minor, “Changing the Discourse on Nuclear Weapons: The Humanitarian Initiative”, *International Review of the Red Cross* 97, no. 899 (2015): 711–730, <https://doi.org/10.1017/S181638311600014X>; J. Borrie, “Humanitarian Reframing of Nuclear Weapons and the Logic of a Ban”, *International Affairs* 90, no. 3 (2014): 625–646, <https://www.jstor.org/stable/24538512>.

<sup>394</sup> R.H. Dalaqua et al., *Missing Links: Understanding Sex- and Gender-Related Impacts of Chemical and Biological Weapons* (Geneva: UNIDIR, 2019), <https://unidir.org/publication/missing-links-understanding-sex-and-gender-related-impacts-of-chemical-and-biological-weapons>; N. Ritchie and M. Kupriyanov, *Understanding the Humanitarian Consequences and Risks of Nuclear Weapons: New Findings from Recent Scholarship* (Federal Ministry of Austria and University of York, 2023), [https://www.bmeia.gv.at/fileadmin/user\\_upload/Zentrale/Aussenpolitik/Abruestung/Understanding\\_the\\_Humanitarian\\_Consequences\\_and\\_Risks\\_of\\_Nuclear\\_Weapons.pdf](https://www.bmeia.gv.at/fileadmin/user_upload/Zentrale/Aussenpolitik/Abruestung/Understanding_the_Humanitarian_Consequences_and_Risks_of_Nuclear_Weapons.pdf).

<sup>395</sup> See, for example, J. Baldus, C. Fehl and S. Hach, *Beyond the Ban. A Global Agenda for Nuclear Justice*, PRIF Report 4/2021 (Frankfurt: Peace Research Institute Frankfurt, 2021); B. Barrillot, “Human Rights and the Causalities of Nuclear Testing”, *Journal of Genocide Research* 9, no. 3 (2017): 443–459; P. Kaiku, *Nuclear Justice for the Marshall Islands in the Age of Geopolitical Rivalry in the Pacific* (Asia-Pacific Leadership Network for Nuclear Non-Proliferation and Disarmament,

polymaking in the highly masculinized space of deterrence-based security is also being brought to the fore by activist, academic and policy communities.<sup>396</sup>

The impact of such calls for gender equality, as well as of gender-mainstreaming initiatives, can be observed in the international nuclear regimes. Meetings of states parties to both the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and the Treaty on the Prohibition of Nuclear Weapons (TPNW) have featured discussions on the equal participation of women, the different effects ionizing radiation has on men and on women, gender-sensitive victim assistance, and intersections of race, gender, economic status, geography and nationality.<sup>397</sup> In the case of the TPNW, in particular, gender has been a topic for discussion as well as the subject of several action points adopted by states parties under the Vienna Action Plan (2022).

Similarly, interventions to incorporate gender in all aspects related to peace and security under the United Nations Security Council's landmark Women, Peace and Security (WPS) agenda could support calls to "connect the dots" between nuclear disarmament and feminist foreign policy. These calls echo long-existing feminist activism around nuclear disarmament and inclusive peace.<sup>398</sup>

Both the TPNW and the WPS agenda are ambitious instruments with ground-breaking potential to reshape global nuclear disarmament, peacebuilding and security governance. Despite affinities between the TPNW and the WPS agenda, there have been no focused discussions on the synergies, limitations and potential of bringing these two processes closer together. To overcome this gap, this paper will ask the following questions:

- How do gender considerations feature in the TPNW? What is needed to ensure that those words are matched with action?
- Where are nuclear disarmament and environmental security in the WPS agenda? How can we bridge this gap?

These reflections are important in promoting a more inclusive understanding of what security means in the TPNW and in ensuring that this understanding is reflected in the practice of TPNW states parties. This discussion can also help broaden the scope of the WPS agenda to include nuclear disarmament and environmental security.

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2023); M.B. Bolton and E. Minor, "Addressing the Ongoing Humanitarian and Environmental Consequences of Nuclear Weapons", *Global Policy* 12, no. 1 (2021): 81–85; J.M. Collin and P. Bouveret, *Radioactivity under the Sand: The Waste from French Nuclear Tests in Algeria* (Heinrich Böll Foundation, 2020), <https://www.boell.de/en/2020/07/08/radioactivity-under-the-sand>.

<sup>396</sup> See, for example, R.H. Dalaqua, K. Egeland and T.G. Hugo, *Still Behind the Curve: Gender Balance in Arms Control, Non-Proliferation and Disarmament* (Geneva: UNIDIR, 2020), <https://unidir.org/still-behind-the-curve-gender-balance-in-arms-control-non-proliferation-and-disarmament-diplomacy>.

<sup>397</sup> See the UNIDIR Gender and Disarmament Hub for summaries of gender provisions in the NPT and the TPNW: <https://unidir.org/tools/gender-disarmament-hub>.

<sup>398</sup> H. Myrntinen, *Connecting the Dots: Arms Control, Disarmament and the Women Peace and Security Agenda* (Geneva: UNIDIR, 2020), <https://unidir.org/publication/connecting-the-dots>; Laura Rose Brown, "Feminist Foreign Policy and Nuclear Weapons: Contributions and Implications", *Non Proliferation and Disarmament Papers* 86 (2023), [https://www.nonproliferation.eu/wp-content/uploads/2023/11/EUNPDC\\_no-86.pdf](https://www.nonproliferation.eu/wp-content/uploads/2023/11/EUNPDC_no-86.pdf).

## 2. Connecting the dots between gender and nuclear politics

Applying a gender lens to nuclear weapons illustrates the gender-specific impacts of nuclear detonation and exposure to ionizing radiation. While the detonation of one or more nuclear weapons would cause immediate catastrophic humanitarian consequences, there is clear evidence that, over the long term, women and girls would have a far higher risk of developing cancer than men or boys if exposed to ionizing radiation. A lifespan study of survivors of the 1945 nuclear weapon attacks on Hiroshima and Nagasaki in Japan found that the risk of developing and dying from solid cancer due to ionizing radiation exposure was nearly twice as high for women as for men.<sup>399</sup> Pregnant women exposed to high doses of ionizing radiation face a greater risk of delivering children with birth defects and of experiencing stillbirths, as well as a greater risk of maternal mortality.<sup>400</sup>

Sex and gender are therefore key aspects that shape how a person experiences conflict and how the biological and physiological impacts of weapons may manifest over the long term. Yet gender also affects access to participation in arms control, non-proliferation and disarmament negotiations. Women are systematically under-represented in discussions on nuclear weapons, comprising, on average, only one third of accredited diplomats to NPT and TPNW meetings.<sup>401</sup> Men are over-represented as heads of delegations. For instance, at the 2019 Preparatory Committee for the 2020 Review Conference of the Parties to the NPT, approximately 76% of heads of delegations were men and 24% were women, while attendees overall were 71% men and 29% women.<sup>402</sup>

But gender is not only an analytical category to shed light on women's under-representation in international security, it is also a tool to decode power relations embedded in nuclear discourse and activities, for example the feminization of resistance and disarmament.<sup>403</sup> Nuclearism intersects with gender in the way it masculinizes nuclear activities and feminizes resistance. When militarized and masculinized nuclearism becomes the norm, divergent narratives, especially those based on gendered and racialized perspectives, risk being feminized and labelled irrelevant.

Beyond gender, an intersectional analysis of nuclear policies must also consider sexual orientation, race, class, caste, ethnicity, geographic location, disability and other forms of marginalization. That

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<sup>399</sup> “Risk” here refers to excess relative risk per Gray. See Ozasa et al. “Studies of the Mortality of Atomic Bomb Survivors, Report 14, 1950–2003: An Overview of Cancer and Noncancer Diseases”, *Radiation Research* 177, no. 3 (2012): 229–243, <https://doi.org/10.1667/RR2629.1>.

<sup>400</sup> A. Guro Dimmen, “Gendered Impacts: The Humanitarian Impacts of Nuclear Weapons from a Gender Perspective”, *ILPI–UNIDIR Vienna Conference Series* 5 (2014): 1–8, <https://unidir.org/publication/gendered-impacts-humanitarian-impacts-nuclear-weapons-gender-perspective>; ICAN, “Gender and Nuclear Weapons”, [https://www.icanw.org/gender\\_and\\_nuclear\\_weapons](https://www.icanw.org/gender_and_nuclear_weapons).

<sup>401</sup> See the UNIDIR Gender and Disarmament Hub: <https://unidir.org/tools/gender-disarmament-hub>.

<sup>402</sup> R. Hessmann Dalaqua, “How Can We Achieve Gender Break-Throughs in Nuclear Negotiations and Technical Cooperation?” *IAEA Bulletin* 62-4 (2021), <https://www.iaea.org/bulletin/how-can-we-achieve-gender-break-throughs-in-nuclear-negotiations-and-technical-cooperation>.

<sup>403</sup> C. Eschle, “Gender and Valuing Nuclear Weapons” (working paper, Department of Politics, University of York, 2012); R. Acheson, *Banning the Bomb, Smashing the Patriarchy* (Lanham, MD: Rowman & Littlefield, 2021); R. Acheson, “A Feminist Critique of the Atomic Bomb”, Heinrich Böll Stiftung, 12 October 2018, <https://www.boell.de/en/2018/10/12/feminist-critique-atomic-bomb>.

some 70% of the world's uranium is located around sites inhabited by Indigenous Peoples, as are most nuclear testing and waste repository grounds, highlights the importance of considering intersectionality.<sup>404</sup> A conceptual toolbox is needed to examine the geographic location of nuclear impacts versus the inhabitants' power and dominance in current global order. The critical analysis presented in this paper is anchored in the following concepts.

### ► Feminist post-colonial perspectives

Feminist post-colonial perspectives look at intertwining racialized, class and gender relations and the associated structure of power and dominance. In particular, this approach examines relations within and between states predicated on gendered and racialized power and hierarchy.<sup>405</sup>

### ► Gender

Gender refers to the roles, behaviours, activities and attributes that a given society at a given time considers appropriate or a “norm” for women and men and girls and boys, as well as non-binary or gender-fluid persons.

Gender norms are socially constructed differences – as opposed to biological differences (sex) – and they function as social rules of behaviour. In most societies, gender norms have resulted in differences and, thus, inequalities between women and men in terms of their socially assigned responsibilities, roles, access to and control over resources, and decision-making opportunities.<sup>406</sup>

### ► Gender analysis

Gender analysis is a critical examination of how differences in gender roles, activities, needs, opportunities, rights and entitlements affect men, women, girls, boys, non-binary persons and gender-fluid persons in certain situation or contexts. Gender analysis examines the relationships between genders, their access to and control of resources, and the constraints they face relative to one another.

Gender analysis can be integrated into all sector assessments or situational analyses to ensure that gender-based injustices and inequalities are not exacerbated by interventions and that, where possible, greater equality and justice in gender relations are promoted.<sup>407</sup>

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<sup>404</sup> W. Churchill and W. LaDuke, “Native North America: The Political Economy or Radioactive Colonization” in *The State of Native America: Genocide, Colonization and Resistance*, ed. M. Annette Jaimes (Boston: South End Press, 1992), 241–266; R. Panchasi, “‘No Hiroshima in Africa’: the Algerian War and the Question of French Nuclear Tests in the Sahara”, *History of the Present: A Journal of Critical History* 9, no. 1 (2019): 88; D. Endres, “The Rhetoric of Nuclear Colonialism: Rhetorical Exclusion of American Indian Arguments in the Yucca Mountain Nuclear Waste Siting Decision”, *Communication and Critical/Cultural Studies* 6 (2009): 45.

<sup>405</sup> S. Choi and C. Eschle, “Rethinking Global Nuclear Politics, Rethinking Feminism”, *International Affairs* 98, no. 4 (2022): 1129–1147; J.A. Tickner, “Feminism Meets International Relations: Some Methodological Issues”, in *Feminist Methodologies for International Relations*, ed. Brooke Ackerly, Maria Stern, and Jacqui True (Cambridge University Press, 2006).

<sup>406</sup> UNIDIR, “What Is Gender?”, Gender and Disarmament Hub, <https://unidir.org/gender-perspective>.

<sup>407</sup> This is an expanded definition based on the UN Women Training Centre's Gender Equality Glossary, <https://trainingcentre.unwomen.org/mod/glossary/showentry.php?eid=49>.

## ► Gender mainstreaming

Mainstreaming a gender perspective is the process of assessing the implications for women, men, girls, boys, non-binary persons and gender-fluid persons of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a way to make everyone's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that men, women, girls, boys, non-binary persons and gender-fluid persons benefit equally and inequality is not perpetuated.<sup>408</sup>

## ► Masculinities

Masculinities refers to the set of socially constructed attributes that are considered characteristic of men. In international relations, masculinized politics is a form of symbolic gender-coding that relies on hierarchical power relations, thus representing certain qualities and realms of international affairs as more masculine (such as international security because it involves “rational” or “unemotional” decision-making) and gives these representations a degree of legitimacy while devaluating the opposite.

In nuclear politics, hyper-masculine nuclearism “associates the possession of nuclear weapons with manliness, sexual potency, and the importance of demonstrating resolve, strength, political advantage and security through military/masculine power”.<sup>409</sup>

## ► Nuclearism

Nuclearism refers to the belief system and policy orientation that supports the development, possession and use of nuclear weapons as a means of national security, deterrence or geopolitical influence. It encompasses the ideological, military and technological frameworks that prioritize nuclear capabilities and doctrines as essential means of security. Nuclearism emphasizes the maintenance and expansion of nuclear arsenals, nuclear deterrence strategies and the pursuit of military dominance.<sup>410</sup>

## ► Nuclear colonialism

Nuclear colonialism refers to the interplay between nuclear technology, imperialism and colonialism. It highlights the historical and ongoing relationships between nuclear power, nuclear weapons and the legacies of colonialism. Nuclear colonialism encompasses the exploitation of colonized lands and Indigenous communities for nuclear testing, uranium mining and nuclear waste disposal. It underscores the disproportionate burden of environmental, health and social impacts on marginalized and colonized communities. It examines the intersectionality of power, race and environmental justice, challenging the prevailing narrative of nuclear progress while calling for the recognition of colonial legacies and the equitable treatment of affected populations.<sup>411</sup>

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<sup>408</sup> This is an expanded definition based on the UN Women Training Centre's Gender Equality Glossary, <https://trainingcentre.unwomen.org/mod/glossary/showentry.php?eid=61>.

<sup>409</sup> N. Ritchie, “A Contestation of Nuclear Ontologies: Resisting Nuclearism and Reimagining the Politics of Nuclear Disarmament”, *International Relations* (2022): 1–24, <https://doi.org/10.1177/00471178221122959>.

<sup>410</sup> Definition provided by the Decolonizing Nuclear Studies project, <https://highlynrched.com/dns-course-definitions>. See also A.S. Runyan, “Disposable Waste, Lands and Bodies under Canada's Gendered Nuclear Colonialism”, *International Feminist Journal of Politics* 20, no. 1 (2018): 24–38; S. Biswas, *Nuclear Desire: Power and the Postcolonial Nuclear Order* (Minneapolis: Minnesota University Press, 2014).

<sup>411</sup> Definition provided by the Decolonizing Nuclear Studies project, <https://highlynrched.com/dns-course-definitions>. See

## 3. Gender and the TPNW: Potential and limitations

### 3.1 Normative progress

The establishment of the TPNW in 2017 marked an unprecedented turn in nuclear discourse from security concerns towards humanitarian impacts. Unlike prior frameworks, the TPNW offers the prospect of contesting the hyper-masculine and militarized thinking of nuclear-based security. Adopted to obligate the comprehensive prohibition of nuclear arms with no conditions, the TPNW incorporates, to various degrees, gender, humanitarian, environmental and justice elements.

The preamble of the TPNW acknowledges that nuclear weapons have a disproportionate impact on women and girls, including as a result of ionizing radiation. It also recognizes the need for the “equal, full and effective participation of both women and men” in promoting peace and security and for the engagement of women in nuclear disarmament.<sup>412</sup> This has clear synergies with gender-mainstreaming efforts in peace and security governance, including the WPS agenda.

Moreover, the TPNW includes a clause mandating states parties to provide age- and gender-sensitive assistance to individuals under their jurisdiction affected by the use or testing of nuclear weapons, including medical care, rehabilitation and psychological support, and to provide for their social and economic inclusion (Article 6).<sup>413</sup>

The transboundary humanitarian consequences of nuclear weapons use and testing, justice for the victims of these practices, and impacts on Indigenous communities are also mentioned in the treaty. Their inclusion is a progressive step towards unprecedented people-centred nuclear accountability and casts a ray of hope for redressing the social, health and environmental impacts of nuclear use past and present.

Broadly considered, these developments indicate an expanded institutional space for discussions on gender and Indigenous justice in the nuclear policymaking sphere. They strengthen the pursuit of human security, the right to a healthy environment, and positive peace, underpinned not only by the absence of war but also by the realization of human rights and justice.

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also Endres, “The Rhetoric of Nuclear Colonialism”; R. Jacobs, “Nuclear Conquistadors: Military Colonialism in Nuclear Test Site Selection during the Cold War”, *Asian Journal of Peacebuilding* 1, no. 2 (2013), 173.

<sup>412</sup> See the TPNW: <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/CONF.229/2017/8&Lang=E>.

<sup>413</sup> See the TPNW: <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/CONF.229/2017/8&Lang=E>.

## 3.2 Operational challenges

With its standing provisions, however, the TPNW would have to overcome several marked barriers to achieve feminist and racial equality in nuclear disarmament.

### 3.2.1 The pitfalls of “add women and stir”

The classic “add women and stir” approach to guarantee “equal participation” replicated in the TPNW assumes women in nuclear policymaking form a hegemonic group with a unitary profile, voice and vision for equality. In traditionally hyper-masculine spaces, women have been shown to often internalize the space’s logic of power and dominance to keep up with their men counterparts. Merely increasing the participation of women, without probing the foundational inequalities between women from different locations and of different race, age, class, disability or sexual orientation, would prevent essential questions about power relations being raised.

Disarmament negotiations remain dominated by men.<sup>414</sup> In 2022, women represented only 37% of delegates to the First Committee of the United Nations, which deals with disarmament, non-proliferation and arms control issues.<sup>415</sup> Gender imbalances increase with higher ranking positions, moving from diplomatic personnel to ambassadors, posts in the foreign ministry, and heads of government.<sup>416</sup>

A recent study on the TPNW conclude that, in relation to the treaty, gender matters were “represented but not always heard”.<sup>417</sup> A further evaluation of the gender provisions of the TPNW – nuclear impacts on women and girls, and women’s under-representation in nuclear policymaking and masculine discourse – demonstrated a mismatch between the gender visions and deliverables of the treaty.<sup>418</sup>

These findings show how “ticking the gender box” could pave the way for a minimum institutionalization of equality but might not challenge the gendered power dynamics within the nuclear policymaking sphere and translate into genuine and meaningful representation. The under-representation of women among governmental delegates is in stark contrast to the long history of feminist anti-nuclear activism, best illustrated by the Women’s International League for Peace and Freedom.

### 3.2.2 Insufficient mechanisms for redressing racialized injustices

With the ground laid for discussions focused on Indigenous Peoples, the TPNW opens a critical opportunity to redress racialized nuclear injustice, but specific mechanisms are still required to support the implementation of key provisions.

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<sup>414</sup> M. Huscha, “Might Feminism Revive Arms Control? Why Greater Inclusion of Women in Nuclear Policy Is Necessary and How to Achieve It”, International Institute for Peace, April 2020, <https://www.iipvienna.com/news-reports-publications/2020/4/28/might-feminism-revive-arms-control-why-greater-inclusion-of-women-in-nuclear-policy-is-necessary-and-how-to-achieve-it>.

<sup>415</sup> UNIDIR Gender and Disarmament Hub, <https://unidir.org/tools/gender-disarmament-hub>.

<sup>416</sup> Dalaqua, Egeland and Hugo, *Still Behind the Curve*.

<sup>417</sup> M. Chan and E. Romani, “Represented but Not Always Heard: An Analysis of the Progress of Gender Equality at the United Nations through the Lens of the Treaty on the Prohibition of Nuclear Weapons”, *Zeitschrift für Friedens- und Konfliktforschung* 12 (2023): 267–288.

<sup>418</sup> See, for example, R.H. Hogue and A. Maurer, “Pacific Women’s Anti-nuclear Poetry: Centring Indigenous Knowledges”, *International Affairs* 98, no. 4 (2022) 1267–1288, <https://doi.org/10.1093/ia/iiaac120>.

Although TPNW states parties are called on to provide “adequate assistance” in Article 7, the responsibilities of victim assistance and environmental remediation (Article 6) are primarily shouldered by affected states.<sup>419</sup> Those states will need to allocate funds to deliver medical care, rehabilitation and psychological support, as well as to ensure the social and economic inclusion of affected individuals. In addition, to ensure the delivery of age- and gender-sensitive victim assistance, affected countries will need to develop mechanisms to collect age- and gender-disaggregated data related to the needs of survivors and take those needs into consideration when designing, implementing and reviewing victim assistance programmes.<sup>420</sup>

To implement their environmental remediation obligations, affected states will need to assess contaminated areas and the risks they pose to the environment and health. The states should then consider options for rehabilitation, including methods and technologies to reduce the amount of radioactive material and stifle the spread of radiation. They will need to devise strategies, policies and programmes to ensure remediation measures are implemented. This may require dedicated legislation, research and development efforts, as well as funding schemes to clear contaminated areas.<sup>421</sup> Even though most of these actions will take place within national boundaries, it should be noted that harm resulting from nuclear activities is, in many instances, transboundary.

While victim assistance and land clearance have been accomplished in the realm of conventional weapons, these processes are likely to be more challenging when applied to nuclear damage. Ionizing radiation from nuclear weapon explosions is known to have adverse impacts on humans, but it can be difficult to establish direct causality between radiation exposure and health impacts, which may extend beyond a generation.<sup>422</sup> The main difficulty in environmental remediation may be obtaining the financial resources and technology required for radiological clean-up.

The TPNW’s preamble stresses that none of its provisions shall be interpreted as affecting the “inalienable right of its States Parties to develop research, production and use of nuclear energy for peaceful purposes without discrimination”.<sup>423</sup> With the global nuclear order seated in a deeply unequal political economy built on exploitation of the labour and natural resources of developing countries to fuel globalized capitalism and technological advancement, mostly controlled by Western countries, the implications of this preambular paragraph warrant careful examination. Resources from Indigenous lands continue to be exploited in the name of nuclear technology and research, with detrimental effects on the local social, environmental and cultural ecology.

This continued exploitation reinforces the message that technological development trumps Indigenous living and beliefs. The “without discrimination” requisite of this TPNW provision risks passively defending the imbalanced status quo without acknowledging the dominance that exists in nuclear energy development as much as in nuclear weapons governance.

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<sup>419</sup> See the TPNW: <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/CONF.229/2017/8&Lang=E>.

<sup>420</sup> J. Revill, R. Hessmann Dalaqua and W. Wan, “The TPNW in Practice: Elements for Effective National Implementation”, *Journal for Peace and Nuclear Disarmament* 4, 1 (2021): 13–33, <https://doi.org/10.1080/25751654.2021.1930737>.

<sup>421</sup> Ibid.

<sup>422</sup> N. Pelzer, “Nuclear Accidents: Models for Reparation”, in *Nuclear Non-Proliferation in International Law*, Volume III, ed. J.L. Black-Branch and D. Fleck (The Hague: TMC Asser Press, 2016), 355–401.

<sup>423</sup> See the TPNW: <https://daccess-ods.un.org/access.nsf/Get?OpenAgent&DS=A/CONF.229/2017/8&Lang=E>.

## 4. Women, Peace and Security: Links and disconnects

One avenue for strengthening the gender component of the TPNW would be to strengthen the links with the WPS agenda. Premised on United Nations Security Council resolution 1325 on Women, Peace and Security (WPS),<sup>424</sup> widely considered a turning point in global efforts to mainstream gender in peace and security governance, the WPS agenda has developed through nine follow-up Security Council resolutions. The WPS agenda has four main pillars: *prevention* of violence and violations of women's human rights; participation in all peace processes as well as women's representation in formal and informal decision-making at all levels; *protection* from violence and abuse of women's human rights; women's equal access to aid distribution mechanisms and services in *relief and recovery*.<sup>425</sup>

The decades after resolution 1325 witnessed a surge of national actions plans (NAPs) on WPS developed by 107 countries<sup>426</sup> and incremental adoption of feminist foreign policy by at least ten countries.<sup>427</sup> The NAPs of Ireland (2019), the Philippines (2009) and Rwanda (2010) acknowledge nuclear politics, while scholarly interventions from the United States of America explore opportunities to connect the WPS agenda to the National Nuclear Security Administration.<sup>428</sup>

Feminist international relations scholarship identifies nuclear weapon politics as a feminist issue that requires a feminist response, as such politics contribute to ideas about a state's interests and its positioning in the international order.<sup>429</sup> Nuclear disarmament arguably falls under the purview of feminist security, with its potential to contribute to greater human and environmental security. The WPS agenda has the potential to facilitate multilateral processes to increase meaningful women's participation in all aspects of security governance, including nuclear disarmament.

At the United Nations level, attempts to table the WPS agenda to harness stronger institutional momentum on women's participation in nuclear disarmament are on the rise. Most remarkably, in his 2020 report on WPS, the United Nations Secretary-General encouraged the WPS and disarmament movements to combine forces to enhance human security.<sup>430</sup> The disarmament branches of the United

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<sup>424</sup> Security Council, S/RES/1325, 2000, [https://undocs.org/S/RES/1325\(2000\)](https://undocs.org/S/RES/1325(2000)).

<sup>425</sup> All resolutions and draft resolutions on WPS are available at: [https://www.securitycouncilreport.org/un\\_documents\\_type/security-council-resolutions/page/1?ctype=Women%2C+Peace+and+Security&cbtype=women-peace-and-security#038;cbtype=women-peace-and-security](https://www.securitycouncilreport.org/un_documents_type/security-council-resolutions/page/1?ctype=Women%2C+Peace+and+Security&cbtype=women-peace-and-security#038;cbtype=women-peace-and-security).

<sup>426</sup> London School of Economics, Centre for Women, Peace and Security, WPS National Action Plans (database), accessed 11 November 2023, <https://www.wpsnaps.org>.

<sup>427</sup> These include Canada, Chile, Colombia, France, Germany, Luxembourg, Mexico, the Kingdom of the Netherlands, Slovenia and Spain. Sweden, which was the pioneer of this movement, announced in 2023 that it would no longer pursue a feminist foreign policy.

<sup>428</sup> Centre for Women, Peace and Security, WPS National Action Plans (database); M.E. Gallagher and E. Howell, "Opportunities for Linking Women, Peace and Security to the US Department of Energy", *International Journal of Nuclear Security* 8, no. 2 (2023): art. 12.

<sup>429</sup> Laura Rose Brown, "Feminist Foreign Policy and Nuclear Weapons: Contributions and Implications", *Non Proliferation and Disarmament Papers* 86, November 2023, [https://www.nonproliferation.eu/wp-content/uploads/2023/11/EUNPDC\\_no-86.pdf](https://www.nonproliferation.eu/wp-content/uploads/2023/11/EUNPDC_no-86.pdf).

<sup>430</sup> Security Council, "Women and Peace and Security", Report of the Secretary-General, S/2020/946, 25 September 2020, [https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s\\_2020\\_946.pdf](https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_2020_946.pdf).

Nations are also involved in this process: UNIDIR, an autonomous institution within the United Nations, has an established Gender and Disarmament research programme. In 2022, the United Nations Office for Disarmament Affairs launched a new Policy on Gender and Disarmament.<sup>431</sup>

In principle, the WPS agenda is well positioned to leverage state commitment to security for women across all forms of disarmament. There are other dedicated efforts linking gender equality and disarmament, but the WPS agenda remains the most systematic, with stronger global discursive momentum. It could offer an entry point for enhanced advocacy and policy for gender and nuclear disarmament.

Despite its origins in progressive feminist activism and vision of peace, the WPS agenda eventually took shape as an array of political documents from the fierce power contestation ground of the United Nations Security Council and was reduced in both ambition and feminist ownership. The WPS agenda's compromised focus on negative peace and militarized security has long been subject to critique.<sup>432</sup> Three main gaps in the WPS agenda pose hurdles to connecting with the TPNW, undermining a critical opportunity to realize gendered and racialized justice:

- No mention of the impacts of nuclear weapons use and/or testing in WPS resolutions;
- No acknowledgement of racialized hierarchy in international security; and
- Near-silences and shortcomings on environmental security.

## 4.1 Where is (nuclear) disarmament?

As it has expanded, the WPS agenda has embraced an increasing body of topics at the critical intersection of gender and peace and security, such as sexual violence, violent extremism, transitional justice and arms trade.<sup>433</sup> However, from founding resolution 1325 (2000) to the latest resolution (resolution 2493 in 2019), the disarmament and governance of nuclear weapons have never been overtly included.

Within the WPS agenda, some progress has been made regarding the topics of small arms and light weapons control, and disarmament, demobilization and reintegration for women combatants.<sup>434</sup> However, initiatives in the field of nuclear weapons control and disarmament to improve women's participation and tackle the gendered impacts of weapons have not been framed explicitly in the WPS agenda.<sup>435</sup>

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<sup>431</sup> UNODA, "UNODA Launches Policy on Gender & Disarmament at Event Co-hosted with Sweden", 6 June 2022, <https://disarmament.unoda.org/update/unoda-launches-policy-on-gender-disarmament-at-event-co-hosted-with-sweden>.

<sup>432</sup> See, for example, P. Kirby and L.J. Shepherd. "The Futures Past of the Women, Peace and Security Agenda", *International Affairs* 92, no. 2 (2016): 373–392; L.J. Shepherd. "Making War Safe for Women? National Action Plans and the Militarisation of the Women, Peace and Security Agenda", *International Political Science Review* 37, no. 3 (2016): 324–335. N. Pratt. "Reconceptualizing Gender, Reinscribing Racial–Sexual Boundaries in International Security: The Case of UN Security Council Resolution 1325 on 'Women, Peace and Security'", *International Studies Quarterly* 57, no. 4 (2013): 772–783.

<sup>433</sup> See summaries and details of the resolutions at PeaceWomen: <https://www.peacewomen.org/why-WPS/solutions/resolutions>.

<sup>434</sup> C. Chinkin, "Arms Control, Disarmament and the Women, Peace and Security Agenda", UNIDIR, 3 March 2020, <https://unidir.org/arms-control-disarmament-and-the-women-peace-and-security-agenda>.

<sup>435</sup> R.H. Dalaqua, "Lost in Translation? Understanding the Relevance of the Women, Peace and Security Agenda in the Field of Arms Control and Disarmament", European Leadership Network, 30 November 2020, <https://www.europeanleadership-network.org/commentary/lost-in-translation-understanding-the-relevance-of-the-women-peace-and-security-agenda-in-the-field-of-arms-control-and-disarmament>.

This crucial disconnect arguably stems from the lingering belief in militarized security (embedded in the “making wars safer for women” tendency) often seen in the WPS agenda, as well as in individual countries’ NAPs on WPS.<sup>436</sup> Consequently, the world’s biggest gender and peace agenda bypasses the conversation of comprehensive disarmament, including nuclear weapons. This approach creates a discrepancy between states’ endorsement of the WPS agenda and their genuine commitment towards nuclear disarmament.

## 4.2 Where is race and power?

Thus far, the WPS agenda has not addressed issues related to race and/or colonialism. In fact, feminist inquiries contend that the racialized hierarchy is carefully maintained in the knowledge production in the WPS and in the making of NAPs. Critical racial reflections about the WPS agenda question who the WPS agenda is about and who it is for. These lines of enquiry seek to deconstruct the global racial hierarchies in WPS practices, wherein the “peaceful Global North” calls for militarized actions of rescue for the “insecure Global South”.<sup>437</sup> In this way, liberal prescriptions of peace can be imposed to open up local markets and resources for the global economy, further cementing hierarchies between post-conflict and intervening countries.<sup>438</sup>

Scholars also highlight the Global North’s domination of WPS knowledge and discourse production, with research centres, programmes and students of WPS largely situated in the Global North.<sup>439</sup> Global South actors contesting the WPS power space take part in efforts to rewrite the WPS agenda through advocacy in the United Nations, taking part in the drafting of NAPs, or engaging in conscious non-implementation.<sup>440</sup>

Together, these critical realizations could create significant momentum for the decolonization of the WPS agenda. But as it stands, it remains a distant prospect for the agenda to meaningfully address racialized power imbalances, including in the sphere of nuclear politics, by putting women at the centre of peace and security. To unlock this potential, the WPS agenda would need to seek positive peace, justice and human security for all, across gender, race and geographic location.

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<sup>436</sup> Shepherd, “Making War Safe for Women?”

<sup>437</sup> T. Haastrup and J.J. Hagen, “Global Racial Hierarchies and the Limits of Localization via National Action Plans”, in *New Directions in Women, Peace and Security*, ed. S. Basu, P. Kirby and L.J. Shepherd (Bristol: Bristol University Press, 2020), 133.

<sup>438</sup> Pratt, “Reconceptualizing Gender”; S. Basu, “The Global South Writes 1325 (Too)”, *International Political Science Review* 37, no. 3 (2016): 362–374, <https://doi.org/10.1177/0192512116642616>.

<sup>439</sup> T. Haastrup and J.J. Hagen, “Racial Hierarchies of Knowledge Production in the Women, Peace and Security Agenda”, *Critical Studies on Security* 9, no. 1 (2021): 27–30; M. Henry, “On the Necessity of Critical Race Feminism for Women, Peace and Security”, *Critical Studies on Security* 9, no. 1 (2021): 22–26, <https://doi.org/10.1080/21624887.2021.1904191>.

<sup>440</sup> Basu, “The Global South Writes”; Security Council Report, *Golden Threads and Persisting Challenges: The Security Council Women, Peace and Security Presidencies Initiative* (New York: Security Council Report, 2022); V. Newby and A. O’Malley, “WPS 20 Years On: Where Are the Women Now?”, *Global Studies Quarterly* 1, no. 3 (September 2021), <https://doi.org/10.1093/isagsq/ksab017>.

### 4.3 Where is environmental security?

With its primary focus on women's security from conflict-related violence, the WPS agenda has been slow to recognize environmental impacts as a security risk for women and girls.<sup>441</sup> So far, the response of the United Nations Security Council to the surging inquiries regarding the environment aspects of WPS is a minimal mention in the preamble of resolution 2242 (2015), which states the Security Council's intention to "increase attention to women, peace and security as a cross-cutting subject in all relevant thematic areas of work on its agenda" for the "changing global context of peace and security" including "the impacts of climate change".<sup>442</sup>

Reviews of the integration of climate change and environment degradation into NAPs on WPS also reveal, with only occasion exceptions, a general reluctance among states to take on gender and environmental peacebuilding.<sup>443</sup>

Conversations about nuclear-related, gendered environmental impacts are thus hindered in the WPS arena. In comparison, the short- and long-term implementation goals of the TPNW give pronounced attention to victim assistance and to environmental compensation with gender considerations.

## 5. Conclusions and recommendations

This paper has argued that norms development in nuclear governance could improve through change in discourse, commitment to supporting survivors, genuine inclusion and equity, enhanced synergies among related policy frameworks and knowledge production that incorporates gender and racial issues. Effective nuclear disarmament must be feminist and inclusive within established normative frameworks and beyond. The following recommendations are put forward to advance inclusive nuclear justice.

### 5.1 Changing the discourse

The TPNW presents nuclear disarmament as a means to avoid the detrimental consequences of nuclear weapons. That it is "cognizant that the catastrophic consequences of nuclear weapons cannot be adequately addressed" is a central theme throughout the text.<sup>444</sup> Such a focus on the humanitarian risks of nuclear weapons is a solid basis for levelled-up redress and justice efforts. However, it is important to go beyond the consequences of nuclear weapons and address the discourse that underpins nuclear deterrence.

The ongoing consultative process on the security concerns of states is an opportunity to sharpen arguments about how the TPNW provides for security. This process, which was initiated by a decision at the second Meeting of States Parties in 2023, will advance arguments and recommendations to

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<sup>441</sup> K. Yoshida and L.M. Céspedes-Báez, "The Nature of Women, Peace and Security: A Colombian perspective", *International Affairs* 97, no. 1 (2021): 17–34; K. Yoshida, H. Bond and H. Kezie-Nwoha, *Defending the Future: Gender, Conflict and Environmental Peace* (LSE Centre for Women, Peace and Security, 2020), <https://www.lse.ac.uk/women-peace-security/assets/documents/2021/Defending-the-Future.pdf>.

<sup>442</sup> Security Council, S/RES/2242, 2015.

<sup>443</sup> E. Smith, "Climate Change in Women, Peace, and Security National Action Plans", *SIPRI Insights on Peace and Security* No. 2020/07 (2020), <https://www.sipri.org/sites/default/files/2020-06/sipriinsight2007.pdf>.

<sup>444</sup> See the TPNW: <http://undocs.org/A/CONF.229/2017/8>.

promote the legitimate security concerns and the threat and risk perceptions enshrined in the TPNW that result from the existence of nuclear weapons and the concept of nuclear deterrence. The process will also seek to “challenge the security paradigm based on nuclear deterrence by highlighting and promoting new scientific evidence about the humanitarian consequences and risks of nuclear weapons and juxtaposing this with the risks and assumptions that are inherent in nuclear deterrence.”<sup>445</sup>

This is an opportune moment to re-examine the structural security inequalities, with inherent gender and racial underpinnings, within the policies that govern the most destructive weapon in human history. Gender, social and environmental aspects must be a part of this process, which has the potential to shake up masculinized, statist nuclear security credos.

## 5.2 Addressing nuclear use past and present through an international trust fund

In the Vienna Action Plan adopted at the first Meeting of States Parties to the TPNW, Action 29 documented a consensus forming between states parties to propose guidelines for the establishment of an international trust fund that could support victim assistance and environmental remediation activities.<sup>446</sup> At the second Meeting of States Parties in 2023, the states parties agreed that an informal working group would continue to exam this issue and prepare a report on the “feasibility of, and possible guidelines for, the establishment of an international trust fund for victim assistance and environmental remediation”.<sup>447</sup> This report will be presented at the third Meeting of States Parties in 2025, where further discussions are expected to take place.

This process could lead to greater momentum for gender- and race-sensitive justice and remedy procedures. Civil society actors have endorsed the idea of the trust fund, as an enhancement to the TPNW, to redress nuclear legacies and mobilize “those who can” in support of “those who need”. It is also seen as an opportunity for rights-based discussions and a point of focus for engaging states not party to the treaty in humanitarian work.<sup>448</sup>

Discussions on the establishment of the fund should be based on questions such as how to mobilize proportionate contributions that are reflective of accountability rather than merely goodwill, how to centralize victims in the decision-making process, how to make sure different needs are equally heard and supported, what kind of infrastructure should be in place, and how to monitor implementation. Good examples can be drawn from other disarmament programmes – the Oslo Action Plan of the Anti-Personnel Mine Ban Convention, for instance – that institutionalize considerations of local ownership, gendered needs, survivor participation, community dialogue, and synergies with other interventions from development, peacebuilding, human rights and humanitarian arenas.

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<sup>445</sup> Report of the Second Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons, TPNW/MSP/2023/14, 13 December 2023, [https://digitallibrary.un.org/record/4033034/files/TPNW\\_MSP\\_2023\\_14-EN.pdf](https://digitallibrary.un.org/record/4033034/files/TPNW_MSP_2023_14-EN.pdf).

<sup>446</sup> First Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons, TPNW/MSP/2022/CRP.7, 22 June 2022, [https://documents.unoda.org/wp-content/uploads/2022/06/TPNW.MSP\\_2022.CRP\\_7-Draft-Action-Plan-new.pdf](https://documents.unoda.org/wp-content/uploads/2022/06/TPNW.MSP_2022.CRP_7-Draft-Action-Plan-new.pdf).

<sup>447</sup> Report of the Second Meeting of States Parties.

<sup>448</sup> See, for example, ICAN, “An International Trust Fund for Victim Assistance and Environmental Remediation”, 16 February 2023, [https://assets.nationbuilder.com/ican/pages/3166/attachments/original/1676637600/ICAN\\_written\\_comments\\_Trust\\_Fund\\_questions\\_UPDATED.pdf](https://assets.nationbuilder.com/ican/pages/3166/attachments/original/1676637600/ICAN_written_comments_Trust_Fund_questions_UPDATED.pdf).

### 5.3 Promoting meaningful and inclusive participation

Feminist perspectives are highly relevant when reviewing the inclusivity of nuclear norm-making. They pose such questions as what is considered central and relevant to the subject matter, what may be unspoken and excluded, whose accounts are regarded as important, and who is left out.<sup>449</sup> In the case of the TPNW, there is a risk that diverse grassroots voices and profiles will be merged into a generic, unitary identity assigned to “victims”. To avoid that, it is imperative to acknowledge that simplistic grouping risks blurring distinct voices from within marginalized groups.

Applying an intersectional approach that incorporates gender, sexual orientation, race, class, caste, ethnicity, geographic location, disability and other forms of marginalization is crucial for justice and for inclusive disarmament. To facilitate inclusion, both normative and logistical barriers need to be overcome, including travel costs, visas, mobility constraints, access to information, procedural rules, stigmatization and discredit. The TPNW and other international frameworks must tackle these barriers, as they often have limited grassroots participation.<sup>450</sup>

### 5.4 Supporting and funding diverse knowledge production

One critical concern that has recently emerged from feminist interrogations of global nuclear politics is the West-concentrated geographic locations of the most high-profile theoretical deliberations on feminist nuclear politics, despite scholarly debates from “peripheral” nuclear countries shedding equally important light on gendered nuclear realities.<sup>451</sup> This concern highlights the power and legitimacy dynamics in global knowledge generation for nuclear disarmament decision-making. These dynamics could determine what aspects of the nuclear order are studied, to what extent, from what perspectives, and by whom.

Giving the most-affected communities the lead in producing the most relevant knowledge, and advisory status on intersectional nuclear weapons issues, could circumvent the one-way street of imposing Western or top-down solutions. The genuine inclusion of feminist and anti-colonial causes would also be a critical driver of attitudinal change and, essentially, a prerequisite for policy inclusivity. When provided with adequate funding, the research branches of relevant United Nations bodies are well positioned to bring non-Western expertise and better age- and gender-disaggregated data from these contexts into analysis and research to inform nuclear norms development.

### 5.5 Overcoming fragmentation in multilateral policymaking

Both the TPNW and the WPS agenda have the potential to generate disarmament and human security policy that is sensitive to gendered and racialized power relations, but their respective limitations are delaying genuine change. Synergy between the two movements is pivotal to garner more inclusive dialogues around gender, nuclear accountability and security; to translate their normative advancements into practical impacts; and to leverage greater state commitment to full disarmament.

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<sup>449</sup> J. Tickner, “Feminism Meets International Relations: Some Methodological Issues”, in *Feminist Methodologies for International Relations*, ed. B. Ackerly, M. Stern and J. True (Cambridge: Cambridge University Press, 2006), 19–41; L.J. Shepherd, *Gender Matters in Global Politics: A Feminist Introduction to International Relations* (Routledge, 2014).

<sup>450</sup> LSE Centre for Women, Peace and Security, *Our Generation for Inclusive Peace, An Inclusive and Sustainable Approach to Relief and Recovery* (Policy Brief 05/2022, LSE Centre for Women, Peace and Security, 2022), <https://www.lse.ac.uk/women-peace-security/assets/documents/An-inclusive-and-sustainable-approach-to-relief-and-recovery-policy-brief-05.pdf>.

<sup>451</sup> Choi and Eschler, “Rethinking Global Nuclear Politics”.

Among other things, bridging the TPNW and WPS agenda communities could help expand what security means in the TPNW, promoting a more inclusive understanding and ensuring that understanding is reflected in the practice of TPNW states parties. Strengthening these links could also broaden the scope of the WPS agenda to include nuclear disarmament and environmental security. Civil society and academic circles addressing the intersectionality of gender, nuclear use and security could connect the currently fragmented initiatives and mechanisms working on these issues.

To drive the advancement further, policy-level engagement – starting with identifying champion states – would be a necessary next step. For instance, states that have ratified the TPNW and adopted WPS NAPs, especially those with nuclear provisions in their NAPs, would be well positioned to lead this work.

State-to-state communications add impetus to other advocacy towards states and aid the creation of an enabling environment within existing institutional platforms (e.g. the United Nations and regional organizations) for reflections on gender in nuclear politics and security. Some other existing processes that could be mobilized to address gendered nuclear injustice and to create a network of accountability include the United Nations Declaration on the Rights of Indigenous Peoples, Special Rapporteur on Human Rights and Environment, the Convention on the Elimination of All Forms of Discrimination against Women, and the Convention on the Rights of Persons with Disabilities.

# Appendices

## Appendix A. Testimonials surveyed by Rebecca Davis Gibbons

NAME	GENDER	NATIONALITY	LOCATION OF EXPOSURE	SOURCE
<b>Abderrahmane Toumi</b>	Man	Algeria	Algeria	“France-Algeria Relations: The Lingering Fallout from Nuclear Tests in the Sahara”, BBC, 27 April 2021, <a href="https://www.bbc.com/news/world-africa-56799670">https://www.bbc.com/news/world-africa-56799670</a>
<b>Abdelkrim Touhami</b>	Man	Algeria	Algeria	“France’s Nuclear Tests in Algeria”, Witness History (BBC World Service Podcast), 2023, <a href="https://podcasts.apple.com/us/podcast/frances-nuclear-tests-in-algeria/id339986758?i=1000595403544">https://podcasts.apple.com/us/podcast/frances-nuclear-tests-in-algeria/id339986758?i=1000595403544</a>  Simon Speakman Cordall, “France Faces Up To Its Nuclear Fallout”, The New European, 22 April 2023, <a href="https://www.theneweuropean.co.uk/france-faces-up-to-its-nuclear-fallout/">https://www.theneweuropean.co.uk/france-faces-up-to-its-nuclear-fallout/</a>
<b>Sue Coleman-Haseldine</b>	Woman	Australia	Australia	“Sue Coleman-Haseldine”, Peace Boat (video) 4 March 2022, <a href="https://www.youtube.com/watch?v=Cuf6eP1IGBA">https://www.youtube.com/watch?v=Cuf6eP1IGBA</a>  “Testimony by Sue Coleman-Haseldine, Nuclear Bomb Testing Survivor”, The Future of Life Institute, 29 March 2017, <a href="https://futureoflife.org/nuclear/testimony-by-sue-coleman-haseldine-nuclear-bomb-testing-survivor/">https://futureoflife.org/nuclear/testimony-by-sue-coleman-haseldine-nuclear-bomb-testing-survivor/</a>
<b>Jim Marlow</b>	Man	Australia	Australia	Amelia Searson and Peter Bar, “Montebello Islands Nuclear Test Research Finds Radiation Still Present 70 Years after Blast”, ABC.AU, 6 October 2022, <a href="https://www.abc.net.au/news/2022-10-07/montebello-islands-nuclear-test-research-examines-radiation-risk/101500896">https://www.abc.net.au/news/2022-10-07/montebello-islands-nuclear-test-research-examines-radiation-risk/101500896</a>
<b>Alan Batchelor</b>	Man	Australia	Australia	Megan Palin, “Children of Maralinga Atomic Bomb Test Vet-erans ‘Suffering Deformities and Early Deaths’ because of ‘Genetic Transfer’”, News.Com.Au, 10 March 2016, <a href="https://www.news.com.au/national/south-australia/new-generations-of-australian-families-suffering-deformities-and-early-deaths-because-of-genetic-transfer/news-story/6e1e0328063fe48142234c7c74848fea">https://www.news.com.au/national/south-australia/new-generations-of-australian-families-suffering-deformities-and-early-deaths-because-of-genetic-transfer/news-story/6e1e0328063fe48142234c7c74848fea</a>

<b>Steve Purse</b>	Man	Australia	Australia	<p>Dominic Casciani, “Nuclear Bomb Test Veterans Relaunch Legal Action”, BBC, 20 September 2023, <a href="https://www.bbc.com/news/uk-66869017">https://www.bbc.com/news/uk-66869017</a></p> <p>Chris Wood, “Nuclear Test Veterans: ‘MY DAD WAS TREATED LIKE A GUINEA PIG’”, BBC, 30 May 2021, <a href="https://www.bbc.com/news/uk-wales-57157476">https://www.bbc.com/news/uk-wales-57157476</a></p>
<b>Hilary Williams</b>	Woman	Australia	Australia	<p>Jon Donnison, “Lingering Impact of British Nuclear Tests in the Australian Outback”, BBC, 31 December 2014, <a href="https://www.bbc.com/news/world-australia-30640338">https://www.bbc.com/news/world-australia-30640338</a></p>
<b>Karina Lester</b>	Woman	Australia	Australia	<p>“Karina’s Father Went Blind at Emu Field. Now, She’s Fighting for a Treaty On Nuclear Weapons”, NITV, 14 June 2023, <a href="https://www.sbs.com.au/nitv/article/karinas-father-went-blind-at-emu-field-now-shes-fighting-for-a-treaty-on-nuclear-weapons/g67uk5oea">https://www.sbs.com.au/nitv/article/karinas-father-went-blind-at-emu-field-now-shes-fighting-for-a-treaty-on-nuclear-weapons/g67uk5oea</a></p> <p>“Treaty to Ban Nuclear Weapons: Karina Lester (podcast)”, Aboriginal Way, 31 July 2023, <a href="https://www.nativetitlesa.org/treaty-to-ban-nuclear-weapons-karina-lester/">https://www.nativetitlesa.org/treaty-to-ban-nuclear-weapons-karina-lester/</a></p> <p>“70 Years after Emu Field”, www.abc.net.au, 14 October 2023, <a href="https://www.abc.net.au/listen/programs/sundayextra/emu-field/102976162">https://www.abc.net.au/listen/programs/sundayextra/emu-field/102976162</a></p> <p>Erin Jones, “South Australian Woman Karina Lester Presents Anti-Nuclear Speech to United Nations in New York”, The Ad-vertiser, 23 June 2017, <a href="https://www.adelaidenow.com.au/news/south-australia/south-australian-woman-karina-lester-presents-antinuclear-speech-to-united-nations-in-new-york/news-story/be7b9ec-b4ae5e0f0c568908f117c4be9">https://www.adelaidenow.com.au/news/south-australia/south-australian-woman-karina-lester-presents-antinuclear-speech-to-united-nations-in-new-york/news-story/be7b9ec-b4ae5e0f0c568908f117c4be9</a></p> <p>“Black Mist and the Ban”, Australian Red Cross, 2023, <a href="https://www.redcross.org.au/stories/2023/black-mist-and-the-ban/">https://www.redcross.org.au/stories/2023/black-mist-and-the-ban/</a></p>
<b>Enver Tohti</b>	Man	China	China	<p>Zeeva Merali, “Did China’s Nuclear Tests Kill Thousands and Doom Future Generations?” Scientific American, 1 July 2009, <a href="https://www.scientificamerican.com/article/did-chinas-nuclear-tests">https://www.scientificamerican.com/article/did-chinas-nuclear-tests</a></p> <p>Ursula Gelis, “‘The Peoples Bomb’: China’s Nuclear Weapons Testing Program”, WILPF Norway, 9 July 2015, <a href="https://www.ikff.no/the-peoples-bomb-chinas-nuclear-weapons-testing-program/">https://www.ikff.no/the-peoples-bomb-chinas-nuclear-weapons-testing-program/</a></p>
<b>Liu Qing (alias)</b>	Man	China	China	<p>Xia Muozhu, “Nuclear Testing in China’s Western Territory”, The Epoch Times, 13 March 2021, <a href="https://www.theepochtimes.com/article/nuclear-testing-in-chinas-western-territory-1487841">https://www.theepochtimes.com/article/nuclear-testing-in-chinas-western-territory-1487841</a></p>

<b>Hinamoeura Cross</b>	Woman	French Polynesia	French Polynesia	Jean-Tenahe Faatau, “Hinamoeura Cross Wants to ‘Educate and to Denuclearize Memories’”, Beyond Nuclear International, 26 September 2022, <a href="https://beyondnuclearinternational.org/2022/09/26/interview-nuclear-tests-in-poly-nesia/">https://beyondnuclearinternational.org/2022/09/26/interview-nuclear-tests-in-poly-nesia/</a>
<b>Auguste Uebe Carlson</b>	Man	French Polynesia	French Polynesia	Nic Maclellan, “‘We Would like France to Apologise:’ Nuclear Test Survivors in French Polynesia”, Dianuke.Org, 28 July 2020, <a href="https://www.dianuke.org/we-would-like-france-to-apologise-nuclear-test-survivors-in-french-polynesia/">https://www.dianuke.org/we-would-like-france-to-apologise-nuclear-test-survivors-in-french-polynesia/</a>
<b>Ashok Bishnoi</b>	Man	India	India	Neha Dixit, “The People of the Fallout”, Outlook, 5 February 2022, <a href="https://www.outlookindia.com/magazine/story/the-people-of-the-fall-out/294065">https://www.outlookindia.com/magazine/story/the-people-of-the-fall-out/294065</a>
<b>Manish Bishnoi</b>	Man	India	India	Swati Vashishtha, “Give Peace a Chance, Say Villagers Near Nuclear Test Sites in Pokhran”, News18, 5 October 2016, <a href="https://www.news18.com/news/india/give-peace-a-chance-say-villagers-near-nuclear-test-sites-in-pokhran-1298772.html">https://www.news18.com/news/india/give-peace-a-chance-say-villagers-near-nuclear-test-sites-in-pokhran-1298772.html</a>
<b>Om Prakash</b>	Man	India	India	Shweta Desai, “Forty Years after Pokhran Nuclear Tests, Villagers Complain of Frequent Cancer Deaths”, Scroll.in, 18 May 2014, <a href="https://scroll.in/article/664440/forty-years-after-pokhran-nuclear-tests-villagers-complain-of-frequent-cancer-deaths">https://scroll.in/article/664440/forty-years-after-pokhran-nuclear-tests-villagers-complain-of-frequent-cancer-deaths</a>
<b>Setsuko Thurlow</b>	Woman	Japan	Hiroshima, Japan	“Setsuko Thurlow”, Peace Boat (video). 4 March 2022, <a href="https://www.youtube.com/watch?v=DtF-2sPuwbgw">https://www.youtube.com/watch?v=DtF-2sPuwbgw</a>
<b>Jiro Kawatsuma</b>	Man	Japan	Hiroshima, Japan	Lorena Rodriguez, “My Journey to Hiroshima: Reflections on Memory”, Rotary Voices, 12 June 2018, <a href="https://blog.rotary.org/2018/06/12/my-journey-to-hiroshima-reflections-on-memory/">https://blog.rotary.org/2018/06/12/my-journey-to-hiroshima-reflections-on-memory/</a>  Jiro Kawatsuma, “What’s It Like To...Survive an Atomic Bomb”, werribeerotary.org.au, (n.d.), <a href="https://werribeerotary.org.au/stories/what-s-it-like-to">https://werribeerotary.org.au/stories/what-s-it-like-to</a>
<b>Sueichi Kido</b>	Man	Japan	Nagasaki, Japan	Mari Yamaguchi, “Atomic Bomb Survivors Look to G7 Summit in Hiroshima as a ‘Sliver of Hope’ for Nuclear Disarmament”, AP, 19 May 2023, <a href="https://apnews.com/article/atomic-bomb-survivors-g7-hiroshima-dc5564ead989e-7c3e75aa32521e12071">https://apnews.com/article/atomic-bomb-survivors-g7-hiroshima-dc5564ead989e-7c3e75aa32521e12071</a>
<b>Yasuaki Yamashita</b>	Man	Japan	Nagasaki, Japan	“Interview: Goal of First-ever UN Resolution Resonates Even Now – A Hibakusha’s Story”, United Nations - UN News, 22 January 2016, <a href="https://news.un.org/en/story/2016/01/520662-interview-goal-first-ever-un-resolution-resonates-even-now-hibakushas-story">https://news.un.org/en/story/2016/01/520662-interview-goal-first-ever-un-resolution-resonates-even-now-hibakushas-story</a>

<b>Sadae Kasaoka</b>	Woman	Japan	Hiroshima, Japan	Laura Goehler, “Hiroshima Survivors Warn G7 Leaders about Using Nuclear Bombs”, Aljazeera, 19 May 2023, <a href="https://www.aljazeera.com/features/2023/5/19/hiroshima-survivors-warn-g7-leaders-about-using-nuclear-bombs">https://www.aljazeera.com/features/2023/5/19/hiroshima-survivors-warn-g7-leaders-about-using-nuclear-bombs</a>
<b>Ryohei Tanabe</b>	Man	Japan	Hiroshima, Japan	Justin McCurry, “Hiroshima Survivors Urge G7 Leaders to Unite against Atomic Weapons”, The Guardian, 15 May 2023, <a href="https://www.theguardian.com/world/2023/may/16/hiroshima-survivors-urge-g7-leaders-to-unite-against-atomic-weapons">https://www.theguardian.com/world/2023/may/16/hiroshima-survivors-urge-g7-leaders-to-unite-against-atomic-weapons</a>
<b>Tsutomu Yamaguchi</b>	Man	Japan	Hiroshima and Nagasaki, Japan	“Tsutomu Yamaguchi: The Man Who Miraculously Survived Two Atomic Explosions”, Yourstory, 27 July 2023. <a href="https://yourstory.com/2023/07/tsutomu-yamaguchi-double-atomic-survivor">https://yourstory.com/2023/07/tsutomu-yamaguchi-double-atomic-survivor</a>
<b>Yasujiro Tanaka</b>	Man	Japan	Nagasaki, Japan	“After The Bomb: Survivors of the Atomic Blasts in Hiroshima and Nagasaki Share Their Stories”, Time, (n.d.), <a href="https://time.com/after-the-bomb/">https://time.com/after-the-bomb/</a>
<b>Takato Michishita</b>	Man	Japan	Nagasaki, Japan	“After The Bomb: Survivors of the Atomic Blasts in Hiroshima and Nagasaki Share Their Stories”, Time, (n.d.), <a href="https://time.com/after-the-bomb/">https://time.com/after-the-bomb/</a>
<b>Yoshiro Yamawaki</b>	Man	Japan	Nagasaki, Japan	“After The Bomb: Survivors of the Atomic Blasts in Hiroshima and Nagasaki Share Their Stories”, Time, (n.d.), <a href="https://time.com/after-the-bomb/">https://time.com/after-the-bomb/</a>
<b>Emiko Okada</b>	Woman	Japan	Hiroshima, Japan	“After The Bomb: Survivors of the Atomic Blasts in Hiroshima and Nagasaki Share Their Stories”, Time, (n.d.), <a href="https://time.com/after-the-bomb/">https://time.com/after-the-bomb/</a>
<b>Masakatsu Obata</b>	Man	Japan	Nagasaki, Japan	“After The Bomb: Survivors of the Atomic Blasts in Hiroshima and Nagasaki Share Their Stories”, Time, (n.d.), <a href="https://time.com/after-the-bomb/">https://time.com/after-the-bomb/</a>
<b>Kumiko Arakawa</b>	Woman	Japan	Nagasaki, Japan	“After The Bomb: Survivors of the Atomic Blasts in Hiroshima and Nagasaki Share Their Stories”, Time, (n.d.), <a href="https://time.com/after-the-bomb/">https://time.com/after-the-bomb/</a>
<b>Fujio Torikoshi</b>	Man	Japan	Hiroshima, Japan	“After The Bomb: Survivors of the Atomic Blasts in Hiroshima and Nagasaki Share Their Stories”, Time, (n.d.), <a href="https://time.com/after-the-bomb/">https://time.com/after-the-bomb/</a>
<b>Inosuke Hayasaki</b>	Man	Japan	Nagasaki, Japan	“After The Bomb: Survivors of the Atomic Blasts in Hiroshima and Nagasaki Share Their Stories”, Time, (n.d.), <a href="https://time.com/after-the-bomb/">https://time.com/after-the-bomb/</a>
<b>Ryoga Suwa</b>	Man	Japan	Hiroshima, Japan	“After The Bomb: Survivors of the Atomic Blasts in Hiroshima and Nagasaki Share Their Stories”, Time, (n.d.), <a href="https://time.com/after-the-bomb/">https://time.com/after-the-bomb/</a>
<b>Shigeko Matsumoto</b>	Woman	Japan	Nagasaki, Japan	“After The Bomb: Survivors of the Atomic Blasts in Hiroshima and Nagasaki Share Their Stories”, Time, (n.d.), <a href="https://time.com/after-the-bomb/">https://time.com/after-the-bomb/</a>
<b>Sachiko Matsuo</b>	Woman	Japan	Nagasaki, Japan	“After The Bomb: Survivors of the Atomic Blasts in Hiroshima and Nagasaki Share Their Stories”, Time, (n.d.), <a href="https://time.com/after-the-bomb/">https://time.com/after-the-bomb/</a>

<b>Norimitsu Tosu</b>	Man	Japan	Hiroshima, Japan	David E. Decosse, “An Interview with a Survivor of the Hiroshima Bombing”, National Catholic Reporter, 19 December 2016, <a href="https://www.ncronline.org/blogs/ncr-today/interview-survivor-hiroshima-bombing">https://www.ncronline.org/blogs/ncr-today/interview-survivor-hiroshima-bombing</a>
<b>Koko Kondo</b>	Woman	Japan	Hiroshima, Japan	“‘We Are Not Screaming Loud Enough’: Hiroshima’s Last Survivors Feel Urgent Need to Bear Witness”, LA Times, 4 August 2020, <a href="https://www.latimes.com/world-nation/story/2020-08-04/hiroshima-survivors-urgency-bear-witness">https://www.latimes.com/world-nation/story/2020-08-04/hiroshima-survivors-urgency-bear-witness</a> .
<b>Matashichi Oishi</b>	Man	Japan	Marshall Islands	Nic Maclellan, <i>Grappling with the Bomb: Britain’s Pacific H-Bomb Tests</i> (Canberra, ANU Press: 2017).
<b>Lee Su-Young</b>	Woman	Japan	Hiroshima, Japan	Choe Sang-Hun, “Korean Survivors of Atomic Bombs Renew Fight for Recognition, and Apology”, New York Times, 25 May 2016, <a href="https://www.nytimes.com/2016/05/26/world/asia/korea-hiroshima-nagasaki-survivors.html">https://www.nytimes.com/2016/05/26/world/asia/korea-hiroshima-nagasaki-survivors.html</a>
<b>Sunao Tsuboi</b>	Man	Japan	Hiroshima, Japan	Justin McCurry, “The Man Who Survived Hiroshima: ‘I Had Entered a Living Hell on Earth’”, The Guardian, 3 August 2015. <a href="https://www.theguardian.com/world/2015/jul/31/japan-atomic-bomb-survivors-nuclear-weapons-hiroshima-70th-anniversary">https://www.theguardian.com/world/2015/jul/31/japan-atomic-bomb-survivors-nuclear-weapons-hiroshima-70th-anniversary</a>
<b>Keiko Ogura</b>	Woman	Japan	Hiroshima, Japan	“Keiko Ogura’s Interview (video)”, Atomic Heritage Foundation, 2019, <a href="https://ahf.nuclearmuseum.org/ranger/tour-stop/keiko-oguras-interview/">https://ahf.nuclearmuseum.org/ranger/tour-stop/keiko-oguras-interview/</a>
<b>Karipbek Kuyukov</b>	Man	Kazakhstan	USSR	“Karipbek Kuyukov”, Peace Boat (video), 4 March 2022, Video, <a href="https://www.youtube.com/watch?v=ZYdkwvyVfBc">https://www.youtube.com/watch?v=ZYdkwvyVfBc</a> <a href="https://www.youtube.com/watch?v=VuigJcECXBs">https://www.youtube.com/watch?v=VuigJcECXBs</a>
<b>Dmitriy Vesselov</b>	Man	Kazakhstan	USSR	“First Person: Life Story of a 3rd Generation Survivor of Soviet Nuclear Tests in Kazakhstan”, InDepthNews, 23 August 2023, <a href="https://indepth-news.net/first-person-life-story-of-a-3rd-generation-survivor-of-soviet-nuclear-tests-in-kazakhstan/">https://indepth-news.net/first-person-life-story-of-a-3rd-generation-survivor-of-soviet-nuclear-tests-in-kazakhstan/</a>
<b>Teeua Tetua</b>	Woman	Kiribati	Kiritimati, Kiribati	Alexis-Martin, Becky, “The Atomic History of Kiritimati – a Tiny Island where Humanity Realised Its Most Lethal Potential”, The Conversation, 4 July 2019, <a href="https://theconversation.com/the-atomic-history-of-kiritimati-a-tiny-island-where-humanity-realised-its-most-lethal-potential-114870">https://theconversation.com/the-atomic-history-of-kiritimati-a-tiny-island-where-humanity-realised-its-most-lethal-potential-114870</a>
<b>Emori Ligica</b>	Man	Kiribati	Kiritimati, Kiribati	Nic Maclellan, <i>Grappling with the Bomb: Britain’s Pacific H-Bomb Tests</i> (Canberra, ANU Press: 2017).
<b>Pita Rokoratu</b>	Man	Kiribati	Kiritimati, Kiribati	Nic Maclellan, <i>Grappling with the Bomb: Britain’s Pacific H-Bomb Tests</i> (Canberra, ANU Press: 2017).

<b>Philomena Lawrence</b>	Woman	Kiribati	Kiritimati, Kiribati	Becky Alexis-Martin, “The Atomic History of Kiritimati – a Tiny Island where Humanity Realised Its Most Lethal Potential”, <i>The Conversation</i> , 4 July 2019, <a href="https://theconversation.com/the-atomic-history-of-kiritimati-a-tiny-island-where-humanity-realised-its-most-lethal-potential-114870">https://theconversation.com/the-atomic-history-of-kiritimati-a-tiny-island-where-humanity-realised-its-most-lethal-potential-114870</a>
<b>Paul ah poy</b>	Man	Kiribati	Kiritimati, Kiribati	Nic Maclellan, <i>Grappling with the Bomb: Britain’s Pacific H-Bomb Tests</i> (Canberra, ANU Press: 2017).
<b>Gordon Coggon</b>	Man	Kiribati	Kiritimati, Kiribati	“Gordon Coggon”, Peace Boat (video), 4 March 2022, <a href="https://www.youtube.com/watch?v=KC_vn1nU4RM">https://www.youtube.com/watch?v=KC_vn1nU4RM</a>
<b>Lee Gyuyeo</b>	Man	Republic of Korea	Hiroshima, Japan	“Lee Gyuyeo”, Peace Boat (video), 4 March 2022, <a href="https://www.youtube.com/watch?v=kG5nPzZ-VZ7c&amp;feature=youtu.be">https://www.youtube.com/watch?v=kG5nPzZ-VZ7c&amp;feature=youtu.be</a>
<b>Peterson Jibas</b>	Man	Marshall Islands	Marshall Islands	Rebecca Davis Gibbons, “What Justice Means to Communities Affected by Nuclear Testing”, <i>Bulletin of Atomic Scientists</i> , 2 February 2023, <a href="https://thebulletin.org/2023/02/what-justice-means-to-communities-affected-by-nuclear-testing/#post-heading">https://thebulletin.org/2023/02/what-justice-means-to-communities-affected-by-nuclear-testing/#post-heading</a>
<b>Neisen Laukon</b>	Woman	Marshall Islands	Marshall Islands	“The U.S. Tested Atomic Bombs, Then I Got Cancer (video)”, <i>AJ+</i> , 13 July 2022, <a href="https://www.youtube.com/watch?v=UDNLrOSCOf8">https://www.youtube.com/watch?v=UDNLrOSCOf8</a>
<b>Tony deBrum</b>	Man	Marshall Islands	Marshall Islands	Dan Zak, “He Saw a Nuclear Blast at 9, then Spent His Life Op-posing Nuclear War and Climate Change”, <i>Washington Post</i> , 24 August 2017, <a href="https://www.washingtonpost.com/local/he-saw-a-nuclear-blast-at-9-then-spent-his-life-opposing-nuclear-war-and-climate-change/2017/08/24/5b6d10e6-882e-11e7-a94f-3139abce39f5_story.html">https://www.washingtonpost.com/local/he-saw-a-nuclear-blast-at-9-then-spent-his-life-opposing-nuclear-war-and-climate-change/2017/08/24/5b6d10e6-882e-11e7-a94f-3139abce39f5_story.html</a>
<b>Darlene Keju</b>	Woman	Marshall Islands	Marshall Islands	Tilman A. Ruff, “The Humanitarian Impact and Implications of Nuclear Test Explosions in the Pacific Region”, <i>International Review of the Red Cross</i> 97, no. 899 (2015): 775-813, <a href="https://doi.org/10.1017/S1816383116000163">https://doi.org/10.1017/S1816383116000163</a>
<b>Lemeyo Abon</b>	Woman	Marshall islands	Marshall Islands	Nic Maclellan, <i>Grappling with the Bomb: Britain’s Pacific H-Bomb Tests</i> (Canberra, ANU Press: 2017).  Tilman A. Ruff, “The Humanitarian Impact and Implications of Nuclear Test Explosions in the Pacific Region”, <i>International Review of the Red Cross</i> 97, no. 899 (2015): 775-813, <a href="https://doi.org/10.1017/S1816383116000163">https://doi.org/10.1017/S1816383116000163</a>
<b>Lani Kramer</b>	Woman	Marshall Islands	Marshall Islands	Renee Lewis, “Bikinians Evacuated ‘for Good of Mankind’ Endure Lengthy Nuclear Fallout”, <i>Aljazeera America</i> , 28 July 2015, <a href="http://america.aljazeera.com/articles/2015/7/28/bikini-nuclear-test-survivors-demand-compensation.html">http://america.aljazeera.com/articles/2015/7/28/bikini-nuclear-test-survivors-demand-compensation.html</a>

<b>Tariq Rafiq</b>	Man	Pakistan	Pakistan	Shweta Desai, “The Fallout FROM Pakistan’s Nuclear Tests”, The Diplomat, 29 May 2017, <a href="https://thediplomat.com/2017/05/the-fall-out-from-pakistans-nuclear-tests/">https://thediplomat.com/2017/05/the-fall-out-from-pakistans-nuclear-tests/</a>
<b>Terry Quinlan</b>	Man	United Kingdom	Kiritimati, Kiribati	Becky Alexis-Martin, “The Atomic History of Kiritimati – A Tiny Island where Humanity Realised Its Most Lethal Potential”, The Conversation, 4 July 2019, <a href="https://theconversation.com/the-atomic-history-of-kiritimati-a-tiny-island-where-humanity-realised-its-most-lethal-potential-114870">https://theconversation.com/the-atomic-history-of-kiritimati-a-tiny-island-where-humanity-realised-its-most-lethal-potential-114870</a>
<b>Eric Barton</b>	Man	United Kingdom	Australia	Dominic Casciani, “Nuclear Bomb Test Veterans Relaunch Legal Action”, BBC, 20 September 2023, <a href="https://www.bbc.com/news/uk-66869017">https://www.bbc.com/news/uk-66869017</a>
<b>John Ward</b>	Man	United Kingdom	Kiritimati, Kiribati	“Nuclear Test Veteran Wants Government Apology over Blasts”, BBC, 18 June 2018, <a href="https://www.bbc.com/news/uk-england-derbyshire-44508192">https://www.bbc.com/news/uk-england-derbyshire-44508192</a>
<b>Mary Dickson</b>	Woman	United States	Utah, United States	“Mary Dickson”, Peace Boat (video), 4 March 2022, <a href="https://www.youtube.com/watch?v=ckn-MPqfr3kY&amp;feature=youtu.be">https://www.youtube.com/watch?v=ckn-MPqfr3kY&amp;feature=youtu.be</a>
<b>George Coleman</b>	Man	United States	Nevada, United States	“The Story of a Nuclear Test Veteran”, ICAN, 29 May 2019, <a href="https://www.icanw.org/the_story_of_a_nuclear_test_veteran">https://www.icanw.org/the_story_of_a_nuclear_test_veteran</a>
<b>Paul Pino</b>	Man	United States	New Mexico, United States	“People Exposed to Fallout from 1st Atomic Bomb Test Still Fighting for Compensation”, NPR (All Things Considered), 30 July 2023, <a href="https://www.npr.org/2023/07/30/1191006283/people-exposed-to-fallout-from-1st-atomic-bomb-test-still-fighting-for-compensat">https://www.npr.org/2023/07/30/1191006283/people-exposed-to-fallout-from-1st-atomic-bomb-test-still-fighting-for-compensat</a>
<b>Wayne Brooks</b>	Man	United States	Johnston Island, Marshall Islands	Jennifer Lafleur, “America’s Atomic Vets: ‘We Were Used as Guinea Pigs – Every One of Us’”, Reveal, 27 May 2016, <a href="https://revealnews.org/article/us-veterans-in-secretive-nuclear-tests-still-fighting-for-recognition/">https://revealnews.org/article/us-veterans-in-secretive-nuclear-tests-still-fighting-for-recognition/</a>
<b>Jim Bunting</b>	Man	United States	Johnston Island, Marshall Islands	Jennifer Lafleur, “America’s Atomic Vets: ‘We Were Used as Guinea Pigs – Every One of Us’”, Reveal, 27 May 2016, <a href="https://revealnews.org/article/us-veterans-in-secretive-nuclear-tests-still-fighting-for-recognition/">https://revealnews.org/article/us-veterans-in-secretive-nuclear-tests-still-fighting-for-recognition/</a>
<b>Lincoln Grahls</b>	Man	United States	Johnston Island, Marshall Islands	Jennifer Lafleur, “America’s Atomic Vets: ‘We Were Used as Guinea Pigs – Every One of Us’”, Reveal, 27 May 2016, <a href="https://revealnews.org/article/us-veterans-in-secretive-nuclear-tests-still-fighting-for-recognition/">https://revealnews.org/article/us-veterans-in-secretive-nuclear-tests-still-fighting-for-recognition/</a>  Francis Lincoln Grahls, “Veterans of US Atomic Age Deserve Compensation”, Military Times, 2 December 2021, <a href="https://www.militarytimes.com/opinion/commentary/2021/12/02/veterans-of-us-atomic-age-deserve-compensation/">https://www.militarytimes.com/opinion/commentary/2021/12/02/veterans-of-us-atomic-age-deserve-compensation/</a>

<b>Barbara Kent</b>	Woman	United States	New Mexico, United States	<p>Lesley M. M. Blume, “Collateral Damage: American Civilian Survivors of the 1945 Trinity Test”, Bulletin of the Atomic Scientists, 17 July 2023, <a href="https://thebulletin.org/premium/2023-07/collateral-damage-american-civilian-survivors-of-the-1945-trinity-test/">https://thebulletin.org/premium/2023-07/collateral-damage-american-civilian-survivors-of-the-1945-trinity-test/</a></p> <p>Leila Fadel, Justine Kenin, Gabe O’Connor, “Survivors of the Trinity Nuclear Test Weren’t Warned — Then Were Lied To After”, NPR.org (All Things Considered), 27 September 2021, <a href="https://www.npr.org/2021/09/27/1040983335/survivors-of-the-trinity-nuclear-test-werent-warned-then-were-lied-to-after">https://www.npr.org/2021/09/27/1040983335/survivors-of-the-trinity-nuclear-test-werent-warned-then-were-lied-to-after</a></p>
<b>Kathleen Bogle</b>	Woman	United States	Mississippi, United States	<p>Barrett Ervin, “A Personal Account”, ATOMIC MS, 10 December 2015, <a href="https://atomicms.olemiss.edu/2015/12/10/a-personal-account">https://atomicms.olemiss.edu/2015/12/10/a-personal-account</a></p> <p>Leila Fadel, Justine Kenin, Gabe O’Connor, “Survivors of the Trinity Nuclear Test Weren’t Warned — Then Were Lied To After”, NPR.org (All Things Considered), 27 September 2021, <a href="https://www.npr.org/2021/09/27/1040983335/survivors-of-the-trinity-nuclear-test-werent-warned-then-were-lied-to-after">https://www.npr.org/2021/09/27/1040983335/survivors-of-the-trinity-nuclear-test-werent-warned-then-were-lied-to-after</a></p>
<b>Bernice Gutierrez</b>	Woman	United States	New Mexico, United States	<p>Danielle Prokop, “New Mexico Downwinders Demand Recognition, Justice”, El Paso Matters, 27 January 2022, <a href="https://elpasomatters.org/2022/01/27/new-mexico-downwinders-demand-recognition-justice/">https://elpasomatters.org/2022/01/27/new-mexico-downwinders-demand-recognition-justice/</a></p> <p>Duane Pohlman, “The ‘Downwinders’: Living and Dying in the Fallout of Oppenheimer’s Bomb”, WKRCsat, October 7 2023, <a href="https://local12.com/news/investigates/the-downwinders-living-dying-fallout-of-oppenheimers-bomb-duane-pohlman-investigate-investigation-manhattan-project-trinity-site-atomic-nuclear-gadget-mushroom-cloud-plutonium-radioactive-cancer-sickness-contamination-missile-geiger-counter-nuclides">https://local12.com/news/investigates/the-downwinders-living-dying-fallout-of-oppenheimers-bomb-duane-pohlman-investigate-investigation-manhattan-project-trinity-site-atomic-nuclear-gadget-mushroom-cloud-plutonium-radioactive-cancer-sickness-contamination-missile-geiger-counter-nuclides</a></p>
<b>Anatoly Korsunov</b>	Man	USSR/Russian Federation	Orenburg Oblast, Russian Federation/USSR	M. Franchetti, “Nuclear Survivors Tell Tale of Horror”, Calgary Herald, 24 June 2001.

# Appendix B. Information about interviews conducted by María Pía Devoto, Mariel R. Lucero Baigorria and Ana Levintan

Semi-structured interviews were conducted based on the following questions.

1. What do you understand by:
  - a. Feminist Foreign Policy (FFP)?
  - b. Foreign Policy with a Gender Perspective (FPGP)?
2. How is the incorporation of FFP or FPGP in foreign policy envisaged?
  - a. Do you see the incorporation of FFP or FPGP in foreign policy as a trend or as an essential axis?
  - b. Is the person in charge of the FFP or FPGP area included in the core decision-making group?
3. How is FFP or FPGP applied/implemented in your country?
4. What are the priority topics on the foreign policy agenda of X (interviewee's country)? What actions does your country take in FFP and FPGP?
5. Do you believe that disarmament (nuclear), gender, and environmental issues should be addressed?
6. How do you think the Global South (Latin America and the Caribbean) can influence the implementation of these topics: disarmament, gender, environment, or others?
7. How do you think these topics can be implemented in practice? What recommendations would you give to increase the influence of FFP and FPGP?

## List of Interviewees

- Carlos Umaña, Co-President of the International Physicians for the Prevention of Nuclear War
- Diaria Arana Aguilar, Director General of Global Thought
- Gloria De La Fuente, Undersecretary of Foreign Affairs of the Ministry of Foreign Affairs of Chile
- Karen Hallberg, Research Director at the Bariloche Atomic Centre, Balseiro Institute, Argentina
- Marita Perceval, Special Representative for Feminist Foreign Policy at the Ministry of Foreign Affairs, International Trade, and Worship of the Argentine Republic
- Maritza Chan, Ambassador of the Permanent Mission of Costa Rica to the United Nations
- Ray Achenson, Disarmament Director at the Women's International League for Peace and Freedom
- Verónica Garea, President of INVAP S.A., Technological Development Institute, Argentina

Additionally, interviews were conducted with three officials from the Directorate of International Security, Nuclear, and Space Affairs of the Ministry of Foreign Affairs, International Trade, and Worship of the Argentine Republic, and four officials from the Ministry of Foreign Affairs of the Government of Mexico.

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UNIDIR hopes that the analyses presented here will represent a springboard for new and inclusive efforts towards nuclear non-proliferation and disarmament.

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