Executive Summary: Making Gender Visible in Digital ICTs and International Security
Report submitted to Global Affairs Canada
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Digital Information Communication Technologies (digital ICTs) are often understood to be a bridge towards women's social, political, and economic empowerment. Initially greeted with a wave of enthusiasm, the digital democracy of the 2000s and 2010s promised to enable active citizen-led policymaking and a bright future of e-governance (Van Dijk 2013, 2.) These promises remain, though the optimism surrounding digital democracy has increasingly given way to anxiety. Digital ICTs now redistribute global influence, sometimes to malicious actors that undermine liberal democratic norms and threaten women's rights around the world.

Women are uniquely and disproportionately affected by conflict and threats to international peace and security. This report begins to reconcile the gap between Canada's National Cyber Security Strategy (NCSS) and commitment to the Women, Peace, and Security agenda, with the goal being to make gender visible in ongoing discussions at the United Nations Open-Ended Working Group (UN OEWG) on digital ICTs in the Context of International Security. This report, commissioned by Global Affairs Canada, signals that Canadian policymakers are taking steps to reconcile the gap between international cybersecurity and the country's Feminist International Assistance Policy. While most states with domestic ICT strategies mention women, often in relation to training opportunities and increasing women's representation in the ICT workforce, gender is largely absent from research on international security in the context of digital ICTs. In addition to using traditional scholarly research and industry reporting, this report uses confidential and anonymous small-n interviews from individuals who work on Internet and ICT governance and who are located in low and middle-income countries. These individuals have been an invaluable source of data, often acting as witnesses to civil unrest that was not widely circulated in the media.

Digital ICT Vulnerabilities: Gender and ICT-Enabled Harassment and Violence
The report finds that women's access and use of digital ICTs is deeply connected to transnational peace and security. This relationship is explored by assessing three vulnerabilities, analysing a case study on the gendered implications of Internet shutdowns, documenting the vibrant digital ecosystem designed to resist women's rights abuses, and by concluding with two avenues for future research. The vulnerabilities listed below are not an exhaustive description of the threat landscape. Rather, these vulnerabilities help policymakers reconceptualize cybersecurity as a toolset with gendered implications that affects international security.

- There is a relationship between the gender digital divide and international peace and security.
- Women, gender and sexual minorities experience gendered patterns of ICT-enabled political violence.
- Online communities can act as spaces for the radicalization and recruitment of men and boys.

Vulnerability 1: *There is a relationship between the gender digital divide and international peace and security.* The research on gender and ICTs has generally focused on addressing what is commonly called 'the digital divide,' defined roughly as those who have access to the "digital resources to engage, mobilise and participate in public life" and those who do not (Antonia and Tuffley 2014, 674). In comparison to men, women are more likely to be primary caregivers, responsible for energy delivery to the household, less mobile, and more prone to social isolation (Davies et al. 2020). ICTs come with a list of promises designed to mitigate these challenges .For these reasons, ICT infrastructure development has been central to the women's equality agenda even as governments try to reconcile the tension between ICTs as tools that both enable political expression and perpetuate gendered harassment and violence.

Women's access to ICTs appears to mirror other indicators that are used to measure gender equality. For example, when women have access to educational opportunities then they are also more likely to have access to ICTs. There does appear to be a relationship between social unrest and ICT blockages during elections and government transitions, and it is during this period that women are more likely to be targeted with sexual violence and other forms of politicial disenfranchisement (Ballington, Bardall, and Borovsky 2017). Women face greater restrictions on mobility and access during ICT blockages, a relationship that is further explored in the case study on Internet shutdowns.

Vulnerability 2: *Women, gender and sexual minorities experience gendered patterns of ICT-enabled political violence.* In comparison to men, women are at increased risk of ICT-enabled harassment and violence, with transgender, lesbian, bisexual, and racialized women at even greater risk than white women (Citron and Franks 2014, 354). For minority women, including women off colour, lesbian, and transgender women, their identities become additional targets for ICT-harrasment and violence. Low, middle, and high-income countries also exhibit different patterns of gendered ICT-enabled violence, which is explored further below. Across geographic locations and identity backgrounds, perpetrators of ICT-enabled harassment and violence share a common "patterned resistance to women's public voice" (Sobieragj 2017, 2).

Some scholars argue that violence against women is linked directly to a state's incapacity to respond to violence within its own borders (Htun and Jensenius 2020, 145). Rather than being viewed as a distinctive form of violence, this argument positions violence against women as an extension of the same violence directed at politically active men; both groups suffer the consequences of living in states with weak democratic institutions (Piscopo 2016, 437). Other researchers have responded to these criticisms by pointing to the experiences of female activists and politicians in states with strong democratic institutions and with the capacity to enforce criminal law (Krook and Sanin 2016, 465,). State capacity informs the character of the ICT-enabled attack, but does not make women in high-income countries immune from gender-based ICT violence.

Vulnerability 3: *Online communities can act as spaces for the radicalization and recruitment of men and boys.* Almost all research on modern terrorism finds a relationship between digital media platforms and radicalization, though it is not always clear whether the growing number of online extremist websites cause, rather than correlate, with radicalization (von Behr et al. 2013,

17). In general, the literature on extremist violence sees the Internet as an "accelerant" to radicalization, where extremist ideas are normalized within a community of individuals who validate each other. As masculinities scholar Michael Kimmel notes, the majority of individuals who perpetuate non-state political violence are men, a commonality that stretches across the ideological spectrum (Kimmel 2018). They are also more likely to be targeted and recruited into politically violent groups (Shoker 2018, 42). Increasingly, reporters have highlighted the relationship between 'lone wolf' mass shooters and their history of domestic violence and misogyny directed at women. Whether violence against women is a causal variable or useful predictor for ideological gun violence within democratic countries largely remains unexamined. Additionally, nearly all mass shootings occur in liberal democratic countries, indicating that regime type may influence an attacker's type or style of violence.

Case Study 1: Internet Shutdowns
Internet shutdowns are politically orchestrated critical infrastructure failures and often occur during periods of civil unrest. Some scholars have conceptualized Internet shutdowns as one tactic in an arsenal of tools that range from content filtering, to coordinated misinformation, to arresting individuals for online political expression (Diebert and Rohozinski 2010, 7). Several NGOs, however, have opted to mark Internet shutdowns, including partial shutdowns that impact social media platforms, as a distinctive phenomenon. Internet shutdowns are increasing worldwide, from 106 in 2017 to 122 in 2019 and with Asia and Africa being the most affected countries (***ibid*.**) Though political leaders do not justify Internet shutdowns by pointing to women's protection, they have increasingly argued that Internet shutdowns are necessary to prevent violence spurred by misinformation on social media. In less than 10 years, Internet shutdowns have become normalized and perceived as viable responses to quelling both peaceful political mobilization and violent political protest. Despite the increasing number of Internet shutdowns that are occurring worldwide, there is still remarkably little data about the gendered impact of Internet shutdowns. Yet since at least the 1990s, disaster and emergency-preparedness scholars have noted that women face a different set of challenges during critical infrastructure emergencies (Fothergill 1996; Yasmin 2016; Davis et al. 2020).

NGOs have noted that communication blockades are particularly problematic when trying to work with vulnerable populations. When communication lines are blocked, NGOs can no longer provide their standard services to population groups that now face the double burden of domestic and government-led violence (Bakshi, 2019). These personal reports largely replicate the larger findings from research on gendered violence during national emergencies and financial crises, a time when women experience higher rates of sexual assault and intimate partner violence from male partners who have experienced job loss (Davis et al. 2020). Access to digital ICTs was also critical for women activists. Internet shutdowns created further restrictions on women's mobility and their ability to participate in political protest. Because women were sometimes prohibited by their parents or even husbands to leave the house during violent unrest, they were more dependent on the Internet to connect and mobilize. They also used the Internet to check if certain neighbourhood areas were safe and accessible. Without access to Internet platforms, they were more likely to stay indoors and remain isolated from their political and social communities.

Using Digital ICTs to Prevent Gender Violence
Increasingly, women's rights advocates are using digital ICTs to build resilience in the face of social disruption. Women's rights advocates have used digital ICTs to build platforms where "ordinary people are repositories of knowledge about wars" and where "their memories are crucial log-books in constructing a war narrative" (Parashar 2013, 626). Whether ICT-enabled solutions emerge in response to long-term trends, as in the case of HarassMap, or in response to short-term bursts of electoral violence as in the case of Ushahidi, women's resistance 'at home' is linked to the international security moment. These technologies are born in turbulent political climates, where regime change also highlights the precarious status of women's political and social rights. Many of these ICT 'work arounds' are borrowed from offline spaces, where women adopt a series of adaptive measures to reduce the chance that they will become targets of violence and harassment. Women will use digital ICTs to determine which spaces are open to them, as in the case of Sudanese activists who relied on social media to assess the safety of offline spaces. Many of these ICT-enabled forms of resistance place the onus of protection on demographic groups that are already at the highest risk of being targeted with violence. While these remedies are designed to treat the symptoms of gender inequality by carving a space for women to continue participating in public life, they do not necessarily alter the legal frameworks that allow perpetrators to target women in the first place.

Conclusion and Recommendations
Recommendation 1: Policymakers in member-states should be encouraged to collect statistics that are disaggregated by gender. This report does not provide a systematic literature review because the field remains fragmented and burdened by poor data collection practices. Researchers still struggle to measure the digital divide. While Canada and other high-income states collect ICT-use statistics disaggregated by sex, 'gender neutral' data collection remains the norm within low and many middle-income countries. Countries that collect gender ICT statistics are also usually the countries that have close to gender parity in ICT usage (Hafkin and Huyer 2007.) In general, research that assesses the gender digital divide has done so using qualitative and comparative methods that are at the discretion of the researcher. The research points to an environment where gender-based ICT inequality is empirically verifiable, but the unsystematic character of the available data presents a challenge to policymakers who would like to use gender-specific indicators to measure societal change over time. "Much like the digital divide, a statistical divide exists where the need is greatest—in developing nations" (Huyer et al. 2005, 194 quoted in Hafkin and Huyer 2007, 26). The discrepancy between ICT data collection in high-income and low-income countries also risks erasing women in the developing world from the international ICT policy conversation.

Recommendation 2: States should consider investing in research that examines whether women's access to digital ICTs are a positive indicator for international peace and stability. Scholarship on gender and international security has noted the positive relationship between state stability and women's rights. However, little research currently exists that examines the relationship between the gender digital divide and international peace and stability. While the end of the Cold War and the international consensus on human security have caused states to rethink 'what counts' as security, the absence of gender in digital ICTs and international security should be further reconciled. In particular, the link between the gender digital divide and global peace and

stability provides a route for exploring whether women's improved access to ICTs can also have positive transnational effects on the international community.