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Opportunities for Linking Women, Peace and Security to the US Department of Energy

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Abstract

In October 2000, the United Nations Security Council unanimously passed Resolution 1325 on Women, Peace and Security (WPS). To date, more than half (107) of all United Nations member states have adopted National Action Plans to address the experiences of women and girls in conflict and their security needs as required by the resolution. The United States is among them, with the US Department of Defense, US Department of State, US Agency for International Development, and US Department of Homeland Security each issuing their own implementation plans for WPS. Importantly, the US Department of Energy (DOE), and most especially, the National Nuclear Security Administration (NNSA), despite having much to offer on the implementation of WPS, has been noticeably absent in this policy space. In this article, we lay out the opportunities that exist for DOE and NNSA to implement WPS. First, we present an analysis of what states around the world have included in their National Action Plans with regard to energy, nuclear, and environmental policies as these are most closely related to the work of DOE. Then, we consider opportunities for DOE to build upon these links by adopting practices toward gender balancing (i.e., increasing the inclusion of women) and gender mainstreaming (i.e., assessing the influence of gender on policy outcomes). By adopting gender balancing and gender mainstreaming practices, DOE can affect the inclusion of women within its institutions and the lived experiences of women outside of them.

Keywords: NNSA, UNSCR 1325, gender balancing, gender mainstreaming

1. Introduction

On October 31, 2000, the United Nations (UN) Security Council unanimously passed Resolution 1325 on Women, Peace and Security (WPS) [1]. This landmark resolution recognized that the experiences of women and girls in conflict had long been ignored by the international community and called on states and international organizations to rectify these omissions in all aspects of conflict prevention and resolution. To this end, more than 100 states, including the United States, have adopted National Action Plans (NAPs) for meeting their obligations under UN Security Council Resolution (UNSCR) 1325.¹ In 2017, the US Congress passed the “Women, Peace, and Security Act” [2] designating four institutions of government as being responsible for the implementation of the US’s NAP: the US Department of State (DOS), US Agency for International Development (USAID), US Department of Defense (DOD), and US Department of Homeland Security (DHS). However, the legislation also allows for “any other department or agency specified by the President” to be included in the implementation [2].

In this article, we argue that the US Department of Energy (DOE) should also be included in the implementation of the US’s WPS National Action Plan. The DOE’s mission is “to ensure America’s security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technology solutions” [3]. The DOE’s primary responsibilities are to administer national energy policies through a series of offices and programs, including the Office of Nuclear Energy, Office of Fossil Energy and Carbon Management, and Office of Environmental Management. Two significant administrations are associated with the DOE. The US Energy Information Administration is an independent office responsible for providing data and analysis to the DOE. The National Nuclear Security Administration (NNSA) is a semiautonomous agency responsible for using military applications of nuclear science to enhance US national security. The NNSA’s specific responsibilities include managing the nuclear stockpile and reducing the global threat of weapons of mass destruction (WMDs) by tracking nuclear and radiological materials. The DOE also oversees the national laboratories, who are primarily tasked with leading US scientific innovation in areas such as combating climate change. The mission of the DOE, supplemented by the importance of NNSA, demonstrates the need for these bodies to be part of the US WPS strategy and that key security issues are missed without DOE’s inclusion.

As the Biden Administration prepares the latest version of the US NAP this fall, the 2023 WPS strategy, they should capitalize on this opportunity by including the DOE in their strategy and expand the inclusion of women and their experiences in national security in ways that will enhance the US security posture, as well as set a standard for other states to follow.

The next section provides an overview of the WPS agenda, including two norms that are central to the efforts that states and organizations have taken in their action plans:

¹ In total, 11 regional organizations, including the North Atlantic Treaty Organization (NATO), have also adopted WPS action plans.

gender balancing and gender mainstreaming. Following that is an analysis of the US NAP, with a particular focus on the 2019 United States Strategy on Women, Peace, and Security [4] and its four “Lines of Effort” (LOEs), which set goals for the four implementing organizations. Each of these organizations—DOS, USAID, DOD, and DHS—approached meeting these LOEs according to their organization’s existing resources, capabilities, and structure; however, most efforts reflect a form of gender balancing or gender mainstreaming. The analysis of these organizations’ implementation plans juxtaposed with the functions and security issues addressed by the DOE make it clear that the inclusion of DOE in the next WPS strategy ought to be prioritized. Finally, in the last section, we offer suggestions for what could be included in a DOE implementation plan based on the plans of DOS, USAID, DOD, and DHS, while recognizing the possibility that the 2023 strategy may propose new LOEs that go beyond the limited nature of those laid out in the existing strategy.

2. Women, Peace and Security: An Overview

UNSCR 1325 [1] and nine subsequent, related resolutions identify the ways in which the lived experiences of women and girls in conflict have been ignored. The resolutions call upon the international community to include women in all levels of decision making, what is known as *gender balancing*, and to consider the ways in which policies differently affect women and girls, or *gender mainstreaming*. Collectively, these resolutions form the *WPS Agenda*.

Four primary pillars are said to make up the WPS Agenda: participation, prevention, protection, and relief and recovery. The first pillar, participation, speaks to the need for greater inclusion of women in all institutions, from local and national institutions to international organizations and peace negotiations, as well as among peacekeeping forces. The key element of the participation pillar is that women are often highly underrepresented in positions of power and decision-making, most especially when it comes to conflict and conflict resolution. This pillar calls on states and organizations, including the UN itself, to increase the participation of women in all these bodies.

The prevention pillar focuses on preventing the types of violence women experience in conflict, most especially sexual violence; indeed, one of the subsequent resolutions, UNSCR 1820 [5], focuses exclusively on conflict related sexual violence. Protection, the next pillar, is closely related to prevention in that it aims to protect women from the types of violence they experience (namely, sexual violence) by calling on actors to establish institutions that will hold perpetrators accountable. This pillar is seen, for instance, through strengthening laws, improving investigations and prosecutions, and prohibiting amnesty in peace agreements for sexual violence. Finally, the relief and recovery pillar calls on international actors to developing policies for addressing the needs of girls and women during and after war.

a. Gender Balancing and Gender Mainstreaming

Underlying the WPS agenda are two broad strategies in advancing gender equality: *gender balancing*, which means increasing the numerical representation of women in institutions and levels of decision-making, and *gender mainstreaming*, which requires

applying a gender lens to policy-making, thus considering the ways that policies will affect men and women in a context differently given societal roles and cultural norms. The four pillars, as well as the ways in which states have implemented WPS, largely reflect these two strategies. For instance, the participation pillar is primarily about increasing the representation of women and is, therefore, focused on gender balancing. The literature on gender balancing has shown that increasing the representation of women in peace negotiations leads to longer-lasting peace, and an increased presence of women among peacekeeping forces increases the likelihood of sexual violence in conflict being reported [6] [7]. Notably, however, concerns exist that just increasing the numbers of women (what has been labeled an “add women and stir” approach) does not account for *which* women are included, *where* in institutions they are included, and the informal barriers to their full participation. States have also come to realize the strategic value of including women in their armed forces, especially when it comes to counterinsurgency operations. However, this inclusion raises concerns that these soldiers may be valued only because their gender makes them useful to the state, particularly for policing the bodies of other women [8].

Moving beyond the representation of women, the protection, prevention, and relief and recovery pillars require a greater awareness of context and cultural gender norms and thus rely on a gender mainstreaming approach. Gender mainstreaming, however, requires having people who are well-skilled in doing gender analysis and a deep understanding of the often insidious ways that gender operates in societies and institutions. To understand why women are being targeted or why their experiences in conflict have been ignored, one needs to understand the ways in which norms about masculinity and femininity operate. Scholars have demonstrated, for instance, that how development dollars are used—whether to build roads or support welfare programs and drinking water—affects women differently [9]. Others have pointed out that how refugee camps are designed—including where latrines are built [10]—affects the security of women in these spaces. Effective mainstreaming requires an intersectional analysis of gender to consider how different women’s lives will be affected differently by policies depending on how gender intersects with other hierarchies such as class, race, ethnicity, sexuality, and religion.

Although WPS has elevated attention and effort toward certain experiences of women related to conflict and security, especially sexual violence, other issue areas exist for which the gendered aspects of security have been overlooked and WPS has not yet fully been applied [11].

b. NAPs in Focus

Although more than one hundred states have adopted NAPs to realize the goals of UNSCR 1325, only one-third of these states have allocated any resources to the programs in their NAP [12]. With regard to the four pillars of WPS—participation, prevention, protections, and relief and recovery—states’ NAPs have often focused on the participation pillar. As scholars have noted, the ease of an *add women and stir* approach raises questions about which women are included and where in institutions they are included [13, 14]. In their analysis of NAPs 20 years after the passage of

UNSCR 1325, Hamilton et al. [13] found that the agencies most often designated to lead in NAPs were either foreign affairs ministries or “Women/Gender” agencies. Those with foreign affairs ministries taking the lead have NAPs that are largely outward focused on “other” women, particularly women in the global south, and emphasize including women in militarized roles within their own state. On the upside, these ministries are often well-supported, unlike “Women/Gender” agencies that are often under-resourced. A few states, however, have adopted a whole-of-government approach, in which three or more departments are responsible for leading a coordinated implementation for the state. The United States is among those that have taken the latter approach.

The issues covered in NAPs vary widely from state to state, though there are some consistencies. For instance, many NAPs reference the experiences of refugees and internally displaced persons; the vulnerabilities experienced by these communities are acknowledged in UNSCR 1325 [1]. Other issues, such as terrorism and trafficking, have also become prominent and again reflect additional resolutions in the WPS agenda that explicitly mention these issues. As the understanding of security has moved beyond armed conflict to taking into account the structural violence and threats women face on account of gender, other issues including reproductive health [15]; the small arms and light weapons trade; and lesbian, gay, bisexual, and transgender issues have also become part of the more expansive WPS agenda [13].² The three issues areas most relevant to DOE—energy, nuclear, and the environment—have been included in existing NAPs to varying degrees, with the security concerns raised by environmental threats and climate change receiving the most attention, and energy and nuclear receiving far less attention.

c. What is Missing from NAPs

The WPS agenda rightfully includes security issues beyond active armed conflicts that threaten the security of women and girls, yet three main issue areas have been either absent or limited in states’ NAPs: energy, nuclear, and the environment. All three of these are crucial security issues for women and are essential to the mission of the DOE. Therefore, there is both need and opportunity for the US 2023 WPS strategy to lead the international community by integrating DOE into its WPS implementation.

Energy

The disproportionate effect of climate change on women has drawn the attention of scholars and policymakers in the fields of human security and international development; however, less attention has been paid to the ways that access to affordable energy is a security issue for individuals. Scholars and policymakers have long recognized that access to energy is gendered and that there is a great need for gender mainstreaming when it comes to energy policy [16, 17, 18]. This need has

² The United States has made efforts to limit these expansions to the WPS agenda as demonstrated by past US threats to veto a resolution regarding sexual violence because of language on reproductive and sexual health. Source: Borger, J. US Threatens to Veto UN Resolution on Rape as a Weapon of War, Officials Say. *The Guardian*, April 22, 2019. <https://www.theguardian.com/world/2019/apr/22/us-un-resolution-rape-weapon-of-war-veto>.

largely been framed by policymakers as a development issue, deeply tied to states' development goals and the UN's Sustainable Development Goals. As a result, USAID has thus far been the US agency to take the lead on thinking about energy security as a human security issue. However, energy is also a national security issue, and as such, DOE has important ideas to contribute.

Scholars have previously made efforts to frame energy as a human right [19]; indeed, there are nongovernmental organizations (NGOs) that have long recognized the gendered inequalities to energy access as a human rights and development problem [20]. However, as the war in Ukraine has made energy security front page news, policymakers are now becoming aware of the myriad overlapping ways that energy security ties into existing human and state security issues. Take, for instance, food security, which is threatened in the absence of energy resources to power farming equipment and refrigerate and maintain existing food, as well as shortages of fertilizer, which undermine agricultural outputs and cause the costs of food to rise rapidly owing to increased costs of energy needed to supply food manufacturing. Energy insecurity runs the risk of destabilizing relationships with other states as they seek out affordable, accessible energy, even if doing so undermines US sanctions against Russia. Finally, the development of non-fossil fuel energy sources also directly affects the security of communities where minerals are mined for these technologies, opening up additional security threats to women. In all, scholars and policymakers absolutely need to pay greater attention to the ways that energy policy is deeply tied to the experiences of women and girls. By being forward thinking on the implementation of WPS, DOE has the opportunity to set up the United States as a leader for other states to follow in this policy area.

Only 11 states, or approximately 10% of those with NAPs for WPS, have mentioned energy in their plans, albeit in very different ways. The United States is among these 11, with energy being referenced five times in its 2016 NAP. Women are identified as being crucial to US policies for addressing climate change and, related to this, their effectiveness in improving energy efficiency. It notes the need to increase the participation of women in the energy sector and as *clean energy entrepreneurs*. This attention to energy was subsequently dropped by the Trump Administration's WPS strategy in 2019. The Biden Administration should reinclude this issue and designate a role for the DOE in implementing it.

Of the 10 remaining states that mention energy in their NAPs, 7 are states in Africa (Burundi, Gabon, Liberia, Nigeria, Sierra Leone, Rwanda, and Uganda), 2 are in Western Europe (Finland and Spain), and the last is in Central Asia (Tajikistan).³ There is no single way that states approach the issue of energy in their NAPs. Spain, for instance, mentions energy in the introduction to its 2017 NAP as a challenge for the international community, along with climate change and food crises [21]. Finland's reference to energy in an earlier NAP is focused outward, highlighting the importance of energy in development policy beyond its borders [22].

³ Although Lebanon mentions energy, it is only to note that they have a female Minister of Energy and Water.

Other states treat energy as an issue that is relevant to the security of women within their borders. Burundi's NAP of 2022, for instance, designates the Ministry of Energy as the responsible party for ensuring access to renewable energy to improve women's household living conditions [23]. Nigeria's earlier NAP, much like Tajikistan, highlights how national energy needs are important to economic development [24]. Shifting away from economic development, Gabon recognizes a role for the Ministry of Energy in their NAP, noting the need for gender mainstreaming of resource management as part of dealing with environmental changes [25]. Though Liberia does not directly mention energy in its first NAP in 2009, it did direct the Ministry of Lands, Mines, and Energy to develop policies to "increase women's access to low cost housing, access to natural resources, and participation in the environment sector" [26]. Other states, such as Rwanda in its first NAP [27], identify energy as a basic need, on par with healthcare, food, and shelter. Sierra Leone's NAP was quite specific in creating ways to demonstrate movement toward communities becoming more sustainable and ensuring environmental security, such as through training women and girls on the use of energy/fuel-saving stoves [28]. Uganda's NAP is the most detailed in the consideration of women's knowledge, skills, and adoption of renewable energy (both infrastructure and sources) as a way to mitigate challenges, especially in areas prone to environmental disasters and conflict. Indeed, they tie one indicator of success to this, noting:

Women who are using knowledge and skills in environmental conservation, natural resource management, and climate change mitigation. Using is at two levels—in their homes and in their enterprises. Renewable energy includes [the] use of solar energy, wind energy, hydropower, geothermal energy, biomass energy, energy-saving stoves, fireless cookers, [and] water-filtering techniques. Eco-friendly technologies include environmentally sustainable conservation tools and techniques used in agriculture, lighting, etc. Measurement will be based on sampling a portion of the population. Total [number] of women using renewable energy/total [number] of women surveyed [29].

Nuclear Disarmament and Regulation

Only two states have NAPs that mention the word nuclear: Ireland and the Philippines. Notably, neither of these states have nuclear weapons nor do they rely on nuclear energy.⁴ The most recent NAP by Ireland notes, "Women and girls are also disproportionately impacted by the use of nuclear weapons, including as a result of ionizing radiation" [30]. Additionally, it calls out the harms that come from states' performances of masculinity that devalue disarmament and justify the possession of nuclear weapons. In its first NAP in 2009, the Philippines noted the indiscriminate harms caused by nuclear weapons, though the focus of the security threat to women was primarily on small arms and light weapons that kill, maim, and intimidate civilians in all forms of conflict [31].⁵ The problematic omission of nuclear disarmament and regulation

⁴ Although Rwanda's NAP mentions nuclear, it is only to note the irony of a nuclear weapon called "the peacemaker" (p. 10) [26].

⁵ The more-recent 2017 NAP does not mention the word *nuclear*.

in the NAPs of all other states provides the opportunity for the United States to lead on this issue.

States with nuclear energy and nuclear weapons, such as the United States, should seek to increase the inclusion of women in nuclear industries and take into consideration the impact of nuclear policies on women's lives. Women are drastically underrepresented in the nuclear sector, comprising less than a quarter of the workforce at 22.4% [34]. Tamara Kenney's research finds that the nuclear science industry has integrated women more slowly compared with most other sciences. Kenney interviewed women in leadership positions within the nuclear science industry regarding their backgrounds and found that all incorporated similar themes in their responses, which included allusions to the glass ceiling and stereotypes. Despite the slow nature of integrating women in the nuclear science industry, there has been progress, particularly in recent years, according to the accounts of these women [35]. The experiences of women in this industry highlight the experiences of women in all science, technology, engineering, and mathematics (STEM) fields. Women comprise a disproportionately small percent of STEM workforces, an issue especially highlighted in the nuclear energy sector. The integration of women in STEM fields, including energy and nuclear, will require gender balancing to increase the inclusion of women, and gender mainstreaming to consider the ways in which the culture of these fields can be improved to make them places where women want to stay and thrive once included.

One approach to improving inclusion is to address the educational gender gap in secondary STEM education. The idea is that women are underrepresented in STEM industries as a result of being underrepresented in STEM programs. Research by the International Atomic Energy Agency supports this assessment and argues that challenges of integration begin in secondary STEM education [34]. Women in Nuclear (WiN) Global, a global NGO advocating on behalf of women in nuclear careers, recognizes the relationship between the gender gap in secondary education and the gender gap in the workforce and seeks to close both gaps. WiN Global has taken action to expose these topics to girls at a young age and arrange mentorships for young women pursuing education and careers in the nuclear sector. Furthermore, political figures share this sentiment. Micah Pacheco, regional science supervisor at the Philippines' Ministry of Education, expressed that integrating women in secondary STEM education is the best way to achieve a greater percentage of scientists in the field [34].

Increasing the number of women in STEM careers, including nuclear and energy, is a laudable effort but requires not only increasing the number of women trained in these fields but also creating hospitable workspaces that support women's inclusion. To do the latter a gender mainstreaming approach is needed to examine the culture of organizations and ways that formal and informal practices in these spaces affect women differently. To put this another way, it's not just inclusion but also retention of women. DOE and NNSA have already begun to think about gender mainstreaming with the development of internal organizations such as Nuclear Women, the organization responsible for this special issue. The inclusion of DOE in the 2023 WPS Strategy

would encourage greater consideration of the ways to improve representation of women and organizational culture within the organization. Finally, it would also provide an opportunity to consider the ways that nuclear policies affect women outside of DOE.

Environment

In total, 44 NAPs reference the environment or climate change, making it the most discussed topic of the three issues central to DOE's mission.⁶ These states represent every continent barring Antarctica, with Australia, 2 states in North America, 1 state in Central America, 1 state in South America, 15 states in Africa, 15 states in Europe, and 8 states in Asia referencing the environment or climate change in their NAPs.

Each state is highly varied in the degree to which it acknowledges climate and the environment in their NAP. The 2016 US NAP highlights climate as a disproportionate threat to women and girls in the developing world and highlights climate change policy as an area in which women's participation should be increased [36]. Other states, such as Slovenia, acknowledge climate within a greater list of growing challenges. Slovenia's list contains climate change, migration, humanitarian crises, and terrorism and violent extremism [37]. The differences in the US and Slovenia's NAPs highlight disparities in the prescribed policies of states. The US indicates that climate change disproportionately affects women and girls in developing regions, coupled with a call to action that women should be more involved in climate policy, which gives clear guidance and steps on how to demonstrate success in this area. On the other hand, Slovenia merely listing climate change as one among many growing threats or challenges diminishes the importance of the threat and says little about what can be done to address women's needs when it comes to climate policy.

The effects of environmental degradation and the need for changing environmental policy has created new opportunities for WPS to integrate women in meaningful ways. Environmental peacebuilding is a subset of environmental policy that focuses on how successful environmental policy and management of natural resources can protect ecosystems and assist in preventing conflict. The linkage between environmental peacebuilding and WPS is undeniable according to Keina Yoshida and Linda Céspedes-Baéz [38]. Similarly, Cohn and Duncanson argue that environmental degradation should be at the core of issues related to WPS because true security cannot be attained without focusing on issues related to the climate crisis [39]. This research also highlights how environmental degradation will affect different groups of women in different ways beyond gender, including socioeconomic status, and geographical location. Contributing to this discussion, work by Seema Arora-Jonsson [40] notes that adding women to existing institutions will not be enough to create the necessary change. Arora-Jonsson argues the importance of focusing on observing women's relations with the men in the same spaces [40]. As an example, women's subordination as opposed to underrepresentation may be a more valuable metric of meaningful inclusion, but this information is difficult to gather as it may happen in more

⁶ NAPs were only counted if the terms were used correctly. For example, "the national security environment" does not count as a reference to the environment. Out of these 44 publishers, 43 are states, and 1 is an autonomous region.

informal ways. This literature, however, provides key insights for moving forward for both gender balancing and gender mainstreaming environmental policy. First, the unique experiences of different groups of women demonstrates that environmental degradation is a global security concern with specific needs. Second, institutions should adopt policies to ensure women working in this field are equal to their male counterparts, including that their input is valued in the same manner. Third, the implementation of environmental policy should consider the unique ramifications that women will face as a result of policy choices.

Of these three issues—energy, nuclear, and the environment—only climate change is mentioned outright in the UN’s WPS documents. UNSCR 2242 [41] calls for great implementation of UNSCR 1325 [1], and it states, “Noting the changing global context of peace and security, in particular relating to rising violent extremism, which can be conducive to terrorism, the increased numbers of refugees and internally displaced persons, the impacts of climate change and the global nature of health pandemics, and in this regard reiterating its intention to increase attention to women, peace and security as a cross-cutting subject in all relevant thematic areas of work on its agenda” [41].

3. Analysis of US WPS Policy and Opportunities for DOE

The US’s initial NAP for implementing UNSCR 1325 [1] came in the form of an executive order issued by President Barack Obama in 2011 [42]. A second NAP was issued in 2016 [36], updating US goals and expanding the meaning of security. Congress formalized the US implementation plan with the 2017 WPS Act [2], making the United States the first country to pass legislation on WPS. The WPS Act requires that the White House release a WPS strategy every 4 years and designates four agencies as being responsible for developing implementation plans and reporting annually to Congress: the DOS, DOD, USAID, and DHS. However, the bill also states that implementation may be carried out by “any other department or agency specified by the president for the purposes of this act” [2]. In 2019, the first WPS Strategy and the third US NAP, was released by the Trump Administration, laying out objectives and four LOEs that each responsible organization should address in their implementation plans [4]. Given that a new strategy is required in 2023, the Biden Administration can shape the direction of implementation for the four institutions that are at the heart of the US WPS plan and also, importantly, can seize this opportunity to direct DOE to be part of the implementation strategy.

a. Implementation of the 2019 US WPS Strategy

The 2019 WPS Strategy laid out four LOEs: (1) preparation and participation, (2) protection, (3) US international programs to improve equality and outcomes for women, and (4) partner governments [4]. The first LOE is largely focused on gender balancing. The effort aims to increase the presence of women in formal and informal decision-making processes, both within the US’s institutions and abroad. Most of the focus for this increased participation is training sessions and education. The protection LOE calls for designing humanitarian assistance “to address the distinct needs of women and girls, including women’s economic security, safety, and dignity” [4]. It notes that “Women cannot participate in the prevention or resolution of conflict or recovery from

disaster if they cannot meet their basic needs or provide for their children” [4]. Importantly, this LOE not only focuses on the need for protecting women because of the vulnerability and violence they experience, but also highlights that women can be agents of violence, with a particular focus on terrorism. The third LOE highlights the need for gender analysis skills among US diplomatic, military, and development personnel, noting the need to “expand and apply gender analysis, as appropriate, to improve the design and targeting of United States Government programs” [4]. Finally, the last LOE is directed at efforts to get partner governments abroad to move toward greater participation of women in their institutions not just through inclusion in US-facilitated trainings (as is part of the first LOE) but also through changing norms and laws in their states to improve gender equality.

Though the COVID-19 pandemic presented challenges in the implementation and reporting required by the 2017 WPA Act [2], the four responsible agencies did submit annual updates on their implementation plans to Congress in 2021 and 2022. These reports provide valuable insights into the specific actions the organizations have taken to implement the US WPS NAP and provide a template for DOE, should it be included in the Biden Administration’s 2023 WPS strategy. Moreover, although each agency’s report highlights their achievements, the COVID-19 pandemic slowed implementation for all. This is worth noting because DOE is not far behind the existing responsible agencies in what it can achieve if tasked with implementing WPS. Indeed, recent research demonstrates that the four current implementing organizations are still learning about WPS and how to implement it [43].

b. Opportunities for Inclusion of DOE in the 2023 WPS Strategy

Under the 2017 WPS Act [2], the executive must provide an annual report to Congress of the progress made by each of the implementing organizations on the four LOEs in the US NAP. The 2022 report [44] is useful for demonstrating the need for DOE to be included in the upcoming 2023 WPS strategy because many of the policy areas crucial to DOE are not fully addressed by the four current implementing organizations. The report also demonstrates what other agencies are doing to implement WPS, which provides a road map for DOE to proceed.

In a major change from the first Congressional report in 2021, the 2022 report highlights the need for increasing the participation of women in the energy sector; however, the scope of this is limited to USAID [44]. Energy as a human security issue is discussed in the annual report as an example of the ways that USAID has made progress on LOE 1 (participation). The specific example provided in the report is from a program in India where “women have a central role to play as energy professionals, energy decision-makers, and energy consumers” [44]. The program built off of USAID’s earlier work on the importance of including women in the energy sector and environmental policy, and the report notes that “integrating women into all levels of the energy value chain leads to more effective and efficient clean-energy initiatives, unleashing greater return on investments and expanding emission reduction opportunities, yet representation of women in the energy sector, especially in the technical fields, is very limited” [44]. To

address this issue, USAID partnered with the US–India Strategy Partnership Forum to establish the South Asia Women in Energy program to increase women’s leadership and participation Indian utilities. In another program, “Engendering Industries,” USAID has partnered with 41 companies to create opportunities for women, including in the energy and water sectors.

Though the mentions of “energy” are limited in the report to Congress, notably, USAID has a long history of building the case for gender inclusiveness in energy security discussions. Beginning in 2014, it partnered with the International Union for Conservation of Nature to create a 10-year program called Advancing Gender in the Environment. The reports that came out of this partnership included one on “Making the Case for Women in the Energy Sector” (2018) [45] and “Making the Case for Gender Equality in Large-Scale Renewable Energy Infrastructure Development” [46]. These reports again highlight that the need for increased participation of women in the energy sector and the need for a gender mainstreaming approach to energy security are not new. However, they are conversations that have largely not included DOE, and given the importance of energy security to national security, that omission ought to be rectified.

Returning to the 2022 WPS Report to Congress, climate and the environment are prominently featured; the word “climate” is mentioned 23 times in the 54-page report [44]. Much like energy issues, USAID has taken the lead in thinking about the nexus of gender inequality, state fragility, and climate vulnerability. Their contributions to the annual report recognize that women are more vulnerable to the effects of climate change but also showcase how the inclusion of women helps to mitigate some of the problems that arise from climate change (e.g., overgrazing issues). Given the consequences of climate change on developing states, unsurprisingly, USAID is leading in thinking about the inclusion of women on climate and development policy. However, other agencies, most especially the DOE, have an important role in ensuring US energy security, especially as the United States and its energy infrastructure are not immune from the effects of climate change. Lastly, USAID stood out from the other agencies in the annual report for also addressing women and the digital divide—that is, the inequality in access and experience women have with technology. Again, given the development focus of the agency, this is not surprising, but it is important to note that the digital divide exists in the United States too and affects women’s workforce readiness and STEM familiarity, which has longer-term consequences for DOE’s ability to improve gender parity.

There are multiple ways that DOE could adopt the same types of metrics as the other four agencies when it comes to implementing the LOEs. For instance, the work carried out under the NNSA’s Office of Counterterrorism and Counterproliferation (CTCP) connects directly to the ways that other agencies are implementing WPS—especially DOD, but also DOS and USAID. CTCP also manages the Nuclear Emergency and Support Teams, which plan for radiological and nuclear incidents; given the biological implications of radiation for women, the insight of a gender mainstreaming perspective would be extremely valuable. Another example would be for the NNSA’s Office of

International Nuclear Safeguards to implement similar guidelines on the inclusion of women when it comes to training with partner countries as all four current implementing agencies do.

One challenge that DOE may anticipate, which is not much different than what DOD expressed in their section of the annual report, is finding people with the requisite gender expertise and skills training and getting that information out to others in the institution. Each agency has approached this task differently, but one option, following DOD's lead, would be to hire and designate gender advisors (GENADS) and gender focal points to serve as a point of contact and facilitate gender mainstreaming policies. Likewise, the GENADS could provide a wealth of in-house training opportunities, coupled with hiring contractors when needed. This task is not a tall order given that most graduate programs in international affairs and security studies currently offer courses on gender analysis, and several have specific programs or certificates that allow for specialization in developing gender analysis skills.⁷

DOE is in a position to learn from what has and has not worked in existing organizations. For instance, research on the agencies implementing WPS in the United States has identified challenges, including a lack of understanding about what WPS is and how to do gender analysis [43]. They have, in some cases, relegated it the equal opportunity office, treating it exclusively as an issue regarding human resources and sexual harassment in the workplace rather than realizing the potential for using gender analysis in developing more effective programs. DOE would be wise to learn from these experiences and invest their efforts in not only working toward gender balance with the organization but also expanding opportunities for training on how to do gender analysis with current employees and hiring people with expertise in gender analysis.

An effective WPS strategy can also help the implementing organizations build *credible leadership*, particularly to address sexual harassment and equal opportunity within the institutions. Interviews with practitioners in the WPS implementing agencies by Henshaw highlighted that “the link between WPS and internal reforms included the need to attract, retain, and promote women government, to address sexual assault and harassment in the military and national security community, to create more career opportunities for those interested in specializing in gender issues, and to interrogate institutionalized sexism” [8]. Data on employment at DOE show that although women make up nearly 39% of the permanent workforce, they are vastly underrepresented in certain positions. The presence of women drops to 33% if looking at those employees in the GS-14 and GS-15 rank, 25% for those employed in General Physical Science, and 19% in General Engineering positions [47]. If just focusing on DOE's 17 national labs, women make up 31% of the workforce; however, significant differences exist in the presence of women in both research/technical management positions (18%) as compared with operations management (35%), as well as technical research staff (20%)

⁷ Examples include the London School of Economics' Master of Science in Women, Peace, and Security; Georgetown University's Certificate in Gender, Peace, and Security; and the many options available to students who are part of the Consortium on Women, Peace, and Security at George Washington University.

compared with operations support staff (44%) [48]. The dip in technical positions highlights the importance of STEM education and gender balancing efforts within these fields. Importantly, it is worth noting that women make up 36% those people in senior leadership roles at the national labs [48]. In all, there is much work to be done to improve gender balancing at DOE and given that these efforts are already well underway within the organization, it would easily be able to demonstrate efforts toward LOE 1 (participation) if included in the 2023 WPS strategy.

One additional bright spot for those within DOE and those developing the 2023 WPS strategy is that WPS has bipartisan support. Although the first US NAP was adopted by executive order under President Obama [42], the 2017 WPS Act [2] came out of a Republican-majority Congress and was signed into law by President Trump. The institutions of government have implemented WPS under both Republican and Democratic administrations; thus, there is unlikely to be much political resistance to expanding WPS to DOE.

The 2017 WPS Act passed by Congress called for the White House's strategy to support and be aligned with plans developed by other countries. Despite the importance of energy, nuclear, and climate security issues, these areas have been underrepresented in other countries' NAPs. The United States has the opportunity in developing its new NAP to lead on the inclusion of these issues by including DOE in its implementation strategy. The next US NAP, the 2023 WPS strategy, presents an important opportunity to advance existing efforts toward gender balancing within DOE and improve efforts at gender mainstreaming energy, nuclear, and climate policy issues that are all at the heart of DOE's mission.

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