



United States of America:

Digital Weapons: Tackling the Rise of Tech-Facilitated Abuse and Bridging Data Gaps

UN Human Rights Council Universal Periodic Review (Fourth Cycle)

By Hope Pyx Global

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Hope Pyx Global is a U.S.-based civil society organization dedicated to combating gender-based violence by addressing its root causes and empowering survivors. We bridge the gap between grassroots efforts and high-level policy and program development. In 2024, we provided consultation for the Beijing +30 Review in the UNECE region. In 2025, we provided another consultation on CSW Revitalization Recommendations. Drawing on our research and experience—gained through U.S. and international multidisciplinary collaboration with stakeholders including UN agencies, governments, law enforcement, victim service providers, and lived experience experts—and the joint contribution of other experts, we have compiled the following review to support the Universal Periodic Review (Fourth Cycle).

Summary:

This review provides a multidisciplinary analysis of how emerging technologies are being weaponized in the context of technology facilitated gender-based violence (TFGBV), with a focus on women, children, and vulnerable populations. It explores four critical and underexamined intersections between technology and trafficking: (1) the exploitation of women and girls in the biotech supply chain, including organ harvesting, surrogacy, and genetic data extraction; (2) the weaponization of AI by traffickers, particularly through natural language processing, deepfakes, and the dark web, to exploit children and marginalized groups; (3) the urgent need for standardized, disaggregated data collection and regulatory accountability in anti-trafficking strategies; and (4) the use of reproductive technologies to facilitate sex-selective abuse, including feticide and infanticide, especially in cultures with strong gender biases, and other new and emerging forms of TFGBV. Centered around a survivor-centered, survivor-informed, rights-based, and gendered approach, the review emphasizes the importance of ethical AI and biotech regulation, corporate and state accountability, global cooperation, data transparency, and cultural shifts in combating emerging and tech-facilitated forms of trafficking and GBV.

It is recommended that the UN Human Rights Council engage survivors in all stages of the UPR review process, particularly in decision-making. This includes establishing a sustainable fund for lived experience experts; inviting them to attend and speak at UPR sessions; involving them in consultations; and providing institutional and financial support, including compensation, travel stipends, and visa assistance.

Issue 1:**Trafficking in the Biotech Supply Chain**

- **Issue:**

Trafficking in the biotech supply chain, especially involving women and girls, is an underrecognized yet deeply alarming crisis. From illegal organ harvesting and the exploitation of trafficking victims' genetic material to unethical surrogacy and egg-harvesting operations, trafficking victims—particularly women and children from marginalized and impoverished communities—are being exploited and abused in the name of medical and technological advancement. With global demand rising for organs, genetic data, and surrogacy services, unscrupulous actors are using trafficked individuals to meet these needs, often without their knowledge or consent. The intersection of biotechnology, tech, and human trafficking poses an urgent human rights concern that demands immediate attention and systemic change.

- **SDG 5 – Achieve gender equality and empower all women and girls**

Target 5.2: Eliminate all forms of violence against all women and girls in public and private spheres, including trafficking and sexual and other types of exploitation. This crisis also intersects with SDG 8 (Decent Work and Economic Growth), SDG 16 (Peace, Justice, and Strong Institutions), and SDG 3 (Good Health and Well-being) due to the severe health implications and the involvement of transnational criminal networks.

- **Recommendations:**

1. **Corporate Accountability and Ethical Sourcing**

Biotech and tech companies must adopt strict ethical sourcing policies, conduct regular third-party audits, and publicly disclose supply chain practices.

Certifications and compliance mechanisms—similar to “fair trade” models in agriculture—can help ensure that no part of the biotech production pipeline relies on trafficked labor or unethical organ sourcing.

2. **Survivor-Centered Policies and Rehabilitation Programs**

Governments, corporations, and NGOs should fund and implement comprehensive, trauma-informed rehabilitation programs that provide trafficking victims, especially women and children, with legal aid, healthcare, education, and vocational training. Survivor voices must be central to policy development and program design to ensure responsive and restorative outcomes.

3. **Global Collaboration and Policy Reform**

A unified global legal framework is essential to establish and enforce ethical standards for the biotech sector—particularly around organ transplants, genetic data use, and surrogacy. Cross-border cooperation among governments, international organizations, and law enforcement (e.g., the UN and INTERPOL) is critical to closing loopholes, prosecuting traffickers, and ensuring consistent regulation.

4. **AI-Powered Detection and Regulation Tools**

Governments and regulatory agencies should invest in AI systems capable of monitoring the biotech and organ trade industries. These tools can flag suspicious medical patterns, detect unregulated clinics, and track illicit online transactions in real time—enabling early intervention and improved enforcement.

5. **Blockchain and Global Registry for Ethical Practices in Biotech**

Blockchain offers a secure, transparent, and tamper-proof method to track and verify every stage of surrogacy, organ donation, and biotech research. A global registry of certified ethical biotech operations—linked to international licensing databases—would enhance transparency, restrict unlicensed actors, and help prevent exploitation and trafficking.

• **Conclusion:**

Trafficking in the biotech and technology sectors is a critical, multifaceted human rights violation. As technological innovation accelerates, ethical and legal protections must keep pace. Addressing this hidden crisis requires a unified global commitment to ethical innovation, survivor protection, and systemic reform. By integrating corporate accountability, survivor-centered programs, AI and blockchain tools, and strong international cooperation, we can safeguard trafficking victims—especially women and children—and uphold the ethical integrity of these rapidly evolving industries.

Issue 2:

AI Weaponized by Traffickers to Exploit Children and Vulnerable Populations

• **Issue:**

Artificial Intelligence (AI) is being weaponized by traffickers to exploit children and vulnerable populations in increasingly sophisticated ways. Three major areas of concern are:

1. The use of Natural Language Processing (NLP) to scan social media for signs of vulnerability such as financial stress, loneliness, or family issues. Platforms like Instagram, X (Twitter), and Facebook are commonly exploited in this manner (National Center for Missing & Exploited Children, 2022).
 2. The generation of Child Sexual Abuse Material (CSAM) using deepfakes for blackmail and sexual exploitation (Interpol, 2023).
 3. The use of the dark web for anonymous grooming, distribution of CSAM, and human trafficking transactions. In the U.S., a dark web administrator was sentenced to 30 years for CSAM-related crimes (US Department of Justice, 2024). Asia diaspora communities in the U.S., including Cambodian, Vietnamese, and Thai migrant populations, are particularly vulnerable due to economic disparities and limited digital literacy (UNODC, 2022).
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- **UDHR**

Article 3, Right to life states that everyone has the right to life and to live in freedom and safety, and everyone has the right to life, liberty and security of person.

Article 4, Freedom from slavery states that no one has the right to treat you as a slave nor should you enslave anyone, and no one shall be held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms.

- **Recommendations:**

1. **Ethical AI Regulation and Safeguards**

Implement robust global and national policies regulating the use of AI in content generation and data analysis. Enforce restrictions on open-source deepfake tools and introduce criminal penalties for the misuse of AI to create CSAM or engage in cyber-trafficking (Biometrica Systems, 2022).

2. **Survivor Protection from AI-Generated Abuse**

Recognize AI-generated CSAM as a prosecutable offense regardless of physical contact. Offer legal and psychological support to victims of image-based sexual abuse. Legislative frameworks must evolve to address the unique harms of fabricated yet damaging content (McMillan LLP, 2022).

3. **AI Detection Tools for Trafficking Prevention**

Invest in counter-AI tools to detect and flag predatory use of NLP and image synthesis technologies. Social media platforms must implement AI models that can identify suspicious behavior and content in real-time while safeguarding user

privacy and mental health (Love Justice International, n.d.).

4. **Restricting NLP Access and Social Media Vulnerability Scanning**
Social media companies must limit access to NLP tools that can scrape user data to identify vulnerability. Platforms should anonymize sensitive content and restrict model use to vetted entities only. AI prompts must be monitored to prevent scanning for distress cues (Love Justice International, n.d.).
5. **International Cooperation to Dismantle Dark Web Trafficking**
Strengthen cross-border law enforcement collaborations to monitor and dismantle dark web operations. Expand efforts like those by Europol, which successfully shut down major CSEM forums with millions of users (Europol, 2021).
6. **Public Awareness Campaigns**
Launch educational initiatives aimed at high-risk groups, especially in migrant, diaspora, and marginalized communities where digital literacy is low, and vulnerabilities are high.
7. **AI-Powered Forensics for Moderation and Prevention**
Social media and AI companies should introduce robust content moderation tools to detect and prevent child trafficking attempts. This includes the use of machine learning to identify patterns of grooming and synthetic content distribution.

- **Conclusion:**

The intersection of AI and child trafficking presents a rapidly evolving threat. From NLP-driven recruitment to deepfake-based blackmail and dark web transactions, traffickers are leveraging technology to expand their operations. Without swift international regulation, survivor-centered protections, and public-private cooperation, AI may become a key enabler of exploitation. Immediate action is required to reclaim technological advances for the safety and dignity of children everywhere.

Issue 3:**Enhancing Data and Regulatory Frameworks in Human Trafficking**

- **Issue**

There are well-defined legal definitions under CEDAW General Recommendation No. 38 that advance effective trafficking response. By incorporating human rights and gender-based practice into the language itself, the Committee establishes a guideline for States experts to build up customary law (CEDAW Guidelines for Gen. Rec. No. 38, pg. 22). However, there is a definition gap when it comes to standardizing data methodology. These gaps prevent robust policy-informative reporting assessment around implementing key provision strategies. Demand-driven frameworks can pool labor and supply-chain regulatory engagement into both human trafficking and anti-corruption response. In the 2020 edition of the Legislative Guide identified measures addressing the root causes of and factors contributing to trafficking, including poverty, lack of education, and social norms that enable exploitative practices, such as norms permitting discrimination against women and other traditionally disadvantaged groups, with a view to reducing vulnerability to trafficking (pg. 51).

- **Analysis**

Regulatory frameworks in human trafficking become more robust when data quantifies its outcomes. The U.S. Department of State's Office to Monitor and Combat Trafficking in Persons (JTIP) evaluates annual Trafficking in Persons (TIP) Reports by assessing countries' efforts to combat human trafficking based on criteria such as legal frameworks, victim protection measures, law enforcement efforts, and overall government commitment. The outcome of laws and their provisions can be qualified when they are tied to data collection transparency.

Where restitution is federally mandated in U.S. law under Ch. 77 statutes to help restore victims of trafficking, less than half of convicted criminal defendants were ordered to pay restitution in 2023. For cases charged outside of Ch. 77, which makes orders discretionary as opposed to mandatory, 18% of convicted traffickers were ordered to pay restitution (Human Trafficking Institute, 2024, pg. 133).

Where Recommendation 38 calls upon States to improve identification, access to services, and secure adequate financial remedies for victims, emphasis needs to be placed first on baselining data transparency mechanisms and their divides. Advancing anti-trafficking practice through a gender-based lens requires data transparency to understand why it is not being mainstreamed. These recommendations seek to empower

practitioners, and experts, to better coordinate. through a common medium.

In the context of the U.S., where they may be federal legal mechanisms to prosecute forced labor from supply chains through the Trafficking Victims Protection Act (TVPA), mandating identification procedures, such as through 1) Verification; 2) Audits; 3) Certification; 4) Internal Accountability 5) and Training, which are covered in their largest economy state of California's Supply Chain Transparency Act, covered retailers are not required to do any of the five. They must simply say on their websites whether or not they do them (WilmerHale, 2022, pg. 7).

- **CEDAW**

CEDAW General Recommendation No. 38, section D. Data Collection, legislative, policy and institutional framework requires that data are disaggregated on the basis of sex, age, disability, ethnicity, nationality, immigration status, location, socio-economic status and all forms of exploitation, and concern both the victims and the perpetrators.

- **Recommendation**

1. Focusing on performance across a continuum—from detection to judicial outcomes—allowing for an ongoing evaluation of how well countries are addressing trafficking and where tangible improvements are needed.
2. Pinpointing structural and procedural obstacles that hinder cross-border cooperation on trafficking issues.
3. Ensuring that anti-trafficking strategies evolve in response to emerging data trends and challenges.

- **Conclusion**

To effectively address human trafficking through the lens of CEDAW General Recommendation No. 38, a reinforced emphasis on standardized, disaggregated data collection is critical. Without consistent methodologies and regulatory clarity, the ability to evaluate the effectiveness of legal frameworks and victim-centered services remains limited. While current reporting mechanisms such as the U.S. Trafficking in Persons (TIP) Report highlight country-level efforts, disparities in restitution practices and limited corporate accountability under laws like California's Supply Chain Transparency Act underscore the urgent need for stronger, enforceable standards. CEDAW's emphasis on data disaggregation by factors including sex, age, immigration status, and forms of exploitation provides a crucial foundation to close these gaps. By focusing on case reporting, enforcement effectiveness, and judicial outcomes, the aim is to standardize a data collection process that not only identifies but qualifies policy impacts.

Issue 4:**Sex-Selective Abuse and Technology Facilitated GBV**

- **Issue:**

Feticides, infanticide and femicides are increasingly linked to the use of reproductive technologies such as ultrasound testing and induced abortion, which are employed for sex selection. These techniques, along with in vitro fertilization (IVF) procedures that allow for sex selection, have created a concerning trend where the right to life of female fetuses and infants is systematically undermined. In countries where cultural preferences favor male children, the availability of these reproductive technologies has led to widespread discrimination against female fetuses, resulting in selective abortion and infanticide.

Other forms of technology-facilitated sexual abuse and exploitation, including new and emerging forms:

1. Online grooming
2. Livestreaming of child sexual abuse (LSCSA)
3. Child sexual abuse material (CSAM) sharing and production, including using generative AI tools
4. Non-consensual pornography (revenge porn)
5. Image-based sexual abuse (IBSA)
6. Deepfake pornography and AI-generated CSAM
7. Cyber sex trafficking
8. Sextortion
9. Sale of abuse content on darkweb
10. Online trafficking and commercial sexual exploitation through classified ads/websites
11. Use of dating apps for exploitation and trafficking
12. Coercion through online gaming platforms

13. Sexual abuse livestreams requested via encrypted apps
 14. Cryptocurrency-facilitated exploitation payments
 15. VR and metaverse-enabled sexual abuse or grooming
 16. Geotagging and tracking for stalking or trafficking
 17. Social media-based grooming, targeting minors
 18. Hidden camera recordings in homes, hotels, rentals (IoT-enabled)
 19. Unsolicited sexual content (cyberflashing) via Bluetooth or Airdrop
 20. Online communities that normalize or promote abuse (e.g., pedophile forums)
 21. Remote-controlled sex toys used without consent (teledildonics abuse)
 22. Crowdsourced abuse or “pay-per-view” abuse livestreams
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- **UDHR & the Declaration on the Elimination of Violence against Women**

Article 3 states that everyone has the right to life and to live in freedom and safety, and everyone has the right to life, liberty and security of person.

The Declaration on the Elimination of Violence against Women, Article 3 states that women are entitled to the equal enjoyment and protection of all human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field. These rights include the right to life, the right to equality, the right to liberty and security of person, the right to equal protection under the law, and the right to be free from all forms of discrimination.

- **Recommendations:**
 - Combat Sex-selective Feticide, Infanticide, and Femicide Enabled by Sex-Selection Technologies**
 - 1. Enact and enforce comprehensive legislation prohibiting sex-selective abortions, IVF practices, and genetic testing that enable gender-based discrimination, ensuring full protection of the right to life for all fetuses regardless of sex.
 - 2. Launch sustained public awareness campaigns to challenge patriarchal norms and cultural biases that devalue girls and women, promoting gender equality from birth.

3. Train healthcare professionals to identify, prevent, and report sex-selective practices, aligning medical protocols with ethical standards of non-discrimination and international human rights instruments such as UDHR Article 3.

Strengthen International Legal and Policy Frameworks for all forms of TFGBV

4. Establish and enforce comprehensive, multidisciplinary international legislation criminalizing all forms of online sexual exploitation, including AI-generated CSAM, deepfakes, teledildonics abuse, and metaverse-enabled abuse.
5. Mandate age-appropriate design codes, digital safety-by-design standards, and accountability mechanisms for platforms, encrypted services, and dating/gaming apps.
6. Expand extraterritorial jurisdiction to prosecute offenders exploiting legal loopholes across borders or using cryptocurrency and the dark web.

• **Conclusion**

The rapid evolution of technology has enabled new and deeply harmful forms of gender-based violence, ranging from sex-selective reproductive practices to AI-facilitated sexual exploitation. These abuses not only undermine the dignity and rights of women and girls but also directly contravene international human rights instruments such as the Universal Declaration of Human Rights and the Declaration on the Elimination of Violence against Women, which affirm the rights to life, liberty, equality, and freedom from discrimination and violence.

Sex-selective feticide, infanticide, and femicide represent one of the most egregious violations of the right to life, fueled by reproductive technologies. Simultaneously, the digital realm has become a dangerous frontier for all forms of technology-facilitated gender-based violence (TFGBV) — from online grooming and AI-generated child sexual abuse material, to cyber sex trafficking and virtual reality-enabled sexual abuse.

A global, intersectional, and survivor-centered response is urgently needed. This includes legislative reform, tech accountability, healthcare and education sector training, and cross-border cooperation. Without coordinated international action, these harms will continue to escalate, violating the most basic human rights and perpetuating a digital culture of impunity and inequality. It is imperative that we adopt bold, rights-based, and forward-looking strategies to protect the safety, dignity, and future of all individuals — especially women and children — in both the physical and digital worlds.

References

- AI Incident Database. (2024, January 25). *Deepfakes and child safety: A survey and analysis of 2023 incidents and responses*. <https://incidentdatabase.ai/blog/deepfakes-and-child-safety/>
- Biometrica Systems. (2022, December 13). *The impact of 'deepfake' on child safety*. <https://www.biometrica.com/the-impact-of-deepfake-on-child-safety/>
- Europol. (2021, October 27). *4 arrested in takedown of dark web child abuse platform with some half a million users*. <https://www.europol.europa.eu/media-press/newsroom/news/4-arrested-in-takedown-of-dark-web-child-abuse-platform-some-half-million-users>
- Kloess, J. A., Woodhams, J., Whittle, H., & Grant, T. (2023). Trust and relationship development among users in dark web child sexual exploitation and abuse networks: A literature review from a psychological and criminological perspective. *Trauma, Violence, & Abuse*, 25(1), 683–698. <https://doi.org/10.1177/15248380231172769>
- Love Justice International. (n.d.). *The people targeted by human traffickers: Learn who they are*. <https://www.lovejustice.ngo/blog/the-people-targeted-by-human-traffickers-learn-who-they-are>
- McMillan LLP. (2022, November 30). *What can the law do about 'deepfake'?*. <https://mcmillan.ca/insights/what-can-the-law-do-about-deepfake/>
- National Crime Agency. (2019). *National strategic assessment of serious and organised crime 2019*. <https://nationalcrimeagency.gov.uk/who-we-are/publications/296-national-strategic-assessment-of-serious-organised-crime-2019/file>
- Olson, E. (2022). The double-side of deepfakes: Obstacles and assets in the fight against child pornography. *Georgia Law Review*, 56(2), 851–876. <https://digitalcommons.law.uga.edu/glr/vol56/iss2/8/>
- The Guardian. (2017, October 7). *Australian police sting brings down paedophile forum on dark web*. <https://www.theguardian.com/society/2017/oct/07/australian-police-sting-brings-down-paedophile-forum-on-dark-web>
- Business Insider. (2024). <https://www.businessinsider.com/south-korea-threatens-deepfake-porn-viewers-three-years-prison-fine-2024-9>
- International Justice Mission. (2021). <https://www.ijm.org/studies/online-sexual-exploitation-of-children>
- Interpol. (2023). <https://www.interpol.int/en/Crimes/Crimes-against-children>
- National Center for Missing & Exploited Children (NCMEC). (2022). <https://www.missingkids.org/theissues/csam>
- CBS News. (2022). <https://www.cbsnews.com/news/suspected-child-sexual-exploitation-report>
- United Nations Office on Drugs and Crime (UNODC). (2022). https://www.unodc.org/documents/data-and-analysis/glotip/2022/GLOTiP_2022_web.pdf
- UNICEF. (2023). <https://www.unicef.org/reports/child-exploitation-online-2023>
- US Department of Justice (DOJ). (2024). <https://www.justice.gov/archives/opa/pr/dark-web-administrator-sentenced-sexually-abusing-minors-and-possessing-thousands-child>
- Australian Centre to Counter Child Exploitation (ACCCE). (2024). <https://www.accce.gov.au/resources/research-and-statistics/statistics>
- The Diplomat, (2019). <https://thediplomat.com/2019/12/south-korea-attempts-to-deal-with-the-dark-web/>
- Office of the United Nations High Commissioner for Human Rights. (2022). *Guidelines for states on the effective implementation of the Committee on the Elimination of Discrimination against Women's General Recommendation No. 38 on trafficking in women and girls in the context of global migration*. <https://www.ohchr.org/sites/default/files/documents/hrbodies/cedaw/guidelines-cedaw-gr38.pdf>
- Human Trafficking Institute. (2024). *2023 Federal Human Trafficking Report*. <https://data.traffickinginstitute.org/wp-content/uploads/2024/06/2023-Federal-Human-Trafficking-Report-WEB-Spreads-LR.pdf>
- Holtmeier, J., Wendler, J.-S., Nana, C. K., McGregor, K., Foley, T. A., Lepeuple, A., & Rundle, D. (2022). *Regulation of forced labor in supply chains: Why it matters and how companies can comply*. WilmerHale.