Technology and Contemporary Forms of Slavery: input to the United Nations Special Rapporteur on Contemporary Forms of Slavery regarding Brazil

Contact Details

Type of Stakeholder: Academic institutions.
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Can we attribute responses to this questionnaire publicly? Yes.

Introduction

The *United Nations Special Rapporteur on contemporary forms of slavery, including its causes and consequences*, is formulating his next thematic report to the General Assembly on the use of technology in facilitating and preventing contemporary forms of slavery.
In preparation for such report, the UN Special Rapporteur launched a process of gathering inputs from stakeholders, according to a predefined Questionnaire. The following is the relevant information about Brazil hereby presented by Facts and Norms Institute, in collaboration with the UFMG Slave Labor and Human Trafficking Clinic.

The Institute and the Clinic's work

The Facts and Norms Institute is an independent academic institution based in the Global South, with members present in all continents. The Institute's mission is straightforward: to promote a rational, human rights-based approach to social issues.
Since its establishment, the Institute conducted research about varied human rights topics, including human rights and infectious diseases; torture and torture prevention; religious intolerance, violence, and racism; social participation; transitional justice and sustainable development; the role of non-state actors (particularly businesses) in transitional justice; the human rights of persons with

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[⊥] Disclaimer: researchers' views are exclusively on behalf of Facts and Norms Institute and the UFMG Slave Labor and Human Trafficking Clinic. [Research responsibilities] Research design and supervision: HNA, LMMM; interviewers: JOMP, GCM, JFR, RPA; first draft: HNA; review: LMMM, JOMP, GCM, JFR, RPA; final text: HNA, LMMM.

albinism; criminalization of persons living in the street and in extreme poverty; the protection of lawyers; the human rights of indigenous and rural communities to water and sanitation; militarization of indigenous and quilombola land; human rights and internet shutdowns; mercury, artisanal and small-scale gold-mining and human rights; adequate housing and climate change; contemporary forms of slavery and the informal economy; and the present submission concerning technology and contemporary forms of slavery.

The UFMG Slave Labor and Human Trafficking Clinic is a project from the Federal University of Minas Gerais's School of Law. The Clinic is part of Clinnect HTS, an international network of clinics which are dedicated to the study of, and the struggle against, human trafficking and slave labor.

The Clinic's activities encompass, among others: i) the training students in both the theory and practice of slavery and human trafficking, with the development of interview techniques, the draft of legal petitions, the study and discussion of concrete cases, among others; ii) a permanent work of legal aid and assistance to persons affected by human trafficking and contemporary forms of slavery; iii) the promotion of classes, courses, conferences and seminars; iv) the communication of results through technical and academic publications, social media and other means.

Methodology

In order to answer the UN Special Rapporteur's Questionnaire on technology and contemporary forms of slavery, Facts and Norms Institute and the UFMG Slave Labor and Human Trafficking Clinic conducted an empirical, qualitative research based on interviewing public servants with relevant knowledge and experience with the topic.[2]

All interviews were conducted using the Questionnaire of the UN Special Rapporteur as the basic framework for the conversation, with the possibility of additional comments and questions from both interviewers and interviewees.

The following table describes the name and occupation of the interviewees, as well as the mode and date of the interviews:

Name	Occupation	Mode of interview	Date of interview
Andrea da Rocha Carvalho Gondim	Public Prosecutor, Labor Prosecution Service	Written answers	13 Mar. 2023
Eduardo Adolfo do Carmo Assis	Federal Police Commissioner	Written answers	22 Mar. 2023
Gustavo Nogami	Chief Public Prosecutor, Federal Prosecution Service	Videoconference via Zoom	16 Mar. 2023
Humberto Monteiro Camasmie	Labor Inspector	WhatsApp voice messages	20 Mar. 2023

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[2] One self-acknowledged limitation of this approach is the fact that the investigation was not able to interview other important stakeholders, particularly the victims and their families, within the boundaries of time that the Institute and the Clinic had in order to answer the UN's Questionnaire in due time. This limitation should not be read as dismissive of the quality and depth of the work that has been done, but rather as an invitation for future studies to add up to the present submission.

João Luiz Moraes Rosa	Federal Police Commissioner	Videoconference via Zoom	10 Mar. 2023
Lutiana Valadares Fernandes Barbosa	Public Defender, Federal Public Defender's Service	Written answers	17 Mar. 2023
Maurício Krepsky Fagundes	Labor Inspector and Head of the Inspection Division for the Eradication of Slave Labor	Written answers and WhatsApp voice messages	13 Mar. 2023

With the objective of enlightening the readers who are not familiar with the national institutions that the interviewed persons are part of, the following table summarizes basic information regarding the main roles and characteristics of said institutions:

Institution	Brief description
Labor Inspection (Auditoria Fiscal do Trabalho)	The Brazilian Constitution, in its art. 21, XXIV, attributed to the Union the responsibility of organizing, maintaining, and executing labor inspection. This responsibility is fulfilled by the work of the Labor Inspectors, public servants with career stability which are part of the federal bureaucracy. The Labor Inspection Office is a body linked to the Executive Branch, with the responsibility of inspecting employers to check whether they are complying with the law. According to art. 1 of Decree no. 4552/2002, "the Federal System of Labor Inspection, under the responsibility of the Ministry of Labor and Employment, aims to ensure, throughout the national territory, the application of legal provisions, including the ratified international conventions, the acts and decisions of the competent authorities and the conventions, agreements and collective labor contracts, with regard to the protection of workers in the exercise of labor activity".
Labor Prosecution Service (Ministério Público do Trabalho)	A branch of the Public Prosecution of the Union which acts in the defense of workers' rights. It receives complaints made by unions or employees and promotes civil inquiries and lawsuits for the protection and defense of workers' interests. It acts as a lawyer of the whole society in cases related to diffuse, collective, and homogeneous individual rights, including the file of actions before the Labor Courts (Labor Justice) for the protection of workers' rights. Its members are also public servants with career stability.
Defensoria Pública da União (Federal Public Defender's Service)	The institution responsible for promoting human rights and providing legal guidance and representing those in need before federal courts, vis-à-vis both their individual and collective rights. Its members are also public servants with career stability.
Federal Police (Polícia Federal)	Federal law enforcement agency responsible for combating crimes against federal institutions, international drug trafficking, terrorism, cyber-crime, organized crime, public corruption, white-collar crime, money laundering, immigration, border control, airport security and maritime policing. Its members are also public servants with career stability.

The Questionnaire below contains the systematization of the information collected during the interviews in order to answer to the questions posed by the UN Special Rapporteur. In some cases, the information provided by the interviewees was supplemented by additional desk research, so that the UN Special Rapporteur and his team have additional sources and references. Finally, concluding recommendations on the use of modern technology to tackle slave labor encompassed both the data from the interviews and the analysis and insight of the research team.

Acknowledgments

The Facts and Norms Institute and the UFMG Slave Labor and Human Trafficking Clinic are thankful to Andrea da Rocha Carvalho Gondim, Eduardo Adolfo do Carmo Assis, Gustavo Nogami, Humberto Monteiro Camasmie, João Luiz Moraes Rosa, Lutiana Valadares Fernandes Barbosa, and Maurício Krepsky Fagundes for sharing their valuable time with the research team. Their inputs are much appreciated.

QUESTIONNAIRE

1. Is there evidence of modern technology (e.g., platforms including social media such as Facebook, Instagram and Twitter, websites, applications, artificial intelligence, the dark web) being used to recruit and subject people to contemporary forms of slavery in your country?
If so, please provide details in relation to:
a. Specific technology being used
b. Profiles of victims (age, sex, gender identity/sexual orientation, ethnicity, nationality, migration status, socio-economic status, race, and any other status)
c. Profiles of exploiters (*e.g.* criminal organizations, human traffickers, private businesses/employers, public authorities or others)
d. Manifestations of exploitation (*e.g.* forced/child labor, debt bondage, domestic servitude, online/offline commercial sexual exploitation of adults, forced/child marriage and criminal exploitation).

There is evidence of modern technology being used to recruit and subject people to contemporary forms of slavery in Brazil, though recruitment by modern technology is still regarded as uncommon or exceptional.[3]
The following tables systematize the input from different interviewees regarding the technology being used, the profiles of victims and exploiters and the manifestations of exploitation:

Information from Andrea R. C. Gondim (Labor Prosecution Service) [4]	
Technology being used	Instagram and Facebook
Victim profiles	Cisgender and transgender women between 18 and 30 years old, as well as girls aged 15 to 18 years
Profiles of exploiters	Criminal organizations, human traffickers, and private companies/employers
Manifestations of exploitation	Forced labor, domestic servitude, and commercial sexual exploitation online/offline for adults

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[3] *V.g.*, Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service); Interview with Eduardo Adolfo do Carmo Assis (Federal Police Commissioner).
[4] Interview with Andrea da Rocha Carvalho Gondim (Public Prosecutor, Labor Prosecution Service).

Information from Gustavo Nogami (Federal Prosecution Service) [5]	
Technology being used	Instagram, Facebook, WhatsApp
Victim profiles	Mostly young women, sometimes even children
Profiles of exploiters	Criminal organizations, particularly those that are also associated with human trafficking
Manifestations of exploitation	Forced labor, commercial sexual exploitation
Information from Eduardo Adolfo do Carmo Assis (Federal Police) [6]	
Technology being used	Job advertisements on OLX, Instagram, WhatsApp
Victim profiles	Vulnerable people, mostly male, of low socioeconomic status; female victims recruited for domestic servitude
Profiles of exploiters	Human traffickers
Manifestations of exploitation	Forced labor, domestic servitude
Information from João Luiz Moraes Rosa (Federal Police) [7]	
Technology being used	Facebook, Instagram, Twitter
Victim profiles	Women and adolescent girls who are offered alleged artistic / fashion-modelling opportunities
Profiles of exploiters	Criminal organizations, human traffickers
Manifestations of exploitation	Commercial sexual exploitation

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[5] Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service). During the same interview, Mr. Nogami also mentioned a case regarding the use of Facebook and WhatsApp to recruit Brazilians online under the false promise of working with technology and game development in Asia. Once the laborers arrived in Southeast Asia, they had their passport seized by a criminal organization and sent to a different location to work with perpetrating online fraud. The victims were eventually able to send online messages to Brazil denouncing their situation and the case was dealt with by the Federal Prosecution Service (particularly by the Office of Mato Grosso).

[6] Interview with Eduardo Adolfo do Carmo Assis (Federal Police Commissioner). According to Mr. Assis, the use of technology is more common in the international trafficking of persons, whose ultimate purpose can also be to submit the victims to slave labor. However, there had also been investigated cases concerning workers who were recruited *internally* (that is, from one place to another in the same national territory) through job advertisements which were published on Instagram, OLX (online marketplace), and WhatsApp. According to the same source, the cited cases of internal recruitment workers generally followed the profile of rescued victims in Brazil: vulnerable people, mostly male, and of low socioeconomic status. There had been cases, however, in which virtual enticements involved female victims who were recruited to provide domestic services.

[7] Interview with João Luiz Moraes Rosa (Federal Police Commissioner).

Information from Lutiana Valadares Fernandes Barbosa (Federal Public Defender) [8]	
Technology being used	Online dating chats, social networks
Victim profiles	Women and girls, migrants

In addition to the information above, one of the interviewed labor inspectors particularly mentioned how some workers who were rescued from slavery reported that they were recruited after seeing a job ad on Facebook. These job ads were not available by the time of the rescue, though, and no other additional information was retrieved by the labor inspectors.[9]

2. Are there examples of positive measures (legislative, administrative, institutional and others) taken by your government to prevent modern technology from being used to facilitate contemporary forms of slavery? If so, please provide details.

The intersection between modern technologies and contemporary forms of slavery is considered to be a relatively recent subject in the public agenda; this has been pointed out as an explanation or justification for why there is still room for more legislative and administrative initiatives to prevent modern technology from being used to facilitate slavery.[10]
The 2016 Brazilian legislation on the prevention and repression of human trafficking (Federal Law 13.344/2016), a crime that is frequently associated with slavery, does not expressly address the subject of modern technology.[11]
The federal legislation regulating the Internet (Federal Law 12.965/2014) does have important dispositions concerning technology and human rights (for instance, when it affirms, in article 2, that Internet use must respect freedom of expression and all human rights, personality development and the exercise of citizenship in digital media); however, this Act does not specifically address the possible relations between technology and contemporary forms of slavery.[12]
There is a Bill under review by the Brazilian Congress (PL 21/2020) whose object is to regulate artificial intelligence (AI) in the country; it is seen as an interesting opportunity for stakeholders to encourage further debate on the use of AI to prevent slavery, as well as how to prevent AI from being an instrument that facilitates contemporary forms of slavery.[13]
On the administrative side, a labor inspector with extensive experience working on the ground to inspect labor and rescue workers from slavery told our researchers that there is room for improvement vis-à-vis intelligence efforts so that prevention and repression efforts be more effective. The exploitation of slave labor is done in informal settings, under the radar, under several layers of illegality, in order to not

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[8] Interview with Lutiana Valadares Fernandes Barbosa (Federal Public Defender's Service).
[9] Interview with Maurício Krepsky Fagundes (Labor Inspector).
[10] Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service).
[11] Interview with Lutiana Valadares Fernandes Barbosa (Federal Public Defender's Service).
[12] Interview with Lutiana Valadares Fernandes Barbosa (Federal Public Defender's Service).
[13] Interview with Lutiana Valadares Fernandes Barbosa (Federal Public Defender's Service).

leave trace or clue. This reenforces the importance of intelligence efforts.[14] It is understood that modern technology can be a fundamental asset in such efforts. Among current positive measures, interviewees mentioned, *e.g.*, the work of the police in investigating criminal activities associated with slave labor[15]; international police cooperation through Interpol; and the receipt of complaints regarding child sexual exploitation through social networks, such as Instagram and Facebook.[16] Moreover, the use of modern technology in promoting human trafficking, as well as the possibilities of using technology to prevent and tackle human trafficking, have been studied by a subgroup of the Ibero-American Network of Specialized Prosecutors against Trafficking in Persons and Smuggling of Migrants ("Rede Ibero-Americana de Procuradores Especializados contra o Tráfico de Pessoas e Contrabando de Migrantes", or "Redtram"). The cited network is the result of a cooperation between the United Nations Office on Drugs and Crime (UNODC) and the Ibero-American Association of Public Prosecutors ("Associação Ibero-Americana de Ministérios Públicos", or "AIAMP"). Redtram's subgroup, however, is a recent initiative and its impact is yet to be monitored and evaluated.[17]

3. Are there examples of positive measures taken by technology companies to prevent their technologies and platforms from being used to facilitate contemporary forms of slavery? If so, please provide details, which may include proactive identification and reporting of exploitative contents, activities and perpetrators, creation of robust monitoring and oversight mechanisms, closing down/removing technologies, platforms and contents used to recruit and exploit victims, awareness-raising and/or warning among users of technologies, and collaboration with public authorities and non-governmental stakeholders?
4. Are there examples of positive measures taken by technology companies to promote access to protection, justice, and remedies for victims? How do they cooperate with other relevant stakeholders in this regard?

Technology companies have been criticized for not doing enough to prevent the use of their platforms (Facebook, Instagram, etc.) to facilitate gross human rights violations such as human trafficking and contemporary forms of slavery.[18] One of the interviewees particularly stressed that he was unaware of cases in which companies have effectively monitored and reported possible criminal activities to the relevant public authorities; instead, collaboration with public authorities regarding exploitative contents and victim recruitment comes generally from civil society and non-governmental organizations[19].

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[14] Interview with Maurício Krepsky Fagundes (Labor Inspector).
[15] Interview with João Luiz Moraes Rosa (Federal Police Commissioner).
[16] Interview with Eduardo Adolfo do Carmo Assis (Federal Police Commissioner).
[17] Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service).
[18] Interview with Lutiana Valadares Fernandes Barbosa (Federal Public Defender's Service); Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service).
[19] Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service).

5. Are there examples of positive measures taken by civil society organizations and other non-governmental stakeholders in preventing modern technology from being used to facilitate contemporary forms of slavery? If so, please provide details.

Non-governmental stakeholders have been highlighted as key in the struggle against slavery as a whole. One manifestation of this importance has to do with how many commissions, councils, or committees on the prevention, combating and eradication of slavery and/or human trafficking were created at the state level[20] as a result of continuous demand from civil society organizations. These commissions, councils, or committees are collegiate structures with members from both the public sector and civil society, whose function is to monitor, articulate and promote public policies for tackling slave labor and/or human trafficking at the state level.[21] Mr. Nogami, from the Federal Prosecution Service, was part of a commission for the eradication of slave labor from 2008 and 2022 and has pointed out that many of the Federal Prosecution Service's actions during that time were a result of demands from civil society within the commission.[22] Regarding the use of technology, in particular, one active non-governmental stakeholder is the Pastoral Service for Migrants ("Serviço Pastoral dos Migrantes", or "SPM"), an organization with roots in the Catholic Church in Brazil whose mission is to organize groups that are experiencing the impacts of forced migration. Mr. Nogami referred to the Pastoral Service as an important actor whose work encompasses passing on the information which they receive about possible slave labor or human trafficking, including via the internet and social media (Whatsapp, Facebook, Instagram).[23]

Other examples mentioned by the interviewees are the work of the "Instituto C&A"[24], a private nonprofit linked with a multinational retail clothing corporation;

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[20] *E.g.*, in Acre, Alagoas, Amazonas, Bahia, Ceará, Distrito Federal, Espírito Santo, Goiás, Maranhão, Minas Gerais, Mato Grosso, Mato Grosso do Sul, Pará, Piauí, Paraíba, Paraná, Pernambuco, Rondônia, Roraima, Rio de Janeiro, Rio Grande do Sul, São Paulo and Tocantins. See: Brasil. Comissões Estaduais para a Erradicação do Trabalho Escravo. Ministério dos Direitos Humanos e da Cidadania, 23 Apr. 2018; Brasil. Comitês Estaduais de Enfrentamento ao Tráfico de Pessoas. Ministério da Justiça e Segurança Pública, 27 Jan. 2023. The list of states with such commissions include: i) states with a commission on slave labor and a commission on human trafficking; ii) states with a commission on slave labor; iii) states with a commission on human trafficking.

[21] Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service); Brasil. Comissões Estaduais para a Erradicação do Trabalho Escravo. Ministério dos Direitos Humanos e da Cidadania, 23 Apr. 2018; Brasil. Comitês Estaduais de Enfrentamento ao Tráfico de Pessoas. Ministério da Justiça e Segurança Pública, 27 Jan. 2023.

[22] Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service).

[23] Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service).

[24] Interview with Andrea da Rocha Carvalho Gondim (Public Prosecutor, Labor Prosecution Service). While accessing the Instituto C&A website, we were able to identify one of their projects, the "Programa Tecendo Sonhos", as being dedicated to the agenda of decent work. The program's website, < https://tecendosonhos.aliancaempreendedora.org.br/sobre-tecendo-sonhos/ >, self-describes their work as aimed at "promoting dignified work relationships in the textile chain with the public of sewing factions through entrepreneurship"; "[t]he program's actions seek to integrate micro and small entrepreneurs from textile factions, social organizations that work with migration, government, networks, researchers and technologies that transform the relationships in their chain and responsible consumption. Since 2014, he has been working with Latin American immigrants in the city of São Paulo. In 2020, the program expands its actions to Agreste Pernambucano due to the textile production and commercialization center in the region, specifically present in the cities of Caruaru-PE and Toritama-PE, serving Brazilian women who work on their own in the sewing area."

and the "Tag Alinha" initiative, which brings together reports from seamstresses about how much they are paid, about their working conditions, among others. The information is secured using blockchain technology. The history of each piece of clothing is published on a website; consumers can access the information by typing a six-digit code that appears on the label of the purchased item.[25]

6. What are remaining challenges in preventing modern technology from being used to facilitate contemporary forms of slavery?

The interviews reflected the concern of the interviewees with challenges regarding both i) preventing contemporary forms of slavery in general, ii) preventing modern technology from being used to facilitate slavery, and iii) preventing human trafficking alongside with the prevention of contemporary forms of slavery. In this sense, the following challenges were reported:

— The volatile character of transnational crime and corresponding difficulties vis-à-vis the competence to investigate.[26]
— Limited coordination among non-governmental stakeholders and the public sector, with some states still lacking their own councils for the eradication of slave labor (for more information on the state councils, please see answer to question 5 *supra*).[27]
— Difficulties in identifying which social media profiles are false, and where do the false or criminal job advertisements come from[28], and the reported lack of effective involvement of technology and social media companies with effective actions to prevent slavery (in this sense, *e.g.*, national authorities face obstacles when they attempt to engage with these companies during investigations).[29]
— The need for technology companies and all State agencies and staff to be coordinated so that information can flow more promptly and investigation can reach more advanced levels.[30]
— Specific difficulties in promoting full accountability for human rights violations in the case of artificial intelligence due to its unpredictability and the "problem of many hands".[31]
— The need for State agents to be more specifically prepared for preventing the use of technology to facilitate contemporary forms of slavery, both in terms of the formation of divisions or teams particularly dedicated to the subject, and in the sense of documenting cases in which the use of technology occurs (the absence of specific preparation can lead officers on the forefront not to

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[25] Interview with Andrea da Rocha Carvalho Gondim (Public Prosecutor, Labor Prosecution Service).
[26] Interview with Andrea da Rocha Carvalho Gondim (Public Prosecutor, Labor Prosecution Service).
[27] Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service).
[28] Interview with Andrea da Rocha Carvalho Gondim (Public Prosecutor, Labor Prosecution Service).
[29] Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service).
[30] Interview with João Luiz Moraes Rosa (Federal Police Commissioner); Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service).
[31] Interview with Lutiana Valadares Fernandes Barbosa (Federal Public Defender's Service). See, also: Peter Königs. Artifcial intelligence and responsibility gaps: what is the problem?. *Ethics and Information Technology*, v. 24, 2022.

ask the victims about technology or to neglect details regarding the use of technology, for example).[32]

— The persistent lack of accountability throughout the production chain.[33]

— The need of judicial orders from criminal courts to access private information.[34]

7. What practical recommendations would you propose for Governments and technology companies to overcome these challenges?

Recommendations recollected from the interviews include: the creation of an automated/algorithmic system of notification from technology companies to investigative authorities once the triggers of possible use of technology to facilitate slavery are pulled[35]; the creation of specific structures within the State with the aim of preventing the use of technology to facilitate contemporary forms of slavery[36]; the creation of intelligence units to aid Labor Inspectors and labor inspection[37]; warnings from companies to the government about false profiles, scams, and enticement of persons[38]; better tracking of the whole production chain[39]; the development of norms and standards for the ethical, human-rights based use of the Internet and artificial intelligence, among other technologies, with the aim of preventing and combatting human trafficking and modern forms of slavery (ISO and IEEE standards on ethical usage of AI was cited as a useful model).[40]

8. Is there evidence of modern technology (*e.g.* applications, artificial intelligence and blockchain technology) being used to prevent contemporary forms of slavery? If so, please provide details.

Different instances of modern technology being used to prevent contemporary forms of slavery were mentioned during the interviews, such as:

— The use of blockchain technology within the "Tag Alinha" initiative (see also answer to Question 5 *supra*).[41]

— The use of data analysis by the SmartLab Initiative, a project by the International Labor Organization and the Labor Prosecution Service.[42]

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[32] Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service).

[33] Interview with Andrea da Rocha Carvalho Gondim (Public Prosecutor, Labor Prosecution Service).

[34] Interview with Andrea da Rocha Carvalho Gondim (Public Prosecutor, Labor Prosecution Service). Researchers understand that this should not be interpreted as an argument for restricting judicial guarantees, but rather a concern with the absence of accountability in cases of technology being used to facilitate contemporary forms of slavery and other gross human rights violations.

[35] Interview with João Luiz Moraes Rosa (Federal Police Commissioner).

[36] Interview with Maurício Krepsky Fagundes (Labor Inspector).

[37] Interview with Maurício Krepsky Fagundes (Labor Inspector).

[38] Interview with Andrea da Rocha Carvalho Gondim (Public Prosecutor, Labor Prosecution Service).

[39] Interview with Andrea da Rocha Carvalho Gondim (Public Prosecutor, Labor Prosecution Service).

[40] Interview with Lutiana Valadares Fernandes Barbosa (Federal Public Defender's Service).

[41] Interview with Andrea da Rocha Carvalho Gondim (Public Prosecutor, Labor Prosecution Service).

[42] Interview with Andrea da Rocha Carvalho Gondim (Public Prosecutor, Labor Prosecution Service); See, also: < https://smartlabbr.org/ > ("Governments around the world produce vast amounts of policy-relevant data. However, rarely do these data become useful information for decision-making on highly complex issues that mark the present day and that require evidence-based and result-oriented interventions. On the other hand, the formulation, monitoring and evaluation of programs, projects and public policies are processes that require information. In this context, the SmartLab initiative emerged to

— The development and use of the Ipê website, which allows for the online filing of complaints regarding slave labor.[43]

— The use of GPS, with coordinates often given to labor inspectors and other State agents by the workers themselves, thus allowing for inspection and police forces to arrive more easily at the denounced workplace.[44]

— The use of drones by labor inspectors and other State agents as a means of improving inspection and rescue operations through aerial oversight, with better identification of routes and the position of all workers, especially when the workplaces offer visual barriers to the teams on the ground (*e.g.* coffee plantations; places with agriculture activities being carried out on the opposite side of a slope; charcoal plants located on the other side of an eucalyptus field; etc.).[45]

— One of the interviewees, a member of the Public Prosecution Service of Brazil, also mentioned how the Public Prosecution Service of Colombia had been using the artificial intelligence software Watson to investigate criminal activities and to map cases of human trafficking and slavery.[46]

— Several labor inspectors have made their WhatsApp numbers available to the workers during inspections. The inspections were deemed by one of the interviewees as "the moment that workers see themselves as subjects of rights". Once they have the inspector's WhatsApp / cellphone contact during these moments, it is not uncommon for them to grow the necessary confidence to share the contact with other workers and to communicate complaints. WhatsApp is easy to handle, very accessible, expedient, fast and direct; it allows for the sharing of text, audio, photographs, and video from the worker to the inspector, thus facilitating enormously both the complaints and the construction of evidence to support each complaint. Moreover, WhatsApp groups allow for inspectors to communicate directly with larger groups of workers during the inspections; and, once a question posed by a worker is answered by the inspector inside the framework of a WhatsApp Group, that doubt is clarified for everyone.[47]

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build relevant knowledge for public policies to promote decent work using a very low-cost public resource: open public data. The joint initiative of MPT and ILO Brazil gave rise to the SmartLab Platform, which has strengthened cooperation with governmental, non-governmental and international organizations that work to promote this agenda and that need information to make decisions about the actions they develop. Through Digital Observatories, the platform also benefits the scientific community, which now has access to information with unprecedented ease for research. In addition, the public flow of information for evidence-based and results-oriented decision-making benefits civil society at large.").

[43] Interview with Humberto Monteiro Camasmie (Labor Inspector); Brasil. Atualização do Sistema de Denúncia de Trabalho Análogo ao de Escravo e Implementação do Módulo Migrante (Sistema Ipê Trabalho Escravo). Ministério do Trabalho e Previdência, 16 Nov. 2020 ("The Ipê System is a system for collecting, concentrating, and handling allegations of work in conditions analogous to slavery in Brazilian territory. […] The system allows for complaints to be dealt with more quickly, and for the prioritization of those complaints that have a more serious indicator of slavery-like conditions. Moreover, the tool is accessible to migrants, given that it can be accessed in 3 more languages in addition to Portuguese, namely: English, Spanish and French."); < https://ipe.sit.trabalho.gov.br/ > (the Ipê website).

[44] Interview with Humberto Monteiro Camasmie (Labor Inspector).

[45] Interview with Humberto Monteiro Camasmie (Labor Inspector).

[46] Interview with Gustavo Nogami (Chief Public Prosecutor, Federal Prosecution Service). See, also: United Nations Office on Drugs and Crime (UNODC). Fundación Pasos Libres, Naciones Unidas e IBM se unieron en la primera hackathon en Colombia contra la trata de personas. *UNODC Colombia*, 10 Sept. 2018; Pablo Medina Uribe; Luisa Fernanda Gómez. 'Watson', el investigador inteligente con el que la Fiscalía busca cerrarle el paso al crimen. *EL País Colombia*, 25 Jul. 2020.

[47] Interview with Humberto Monteiro Camasmie (Labor Inspector).

9. What are the existing limitations and challenges in using such technologies, and what recommendations do you have to overcome them?

The Ipê website is an important initiative, but the presentation of complaints through the website appears to be not as an accessible means as WhatsApp, especially vis-à-vis persons living under a low socioeconomic status and persons with a background of limited access to education.

The reported use of WhatsApp to establish direct communication between workers and the labor inspection (see answer to question 8 *supra*) appears to be a successful, good practice that deserves generalization in the country and other countries with similar socioeconomic characteristics, for many amongst the socially vulnerable population in Brazil nonetheless have access to cellphones and WhatsApp and are used to this tool and its power to transmit text, voice recordings, photos and video recordings. The role that this app can have in terms of facilitating both the presentation of complaints and the production and documentation of evidence allows for the recommendation that this practice be better studied, tested, and applied by State agents nationwide (so far, it has been a local practice). Perhaps the practice can be integrated with the Ipê system, so that the information received through WhatsApp is organized according to priority and relevance, in the same way that the Ipê system allows for in relation to the complaints it receives.

The use of drones also appears to be a good practice. The generalization of this technology, so that all police and inspections teams have access to it, should equally be considered as an interesting means of improving the work of labor inspection, investigation, and accountability nationwide.

In conclusion, a common topic that emerged in different interviews concerns the need for, or the possibility of, better coordination and intelligence among the various State agents and institutions. Departing from, and transcending, the interviews, we take this opportunity to present two recommendations of actions that might contribute to the topic:

I. Slave labor can often be seasonal in Brazil, such as in the case of workers being exploited during seasonal harvests, in rural settings. The Statistics and Information Dashboard of Labor Inspection in Brazil, Radar SIT, is able to generate information regarding regions and economic activities that are most likely to be susceptible to slave labor. The integration of data such as these can allow Labor Inspectors to not only monitor and act upon received complaints, but also in a preventive and timely manner. For example: knowing that in Minas Gerais there is a greater risk of slave labor during the coffee harvest of municipalities X, Y, and Z, an improved system or process could issue warnings for Labor Inspection to act in the right time at the main coffee farms (thus avoiding, *v.g.*, inspectors arriving in situ when the harvest season has ended).

II. The prevention and repression mechanisms against slave labor can also benefit from the use of technology to document, systematize and cross-check information from multiple sources, including information from the judicial system. It would certainly be very useful for the institutional efforts against slave labor to aggregate data from complaints to inspectors and the police and inspection reports to civil class lawsuits, conduct-adjustment agreements ("termos de ajustamento de conduta"), and criminal lawsuits.