The Role of Data *in* Strengthening *the* Response *to* Trafficking *in* Persons

Opportunities for Replicating and Scaling in West Africa

Center on Human Trafficking Research & Outreach

APRIES African Programming & Research Initiative to End Slavery

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SUMMARY

This policy brief identifies opportunities and challenges surrounding use of data to strengthen responses to human trafficking with particular attention to the situation in West Africa. It assesses how useful different kinds of data-driven methods and initiatives are, providing recommendations for policy makers to more effectively use data in the formulation of anti-trafficking policy and programming. It has been prepared by the African Programming and Research Initiative to End Slavery (APRIES) at the University of Georgia's Center on Human Trafficking Research & Outreach (CenHTRO). The content draws from an expert panel of the same title which took place April 2023 in Freetown, Sierra Leone, as part of the Regional Conference of Economic Community of West African States (ECOWAS) on Ending Human Trafficking. The content was prepared by APRIES Policy Officer Adam Burns; APRIES Associate Director and Director of Research at Modern Slavery Policy and Evidence Centre Alex Balch; and former APRIES Sierra Leone Think Tank Consultant Haja Ramatulai Wurie.

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POLICY RECOMMENDATION RATING SYSTEM

1 2 3 4 5 6 7 8 9 10

This document employs a policy recommendation rating system, a structured framework designed to assess and evaluate the effectiveness and feasibility of the outlined policy proposals.

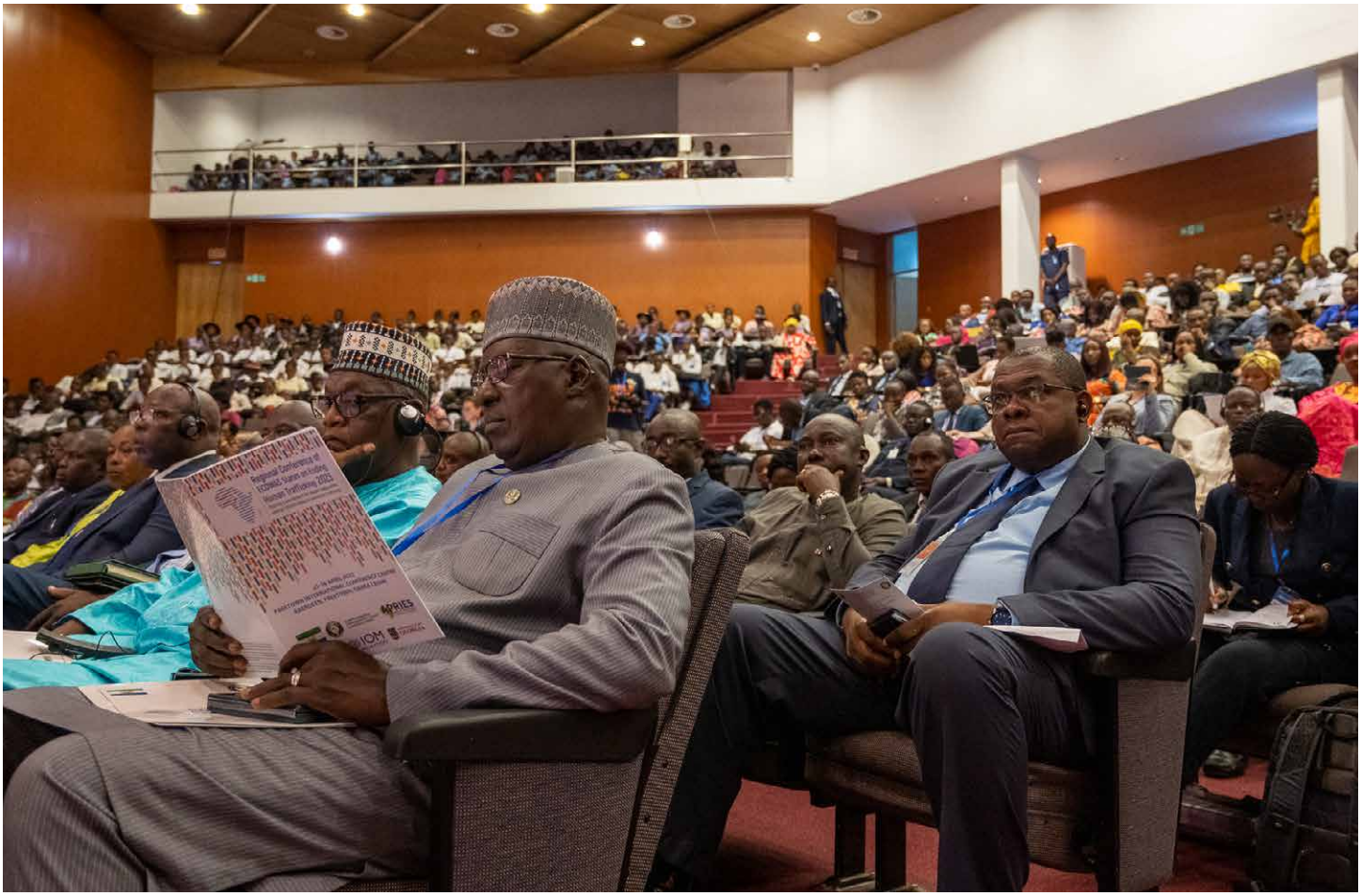
This system serves as a tool for policymakers and researchers to gauge the potential impact of various policy initiatives. The rating system consists of a numerical range, from 1 to 10, where lower rankings indicate policies that are less likely to yield desired outcomes for policymakers, might be impractical, or could have unintended negative consequences.

On the other hand, higher rankings signify policies that are more likely to achieve intended goals, are well-grounded in research and data, and are feasible within the existing societal, economic, and political constraints within the West African region. This framework has been designed in consultation with panellists from the 2023 data panel at the Regional Conference of ECOWAS States on Ending Human Trafficking in Freetown, Sierra Leone.

Overall, this rating system aids in prioritising and refining policy recommendations, allowing decision-makers to make informed choices that align with the broader objective of addressing data prevalence.

Opposite page: Photographs from the Regional Conference of ECOWAS States on Ending Human Trafficking in April 2023, including a meetings of ECOWAS ministers (top).


THERE IS HOPE



INTRODUCTION

With both the emergence of globalization and advances in information technology in the 21st century, there are new tools for responding to the global challenge of human trafficking. However, there are a range of challenges facing policymakers when seeking to collect and make better use of data, and these are often specific to different countries and regions. To overcome these obstacles and harness the potential of data in combating human trafficking, effective data sharing practices and mechanisms need to be established.

Data is normally associated with establishing the scale and nature of human trafficking, but local, national, and global prevalence estimates are affected by incomplete and non-systematic data and therefore suffer from numerous operational, definitional, and methodological limitations (Clawson et al., 2006; Goodey, 2008; Weitzer, 2011). There is a lack of consensus over prevalence methods, and inconsistencies over definitions further complicate the matter. The lack of a standardized approach to the collection of international data makes determining the scale and scope of human trafficking extremely difficult (Organization for Migration, 2001; Joint Committee on Human Rights, 2007). CenHTRO's Prevalence Reduction Innovation Forum (PRIF) initiative is also addressing this issue by building a global community of researcher-learners in the science of human trafficking prevalence estimation. PRIF focuses on documenting the robustness of various methodological approaches in human trafficking prevalence research.

Statistical approaches can use data to explore the effectiveness, or otherwise, of policy responses to trafficking in persons (TIP). For instance, we might expect to see a direct correlation between the number of successful prosecutions and a clear reduction in cases of TIP. However, the data does not consistently support this expectation. In an analysis drawing on the annual TIP Report produced by the U.S. Department of State, G. E. Van Der Vink et al., states, "We would expect to see TIP decrease as prosecution rates increase." As presented in the analytical conclusion section of this paper, the statistical analysis reveals that nation-by-nation variations in 2015–2017 prosecutions explain 0.3% of the variance in the change in TIP (G. E. Van Der Vink, et al., 2023).

In the West African context, researchers have identified issues with the porous nature of borders in the region, making accurate data collection challenging for law enforcement. Omolara Akinyemi notes that "lapses in border security and ineffective identification systems in Ghana and Nigeria have availed to traffickers, many hidden recruitment points for trafficking activities" (Akinyemi, 2019). While ECOWAS represents a significant pivot towards a pan-African economic framework, this can be challenged based on poor or lacking state security infrastructure between participating states. This issue is further compounded by a general hesitancy among West African states to provide annual reports to key stakeholders at the global level. At the 2023 panel on data in responding to human trafficking, panelists indicated that countries in West Africa are regularly failing to submit annual reports to the UNODC, further indicating it is the "region we have most trouble with."

The 2023 data panel outlines three main challenges facing accurate data collection in this region:

- **Data standardization/harmonization**
- **Multi-sectoral collaboration**
- **Data collection methodologies**

These challenges pose significant obstacles to obtaining reliable and comprehensive data on human trafficking in West Africa. They underscore the importance of addressing data sharing and collaboration to overcome the complexities of human trafficking. Effective data sharing practices among countries, regions, and international organizations are vital for developing a comprehensive understanding of the issue and formulating evidence-based policies and interventions. By fostering a culture of transparency, cooperation, and information exchange, stakeholders can work together to combat human trafficking more effectively and protect the rights and well-being of vulnerable individuals.

The Global Estimates on Modern Slavery, published in May 2023 by the International Organization for Migration (IOM), provides the most comprehensive survey of modern slavery and human trafficking globally. The annual TIP Report, published by the U.S. Department of State, also provides policymakers with a useful view of the effectiveness of state actors in combating human trafficking at a nation-state level. The TIP Report presents West African states within its Tier 2, Tier 2 Watch List, or Tier 3 assessment. While the report does outline recommendations for each country, including details on methodology, arguments have been set out in criticism of the TIP Report and its often-subjective analysis: "Since the first report was published in 2001, several country placements have been called into question" (Roster, 2016).

While direct references to examples in West Africa are lacking, Rosters quantitative analysis found "significant evidence for political influence of the rankings" (Roster, 2016), ultimately placing skepticism over the TIP Report's efficacy as an authoritative data source. However, despite these findings, the TIP Report remains one of the most comprehensive efforts to collect and present data on human trafficking globally and one of the most valuable tools for understanding the estimated extent of TIP.

Empirical analysis by Roster (2016) highlights a direct correlation between a nation's political proximity to the United States, as evidenced by their voting patterns in the United Nations General Assembly (UNGA), and their scores on the TIP scale. Countries with greater agreement in UNGA votes tend to receive better rankings in the TIP report. This finding raises questions about the objectivity and potential biases within the report's assessments.

In conclusion, both the Global Estimates on Modern Slavery and TIP Reports are influential in guiding policymakers and law enforcement in understanding the holistic realities of human trafficking. However, these sources are limited in scope and provide merely a starting point for those seeking to take determined, meaningful action in the fight against trafficking and modern slavery.

Further sections in this policy brief will explore the benefits of leveraging human trafficking data as a means for combating the epidemic of human trafficking in West Africa. The authors analyze three opportunities—enhanced standardization methods, more innovative methodological extensions, and cutting-edge artificial intelligence (AI) and machine learning (ML) technologies—by assessing the usefulness of each and offering recommendations to policymakers.

"Human trafficking still remains under-developed in the field of data science, when analytics could contribute significantly."

(Xian & Logeswaran, 2021)

AI as a technological solution to data prevalence in human trafficking

OUR RATING 4

THE CLAIM

Significant progress has been achieved in the advancement of AI and ML recently. Montasari et al. (2021) argue that AI will bring substantial benefits in enhancing responses to a broad range of human trafficking sub-fields. For example, AI could be useful in the promotion of more accurate prevalence measures and case identification. The Data for Investor Action on Modern Slavery report (2021) from the Modern Slavery Policy & Evidence Centre (PEC) also emphasizes the potential of Natural Language Processing (NLP) as a solution to address challenges related to the inaccuracies of current prevalence measures. NLP possesses remarkable analytical capabilities to examine unstructured text from various sources, such as company disclosures or news reports, on a large scale and with minimal human involvement (Ostmann et al., 2021). This ability becomes particularly noteworthy when addressing the issue of data bias, as highlighted in our previous argument against the analysis presented in the US State Department's TIP Report. As for case identification and prosecution of traffickers, AI could be leveraged to enhance efficiencies. "AI technologies are capable of making predictions, recommendations, or decisions independently and without human intervention. In the case of human trafficking, an AI-powered automated age-progression software could be deployed to determine the appearance of a child victim of sex trafficking as an adult" (Montasari et al., 2021).

HOW WILL IT MAKE A DIFFERENCE?

The ability of AI to act independently of human involvement would significantly enhance law enforcement's ability to respond to cases of human trafficking. The freeing up of law enforcement resources also allows for greater reductions in cost at the regional and national level, as well as greatly increasing outputs from quicker, more efficient analysis. "Law enforcement's reaction time, a key factor to assist an exploited child, could potentially be reduced from days to seconds" (Montasari et al., 2021).

There have been recent examples of AI, particularly facial recognition and identification software, already being deployed as an effective tool in the fight against human trafficking: Amazon Rekognition, one of the most popular computer vision services, has been used by law enforcement since 2017 for cases relating to human trafficking. This software was credited as being specifically instrumental in the 2019 arrest and prosecution of a trafficker (Deeb-Swihart et al., 2022).

OUR ASSESSMENT

The highlighted examples demonstrate both the potential of AI as a highly attuned and efficient tool in strengthening responses to TIP and how it is being used in current law enforcement practices. However, a more widespread approach to these methods and tool sets will provide more tangible results and more accurate datasets on the success of technological data in combating TIP. Policymakers should seriously consider the benefits provided by AI in terms of efficiency and effectiveness in both domestic and global settings. But the full realization of AI is limited by resource capabilities at the nation-state level. International cooperation and multilateral funding mechanisms should be deployed to overcome the barriers imposed by a lack of resources in the region.

However, the utilization of AI poses certain ethical concerns regarding the confidentiality of data. This is of note when considering the sensitive nature of human trafficking victims and their personal information. Policymakers should consider how such data is collected, stored, and used, especially when large multinational conglomerates often host such technology. Consideration of utilizing AI in the fight against TIP should pair with strict regulations at the state level governing how data is used, stored, and shared.

Moreover, researchers have also noted inherent biases within the available software: "many of the datasets that underlie commercially available computer vision software are unbalanced with respect to race, gender, and age; The result is that many of these tools have lower accuracy on faces that are young, feminine, and/or have darker skin" (Deeb-Swihart et al., 2022). It can therefore be implied that the makeup of software development and affiliated technology-related industries largely reflects a broadly white, male demographic. This demographic is generating potentially unintended biases in the development of AI, creating software that is fundamentally reflective of the ethnic and socio-economic background of its creators. Secondly, researchers have noted that algorithmic models learn and adapt based on inherent biases that exist within society and, by association, the internet in which they permeate. "They find patterns within datasets that reflect implicit biases and, in so doing, emphasize and reinforce these biases as global truth" (Howard & Borenstein, 2018). Within the West African context, this could pose significant issues for law enforcement and policymakers.

Deployment of statistical analysis models in combating human trafficking in West Africa

OUR RATING 6

THE CLAIM

Statistical analysis is a key method of collection and analysis of large datasets, utilizing probability, sampling, and assumptions to create inferences from the data (Xian & Logeswaran, 2021). Statistical analysis presents unique opportunities for efficient decision-making in the face of current, potentially inaccurate prevalence measures. Another area in which data collection via statistical analysis may prove invaluable is through the analysis of illegal online activity. There are numerous sites advertising sexual services, creating an immense amount of data and activity to track (Keskin et al., 2021). Applying statistical analysis methodologies and AI will allow law enforcement and associated bodies the ability to better track and analyze the data being generated by those seeking to recruit and groom potential victims. In line with the rise and prevalence of social media platforms, there is a correlated increase in channels for criminal activity, such as human trafficking. Law enforcement agencies struggle to process online sexual service ads due to ad volume, geographic dispersion, and the use of obfuscation tactics (Ibanez & Gazan 2016; Latonero, 2011).

HOW WILL IT MAKE A DIFFERENCE?

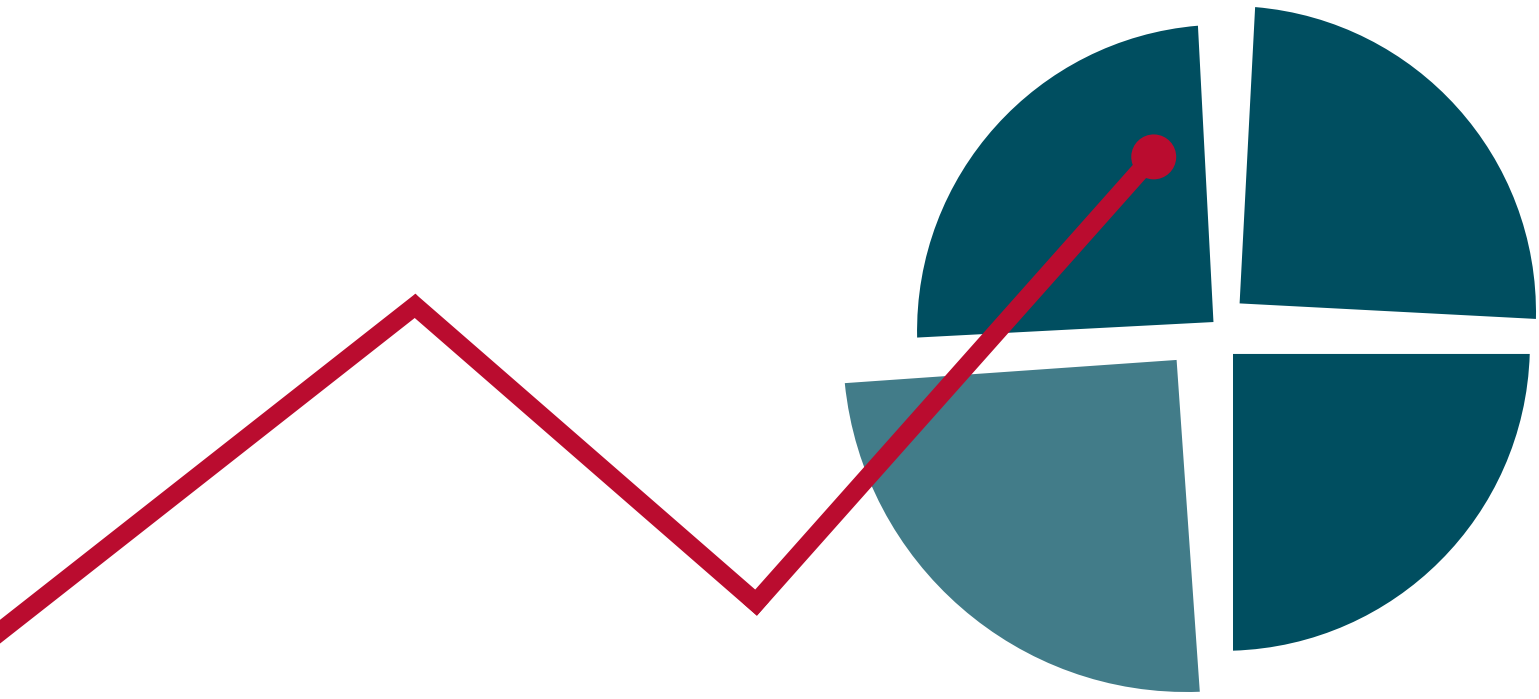
Statistical analysis' predictive modeling will present opportunities for law enforcement to better identify potential channels that human traffickers use to groom and recruit, by "grouping sexual advertisements, detecting existing patterns in post groups, and predicting the future posting behaviour, that is, target locations of post groups in a systematic way" (Keskin et al., 2021). This systematic approach allows law enforcement a more robust, proactive instead of reactive, and reliable method of data collection, with the added benefit of analysis, allowing bodies to make more effective decisions about resource allocation and expenditure. Statistical analysis will overcome

the significant issue posed by a lack of any systematic approach to data collection, highlighted by the Joint Committee on Human Rights 2007 report.

OUR ASSESSMENT

The evidence presented suggests that statistical analysis can improve estimation of prevalence and support prioritization for policymakers. Appropriate utilization of statistical analysis would not only allow robust collection of data but would also assist law enforcement, government agencies, and NGOs to include known factors that drive human trafficking to identify potential human trafficking hotspots.

Within the West African context, the power of statistical analysis would enable law enforcement, NGOs, and stakeholder organizations to better allocate resources by using probability measures to predict hotspots and address challenges raised by prevalence measures in the region. In one example scenario, statistical analysis could be deployed to assess internet activity in regions where human traffickers are active. However, once again, it should be noted that there are significant economic barriers to overcome within the West African context, and policymakers should consider a multilateral approach when seeking to secure funding for such advanced technological solutions.



Data Standardization

OUR RATING 7

THE CLAIM

The collection of data is imperative to standardization efforts in the fight against human trafficking. The successful collection and analysis of data is hampered by several factors. Poor understanding of definitions, varying international classifications, and inconsistent collection methodologies have frustrated efforts to conduct meaningful comparative analysis. The UNODC defines trafficking as: "Human trafficking is the recruitment, transportation, transfer, harboring, or receipt of people through force, fraud, or deception, with the aim of exploiting them for profit." While this formulation is now the internationally recognized definition of human trafficking, researchers often still face challenges with prevalence estimates stemming from the above issues.

Data collection also affects prevalence estimates. For example, some methodologies have looked to map in-country crime statistics to understand the extent of TIP. However, this methodology is limited in scope and does not account for the hidden aspects of this crime and its international reach.

In response, Kristiina Kangaspunta proposes an alternative methodology: "a focused victimization study on trafficking experiences could be carried out among, for example, young women from developing countries returning from abroad" (Kangaspunta, 2010), and there have been instances in the past where similar standardization practices have proven effective. In discussing standardization, Frank Laczko and Marco A. Gramegna praised the IOM's Counter Trafficking Module (CTM) for exemplifying what can be achieved through standardization and technology, supporting claims by Kangaspunta: "CTM collects first-hand information from IOM field missions working on counter-trafficking. The mission staff carries out in-depth interviews based on a standardized questionnaire" (Laczko & Gramegna, 2003).

As the introductory paragraphs of this policy brief set out, efforts to utilize data to strengthen responses to human trafficking have long been hindered by a lack of standardization across definition, classification, and collection

methodologies. Researchers also point to a general lack of willingness to share data by both state actors and anti-trafficking agencies. Despite claims of greater collaboration via international agencies, "The birth of the liberalism paradigm led to the direction of peace and changed the order of the previously anarchist international system toward world peace by promoting inter-actor cooperation" (Nugrahaningsih et al., 2020).

A lack of any standardized approach in the collection of data, definitions and classifications presents significant challenges when attempts are made to share reliable data on human trafficking. Numerous sources, utilizing varying collection methodologies paired with varying levels of willingness to share data, present roadblocks to the understanding of human trafficking in West Africa. Research has pointed to increased collaborative efforts between state and non-state actors as a remedy to this issue: "The role of NGOs is often viewed as being highly relevant for learning about trafficking" (Kangaspunta, 2007).

Ultimately, the proposals made by Kangaspunta, Laczko, and Gramegna in the introduction of victimization studies, leveraging existing technological frameworks such as the CTM present the best means by which the outstanding issues with prevalence measures can be addressed.

HOW WILL IT MAKE A DIFFERENCE?

Within the context of ECOWAS and globalization, it is important to emphasize standardized methods of data collection and collaboration. Leveraging technology, governments within the ECOWAS framework can improve cross-governmental collaboration alongside NGOs and on-the-ground organizations. "External support, recommendations, and material support by governments for NGOs to secure valuable data would perhaps be called for" (Kangaspunta, 2007). Implementing a database comparable to the one implemented as a result of the IOM's efforts in the Eastern European context would greatly provide key stakeholders with better opportunities to share data at various levels.

"'The most detailed information on characteristics of trafficked persons are to be found in the IOM" (Kangaspunta, 2007). NGOs, which often possess the most accurate data on trafficking victims, could collaborate with governments and international entities to consolidate this data for real-time analysis, yielding greater outcomes.

OUR ASSESSMENT

This paper recommends a stronger emphasis on international cooperation by states, NGOs and other non-state actors. While the success of the IOM database proves what can be achieved at a regional level, we recommend that such technological methods be implemented at a broader, international level, facilitating increased levels of participation from NGOs and other non-state actors.

It is our opinion that by using an IOM-modeled database, West African states can better standardize data collected and generated by both ECOWAS governments, NGOs, and other on-the-ground organizations. This has the potential to provide a clearer picture of human trafficking in the region. Furthermore, improved standardization will greatly assist law enforcement in collaboration and data sharing efforts.

This solution also poses a more practical approach for West African states, where access to advanced technological solutions can be limited. Emphasizing greater international collaboration would greatly assist in overcoming such barriers and would enable the use of the same tools and processes for collecting data without necessarily having to rely on access to costly technological solutions.

Ministers from ECOWAS states announce the signing of the Freetown Roadmap during the Regional Conference of ECOWAS States on Ending Human Trafficking in April 2023.

CONCLUSION

In conclusion, by addressing issues with data prevalence and bias, the combination of AI and ML technologies can greatly improve responses to human trafficking. Automated age-progression software and facial recognition/identification software are two examples of AI technologies that can independently generate predictions and conclusions, minimizing biases in data collection techniques. Law enforcement's response time can be sped up by AI's ability to function independently of humans, freeing up resources for more effective study. The use of AI technology in law enforcement for cases involving human trafficking, as demonstrated by Amazon Rekognition, demonstrates their usefulness in preventing trafficking.

Another useful approach for gathering and analyzing massive datasets is statistical analysis when combined with AI, particularly when investigating nefarious internet activity connected to human trafficking. Law enforcement can more accurately pinpoint potential pathways used by traffickers to attract victims by employing statistical analysis approaches and predictive modeling. The difficulties caused by the absence of a systematic data gathering methodology are reduced by this methodical technique, which enables proactive data collection and more informed resource allocation decisions.

In the battle against human trafficking, data consistency is essential, and previous initiatives have demonstrated its efficacy. An effective example of standardization and data collecting is the Counter Trafficking Module (CTM) from the IOM. However, standardization efforts are hampered by governmental actors' and anti-trafficking organizations' unwillingness to share information or collaborate. This problem can be solved by fostering greater cooperation among governments, non-governmental organizations, and charitable groups. Establishing databases and obtaining government backing for NGOs to gather valuable data would enable real-time analysis and improve outcomes at the international level.

Responses to human trafficking can be strengthened by using AI and ML technology, utilizing statistical analysis, and encouraging data uniformity. These methods have the potential to improve stakeholder collaboration, address data issues, lessen biases, and boost law enforcement capabilities. Policymakers may make more informed decisions and take significant action to combat human trafficking by leveraging technology and supporting data-driven approaches.

To further advance efforts in combating human trafficking and leveraging data-driven approaches, the following next steps are recommended:

1

Foster Collaboration
Encourage greater collaboration and information sharing among governments, international organizations, NGOs, law enforcement agencies, communities and other stakeholders involved in anti-trafficking efforts. Establish platforms or initiatives that facilitate the exchange of data, best practices, capacity building and expertise.

2

Enhance Data Standardization
Promote the adoption of standardized methodologies for data collection, including common definitions and indicators, across jurisdictions and organizations. Encourage the development of data-sharing protocols and frameworks to ensure consistent and reliable data exchange.

3

Strengthen Statistical Analysis
Invest in building statistical analysis capacity within law enforcement agencies and anti-trafficking organizations. Provide training and resources to enable professionals to effectively analyse large datasets, identify trends, and derive actionable insights for more targeted interventions in real time, promoting proactive versus reactive responses. The utility of statistical analysis would greatly enhance the speed by which law enforcement resources are able to act. For example, the time taken to identify and locate a victim could be reduced from days to minutes.

4

Support Research and Evaluation
Promote research initiatives that focus on evaluating the effectiveness of data-driven approaches in combating human trafficking. Encourage the publication of findings and facilitate knowledge sharing among researchers, practitioners, and policymakers to inform evidence-based strategies.

5

Strengthen Legislative and Policy Frameworks
Advocate for the development and implementation of comprehensive legislation and policies that address human trafficking and facilitate the collection, sharing, and analysis of data. Collaborate with international partners to harmonize legal frameworks and enhance cross-border cooperation.

6

Raise Awareness and Capacity Building
Conduct awareness campaigns to educate the public, law enforcement personnel, and relevant professionals about the importance of data in combating human trafficking. Offer capacity-building programs and training opportunities to enhance data literacy, analytical skills, and technological expertise among those involved in anti-trafficking efforts.

7 **Invest in Technology and Innovation**
Allocate resources to research and development in AI, ML, and other emerging technologies to enhance data collection, analysis, and prediction capabilities. Support initiatives that explore the application of innovative technologies, such as advanced facial recognition, natural language processing, and network analysis, to identify trafficking patterns and improve intervention strategies.

8 **Ensure Ethical and Responsible AI Use**
Establish guidelines and ethical frameworks for the responsible deployment of AI technologies in anti-trafficking efforts. Address concerns related to privacy, bias, and algorithmic transparency to ensure that AI tools are used ethically and do not inadvertently perpetuate harm or discrimination.

By taking these next steps, policymakers can facilitate the effective use of data, AI, and statistical analysis to combat human trafficking, improve victim identification and protection, dismantle criminal networks, and ultimately contribute to the eradication of this heinous crime.

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