



General Assembly

Distr.: General
20 August 2024

Original: English

Human Rights Council

Fifty-sixth session

18 June–12 July 2024

Agenda items 2 and 3

Annual report of the United Nations High Commissioner for Human Rights and reports of the Office of the High Commissioner and the Secretary-General

Promotion and protection of all human rights,
civil, political, economic, social and cultural rights,
including the right to development

Mapping report: human rights and new and emerging digital technologies

Report of the Office of the United Nations High Commissioner for Human Rights*

Summary

The present report, submitted pursuant to Human Rights Council resolution 53/29, is a mapping of the work and recommendations of the Council, the Office of the United Nations High Commissioner for Human Rights (OHCHR), the human rights treaty bodies and the special procedures of the Council in the field of human rights and new and emerging digital technologies, including artificial intelligence. In the report, gaps and challenges are identified and recommendations on how to address them are set out, with due consideration to related United Nations system-wide work.

* The present report was submitted to the conference services for processing after the deadline so as to include the most recent information.



I. Introduction

1. The present report is submitted pursuant to Human Rights Council resolution 53/29, in which the Council requested OHCHR to prepare a report, mapping the work and recommendations of the Council, OHCHR, the treaty bodies and the special procedures of the Council in the field of human rights and new and emerging digital technologies, including artificial intelligence, identifying gaps and challenges and making recommendations on how to address them, while giving due consideration to the United Nations system-wide work on new and emerging digital technologies.

2. An encouraging key finding of the mapping exercise was that the number of technology-related outputs developed by the United Nations human rights system has reached an astounding level. For example, in at least 135 of their reports, the special procedure mandate holders have discussed aspects of digitalization.¹ While mapping the work of the United Nations human rights system along thematic lines helps to capture the breadth and depth of the work and to demonstrate thematic developments and trends, the interrelatedness and indivisibility of rights and the intersectionality of topics inevitably lead to overlap. In view of the wealth and ongoing development of such material, the present report is not exhaustive, but rather provides a bird's-eye perspective to further facilitate work in the field within the United Nations human rights system.

II. Governance of the Internet and Internet-based communications

3. With the mass uptake of the Internet, the United Nations has become a venue for discussions on its economic, social, cultural and political impacts and on ways to govern it. The World Summit on the Information Society, held in December 2003 and November 2005, led to important commitments that highlighted the human rights-enabling role of the Internet and the centrality of human rights in its governance.² The human rights system began to tackle Internet-related questions and, from the outset,³ highlighted the fundamental tension between the immense potential of the Internet to facilitate the enjoyment of rights, particularly expression and participation, and the risks of human rights abuses and violations.

Access to the Internet as a human rights enabler

4. The Internet is an indispensable enabler of human rights.⁴ Reports of the special procedure mandate holders have provided ample supporting analysis, nuance and detail, analysing the benefits across the spectrum of human rights.⁵ The Secretary-General⁶ and OHCHR consistently emphasize the need to achieve universal access to the Internet to ensure the full enjoyment of human rights by all.⁷ On many occasions, treaty bodies have underscored the importance of equal access to the Internet and digital technology.⁸ There is an urgent need, therefore, to overcome digital divides within and between countries.⁹

¹ See

https://www.ohchr.org/sites/default/files/Documents/HRBodies/SP/List_SP_Reports_NewTech.pdf.

² See <https://www.itu.int/net/wsis/docs/geneva/official/dop.html> and [A/60/687](#).

³ See Human Rights Council resolution 12/16.

⁴ See General Assembly resolution 78/187; Human Rights Council resolutions 47/5, 47/16, 50/15 and 53/7; and Sustainable Development Goals, targets 9.c and 5.b.

⁵ See [A/66/290](#), [A/67/326](#), [A/HRC/17/27](#), [A/HRC/26/49](#) and [A/HRC/26/49/Corr.1](#).

⁶ See Road Map for Digital Cooperation; United Nations, "Our Common Agenda, policy brief 5: a global digital compact – an open, free and secure digital future for all", May 2023; and [A/HRC/43/29](#).

⁷ See [A/HRC/35/9](#), [A/HRC/44/24](#) and [A/HRC/50/55](#).

⁸ See Committee on the Rights of the Child, general comment No. 25 (2021) and Committee on the Elimination of Discrimination against Women, general recommendation No. 39 (2022). See also [CRC/C/ZAF/CO/3-6](#), [CEDAW/C/BTN/CO/10](#), [CEDAW/C/UKR/CO/9](#), [E/C.12/IRQ/CO/5](#) and [E/C.12/PSE/CO/1](#).

⁹ See, for example, General Assembly resolutions 78/213 and 78/265; Human Rights Council resolutions 38/5, 47/16, 50/15 and 53/29; [A/66/290](#), [A/67/326](#), [A/74/821](#), [A/HRC/17/27](#),

Restrictions on access to and use of the Internet

5. Reflecting the crucial role of the Internet and digital technologies for the realization of human rights, a large body of work has provided analyses of restrictions on access to and use of the Internet and Internet-based technologies imposed by State and non-State actors that often narrow civic space.¹⁰

6. Legislative and regulatory instruments that unduly restrict certain human rights, such as the right to freedom of expression, by restricting the use of the Internet in a way that contravenes the principles of legitimate aim, necessity and proportionality¹¹ have been identified consistently as key problems.¹² Such instruments, often carrying criminal penalties, relate to such issues as terrorism, extremist speech, national security, disinformation, hate speech, cybercrime, cybersecurity, defamation, blasphemy and morality or directly prohibit the criticism of authorities.¹³ The issues of online harassment, threats and cyberattacks, including via social media, are often also raised.¹⁴

7. Various forms of website and content filtering and blocking raise other major human rights concerns.¹⁵ State-imposed shutdowns of access to the Internet and mass communication platforms, such as social media, constitute severe human rights restrictions that have frequently been denounced in resolutions¹⁶ and by the Human Rights Committee,¹⁷ the special procedure mandate holders¹⁸ and the High Commissioner.¹⁹

Disinformation, hate speech and social media governance

8. Recent years have seen an upsurge in work in three interlinked areas: disinformation, hate speech and the governance of social media platforms.

9. Building on article 20 (2) of the International Covenant on Civil and Political Rights and article 4 of the International Convention on the Elimination of All Forms of Racial Discrimination, in combination with the overarching prohibition of discrimination, there has been expansive work on online hate speech. The Rabat Plan of Action on the prohibition of advocacy of national, racial or religious hatred that constitutes incitement to discrimination, hostility or violence provides detailed guidance on the concept of incitement to national, racial or religious hatred, while ensuring full respect for freedom of expression. The Committee on the Elimination of Racial Discrimination has provided important guidance on hate speech, in particular in its general recommendation No. 35 (2013) on combating racist

[A/HRC/26/49](#), [A/HRC/44/49](#) and [A/HRC/48/54](#); Our Common Agenda policy brief 5; Committee on the Rights of the Child, general comment No. 25 (2021); and [CRC/C/ZAF/CO/3-6](#), [CEDAW/C/BTN/CO/10](#), [E/C.12/IRQ/CO/5](#) and [E/C.12/PSE/CO/1](#).

¹⁰ See [A/78/269](#) and [A/HRC/50/25](#). See also <https://www.ohchr.org/en/press-briefing-notes/2023/05/ohchrs-report-digital-tech-and-civic-space-south-east-asia>.

¹¹ See Human Rights Committee, general comment No. 34 (2011).

¹² See, for example, Human Rights Council resolutions 49/21 and 51/9; and [A/66/290](#), [A/70/371](#), [A/71/373](#), [A/78/269](#), [A/HRC/16/51](#), [A/HRC/22/17/Add.4](#), [A/HRC/31/65](#), [A/HRC/32/38](#), [A/78/269](#) and [CCPR/C/KHM/CO/3](#).

¹³ See, for example, [A/71/373](#), [A/HRC/41/41](#), [A/HRC/43/10](#), [A/HRC/43/46](#), [CCPR/C/KHM/CO/3](#) and [CCPR/C/QAT/CO/1](#); and communications VNM 6/2023, LBY 3/2022, MDV 1/2022, TUR 3/2022 and response, EGY 12/2020, MYS 3/2019 and response and RUS 7/2016. All communications and replies are available at <https://spcommreports.ohchr.org/Tmsearch/TMDocuments>.

¹⁴ See [A/76/258](#), [A/HRC/41/41](#), [A/HRC/50/29](#) and [A/HRC/53/31](#); <https://www.ohchr.org/en/press-briefing-notes/2023/05/ohchrs-report-digital-tech-and-civic-space-south-east-asia>; communications HUN 1/2022, MDV 1/2022, TUR 3/2022 and response, ARM 2/2020 and response and PHL 6/2019; and [CCPR/C/PHL/CO/5](#).

¹⁵ See, for example, [A/74/486](#), [A/HRC/17/27](#), [A/HRC/29/32](#), [A/HRC/35/22](#) and [A/HRC/44/24](#); communications LBY 3/2022, RUS 2/2022 and response, IRN 29/2021 and response and SGP 1/2021 and response; and <http://freedex.org/wp-content/blogs.dir/2015/files/2018/05/Flavus-OOO-SR-intervention.pdf>.

¹⁶ Human Rights Council resolutions 44/20, 47/16, 49/21, 50/15 and 51/9.

¹⁷ See, for example, Human Rights Council general comments No. 34 (2011) and No. 37 (2020). See also [CCPR/C/IRN/CO/4](#), [CCPR/C/ETH/CO/2](#), [CCPR/C/CMR/CO/5](#) and [CCPR/C/LKA/CO/6](#).

¹⁸ See [A/HRC/17/27](#), [A/HRC/35/22](#), [A/HRC/41/41](#) and [A/HRC/47/25](#).

¹⁹ See [A/HRC/44/24](#) and [A/HRC/50/55](#).

hate speech.²⁰ Member State-driven processes have raised online hate speech as a major concern on numerous occasions.²¹ The special procedure mandate holders have dedicated considerable work to hate speech, underscoring the indivisible link between freedom of opinion and expression and combating online hate speech, including reports by the Special Rapporteurs on contemporary forms of racism, racial discrimination, xenophobia and related intolerance,²² on the promotion and protection of the right to freedom of opinion and expression (with recommendations for content moderation practices),²³ on freedom of religion or belief (discussing problems with domestic hate speech laws that protect religious feelings),²⁴ and on minority issues.²⁵ Moreover, gendered hate speech is receiving increased attention.²⁶ Hate speech is a priority for OHCHR, which recently developed guidance on rights-based responses to hate speech on the grounds of religion or belief and in electoral contexts and has drafted a forthcoming report on cyberbullying against persons with disabilities, for submission to the Human Rights Council.²⁷

10. Disinformation²⁸ became a focus of the United Nations human rights system in the second half of the 2010s. Disinformation has been the subject of resolutions,²⁹ the universal periodic review³⁰ and discussions of the treaty bodies.³¹ Reports of the Secretary-General³² and the Special Rapporteur on the right to freedom of opinion and expression³³ have included recommendations for human rights-based responses. A set of global principles for information integrity has been developed within the United Nations.³⁴

11. The governance of social media is a central issue for discussions on legislation and policies, with far-reaching implications for human rights. Many of the sources cited above regarding restrictions, hate speech and disinformation are also relevant here. The special procedure mandate holders have discussed social media since the early 2010s.³⁵ A 2018 report of the Special Rapporteur on the right to freedom of opinion and expression included a comprehensive human rights-based framework for content moderation and curation and their regulation.³⁶ Other reports have contained discussions on the impacts of artificial

²⁰ See also Committee on the Elimination of Racial Discrimination general recommendations No. 7 (1985) relating to the implementation of article 4 of the Convention and No. 15 (1993) on article 4 of the Convention.

²¹ See, for example, Security Council resolution 2686 (2023); General Assembly resolutions 77/211 and 78/213; Human Rights Council resolution 55/13; and [A/HRC/26/10](#), [A/HRC/36/8](#), [A/HRC/49/18](#), [A/HRC/52/15](#) and [A/HRC/54/5](#).

²² [A/67/326](#), [A/78/538](#) and [A/HRC/26/49](#) and [A/HRC/26/49/Corr.1](#).

²³ [A/74/486](#).

²⁴ [A/HRC/40/58](#).

²⁵ [A/HRC/28/64](#) and [A/HRC/46/57](#).

²⁶ See [A/76/258](#); communication OTH 90/2023 and response; and [CEDAW/C/TJK/CO/7](#), [CEDAW/C/URY/CO/10](#), [CEDAW/C/GMB/CO/6](#), [CEDAW/C/CHE/CO/6](#) and [CEDAW/C/BOL/CO/7](#).

²⁷ See [A/HRC/22/17/Add.4](#), [A/HRC/55/74](#) and [A/HRC/56/31](#). See also <https://www.ohchr.org/sites/default/files/2024-05/information-note-hate-speech-incient-hatred-in-electoral-context.pdf>; United Nations Strategy and Plan of Action on Hate Speech; and [A/HRC/56/31](#).

²⁸ See [A/77/287](#).

²⁹ General Assembly resolution 76/227; and Human Rights Council resolutions 49/21 and 55/10.

³⁰ [A/HRC/13/4](#), [A/HRC/43/9](#), [A/HRC/52/15](#) and [A/HRC/54/18](#).

³¹ See, for example, [CCPR/C/ETH/CO/2](#), [CCPR/C/CHN-HKG/CO/4](#), [CCPR/C/TUN/CO/6](#), [CCPR/C/BHR/CO/1](#), [E/C.12/BRA/CO/3](#), [CRC/C/CZE/CO/5-6](#) and [CAT/C/ETH/CO/2](#); and Committee on Economic, Social and Cultural Rights, general comment No. 25 (2020).

³² [A/77/287](#).

³³ [A/77/288](#), [A/78/288](#) and [A/HRC/47/25](#). See also [A/73/348](#), [A/HRC/38/35](#), [A/HRC/44/49](#), [A/HRC/44/49/Add.1](#), [A/HRC/50/29](#) and [A/HRC/50/29/Add.1](#); communications BRA 6/2020, ITA 1/2018 and response, LAO 1/2014, MYS 5/2021, MYS 6/2018, MYS 1/2018 and response, PAK 3/2020 and response, QAT 1/2020 and response, RUS 4/2019, SGP 3/2019 and State response with annexes, LKA 9/2023 and response, GBR 5/2022 and response and ZMB 1/2021; and <https://www.ohchr.org/en/press-releases/2017/03/freedom-expression-monitors-issue-joint-declaration-fake-news-disinformation?LangID=E&NewsID=21287>.

³⁴ See <https://www.un.org/en/information-integrity/global-principles>.

³⁵ See, for example, [A/67/326](#), [A/HRC/17/27](#) and [A/HRC/26/49](#) and [A/HRC/26/49/Corr.1](#).

³⁶ [A/HRC/38/35](#).

intelligence on the information space³⁷ and explanations of how content moderation can address hate speech.³⁸ Special procedure mandate holders have sent numerous communications to States and companies concerning social media governance.³⁹ While the universal periodic review and the concluding observations of human rights treaty bodies have raised social media-related issues on many occasions, the ensuing recommendations do not provide detailed guidance on governance. General comments⁴⁰ have set valuable general guidelines but have not provided social media-specific governance frameworks. The United Nations Educational, Scientific and Cultural Organization (UNESCO) recently finalized guidelines for the governance of digital platforms.⁴¹

Technical standards

12. Technical standards are increasingly recognized as instrumental in shaping the evolving digital environment, with significant human rights effects. At the request of the Human Rights Council, OHCHR published a report on the topic in 2023 and is working with standard-setting organizations, such as the International Telecommunication Union, and stakeholders on better integrating human rights considerations into standard-setting processes.⁴²

III. Surveillance, datafication and artificial intelligence

13. For decades, United Nations processes have recognized the human rights threats linked to the ever-increasing ability of digital systems to collect and process data and to surveil. Early examples include the Guidelines for the regulation of computerized personal data files and Human Rights Committee general comment No. 16 (1988) on the right to privacy. In the past 15 years, attention to those issues has increased. Numerous resolutions on the right to privacy in the digital age have addressed a broad range of topics relating to surveillance and data governance. In 2015, the Human Rights Council established the Special Rapporteur on the right to privacy.

A. Surveillance

14. Concerns have been raised consistently within the United Nations human rights system about surveillance by government agencies, including the mass and targeted interception of communications, access to and the collection of communications-related data, intrusion into electronic devices through hacking and the surveillance of public spaces online and offline, increasingly through biometric and artificial intelligence-based technologies.

15. In addition to numerous resolutions,⁴³ recommendations relating to surveillance have been made through the universal periodic review⁴⁴ and reflected in the concluding observations of the treaty bodies.⁴⁵ The Human Rights Committee referred to surveillance measures in its general comments No. 16 (1988) and No. 37 (2020).

³⁷ [A/73/348](#).

³⁸ [A/74/486](#).

³⁹ See, for example, communications BGD 2/2023, VNM 6/2023, OTH 90/2023 and response, KGZ 3/2023 and response, OTH 229/2021, IND 8/2021 and response, IRN 29/2021 and response and DEU 1/2017 and response.

⁴⁰ Particularly Human Rights Committee, general comment No. 34 (2011); and Committee on the Rights of the Child, general comment No. 25 (2021).

⁴¹ See <https://www.unesco.org/en/internet-trust/guidelines>.

⁴² See Human Rights Council resolution 53/29; and [A/HRC/53/42](#).

⁴³ General Assembly resolutions 68/167, 77/211 and 78/213; and Human Rights Council resolutions 28/16, 50/15, 50/17, 51/9 and 54/21.

⁴⁴ See, for example, [A/HRC/15/11](#), [A/HRC/41/17](#), [A/HRC/44/9](#), [A/HRC/52/10](#), [A/HRC/53/11](#) and [A/HRC/54/5](#).

⁴⁵ See, for example, [CCPR/C/SRB/CO/4](#), [CCPR/C/USA/CO/5](#), [CCPR/C/KOR/CO/5](#), [CCPR/C/IRN/CO/4](#), [CCPR/C/UGA/CO/2](#) and [CCPR/C/NIC/CO/4](#).

16. Special procedure mandate holders have provided extensive analysis concerning State surveillance. The mandate of the Special Rapporteur on the promotion and protection of human rights and fundamental freedoms while countering terrorism has repeatedly raised concerns and recommended measures to reign in surveillance-related human rights violations and abuses, including relating to the use of biometric data and spyware.⁴⁶ The Special Rapporteur on the right to freedom of opinion and expression has made important contributions, including on surveillance practices, the role of information and communications technology (ICT) in the private sector and the surveillance industry and related duties and responsibilities.⁴⁷ Special procedure mandate holders have addressed the use of new technologies against relatives of disappeared persons and adequate oversight of intelligence operations.⁴⁸ They have also sent numerous communications to States and other entities addressing surveillance-related concerns.⁴⁹

17. OHCHR has focused on surveillance trends and made related recommendations in several reports, including on mass surveillance, spyware, the weakening of encryption and the surveillance of public spaces in general and in the context of peaceful assemblies.⁵⁰

B. Datafication, data-intensive technologies and artificial intelligence

18. Unlocking the value of data has been identified as key to boosting development, economic well-being and scientific discovery, while also presenting significant human rights risks. The human rights system has recognized that implementing data governance, especially data privacy and personal data protection frameworks, is a human rights priority.⁵¹ The High Commissioner and the Special Rapporteur on the right to privacy have described key challenges in that regard and outlined minimum requirements for governance frameworks.⁵² Such considerations have grown in importance with the emergence of ever-more powerful and data-intensive systems, including artificial intelligence.

19. States have addressed human rights in the context of artificial intelligence in resolutions and in the UNESCO Recommendation on the Ethics of Artificial Intelligence.

20. The special procedure mandate holders have discussed artificial intelligence and human rights, including in reports on the implications of artificial intelligence for the rights to freedom of opinion and expression⁵³ and on the right to privacy,⁵⁴ on freedom of thought,⁵⁵ on the right to education,⁵⁶ on the right to health,⁵⁷ on the rights of older persons⁵⁸ and on the rights of persons with disabilities.⁵⁹ Important insights concerning artificial intelligence have

⁴⁶ See [A/69/397](#), [A/70/371](#), [A/HRC/13/37](#) and [A/HRC/52/39](#); and <https://www.ohchr.org/en/special-procedures/sr-terrorism/activities>.

⁴⁷ See [A/HRC/23/40](#), [A/HRC/35/22](#) and [A/HRC/41/35](#).

⁴⁸ See [A/HRC/37/62](#).

⁴⁹ See, for example, communications IRN 29/2021 and response, PHL 4/2020 and response, GBR 4/2015 and responses, USA 9/2016, USA 7/2017 and response, VNM 7/2013 and response and ZMB 1/2021.

⁵⁰ See [A/HRC/27/37](#), [A/HRC/39/29](#), [A/HRC/44/24](#), [A/HRC/48/31](#) and [A/HRC/51/17](#); and <https://www.ohchr.org/en/documents/tools-and-resources/digital-border-governance-human-rights-based-approach>.

⁵¹ See General Assembly resolutions 71/199, 73/179, 75/176 and 77/211; Human Rights Council resolutions 34/7, 48/4 and 54/21; and Committee on the Rights of the Child, general comment No. 25 (2021).

⁵² See [A/77/196](#), [A/HRC/39/29](#), [A/HRC/49/55](#) and [A/HRC/55/46](#); and <https://www.ohchr.org/en/privacy-in-the-digital-age> and <https://www.ohchr.org/en/special-procedures/sr-privacy/annual-thematic-reports>.

⁵³ [A/73/348](#).

⁵⁴ [A/73/438](#), [A/77/196](#), [A/78/310](#) and [A/HRC/46/37](#).

⁵⁵ [A/76/380](#).

⁵⁶ [A/HRC/50/32](#).

⁵⁷ [A/HRC/53/65](#).

⁵⁸ [A/HRC/36/48](#) and [A/HRC/45/14](#).

⁵⁹ [A/HRC/49/52](#).

also been presented in areas such as counter-terrorism,⁶⁰ extreme poverty⁶¹ and racism, racial discrimination, xenophobia and related intolerance associated with digital technology in general⁶² and in the border and immigration enforcement context in particular.⁶³

21. In its 2021 report on new and emerging digital technologies, the Human Rights Council Advisory Committee discussed issues associated with artificial intelligence.⁶⁴

22. The work of the treaty bodies on artificial intelligence has put a strong focus on racial and gender-based discrimination and inequality issues,⁶⁵ often in the context of surveillance and policing measures.⁶⁶

23. The Secretary-General has identified artificial intelligence as a priority area for human rights engagement⁶⁷ and, in 2023, established the High-level Advisory Body on Artificial Intelligence, which is developing principles and recommendations for the international governance of artificial intelligence.⁶⁸

24. Artificial intelligence has been a key issue in the work of OHCHR on digital technologies. A 2020 report on new technologies in the context of assemblies, including peaceful protests, included a chapter on the rise of remote facial recognition technology.⁶⁹ A 2022 study of artificial intelligence⁷⁰ contained key recommendations to States and businesses. Under the B-Tech project, OHCHR started developing guidance in 2023 on the application of the Guiding Principles on Business and Human Rights to generative artificial intelligence.⁷¹

IV. Economic, social, cultural and development aspects

25. Reflecting on how digital technologies permeate all aspects of life, the United Nations human rights system has addressed many of their economic, social, cultural and development impacts, often as part of cross-cutting discussions dealing with a broad range of human rights issues. Resolutions focusing on the Internet and digital technologies have consistently underscored that technologies are driving forces in accelerating development.⁷² The 2021 report of the High Commissioner on the right to privacy in the digital age delved deeper into privacy as an enabler of rights, exploring the role of artificial intelligence in the context of social security and employment settings.⁷³ Moreover, concerns about digital divides⁷⁴ have focused consistently on economic, social and cultural rights and obstacles to development. The OHCHR report on Internet shutdowns included a discussion of the deep impact on the rights to education, health and an adequate standard of living.⁷⁵

⁶⁰ See [A/HRC/52/39](#); and <https://law.umn.edu/human-rights-center/research/use-biometric-data-identify-terrorists>.

⁶¹ See [A/74/493](#), [A/HRC/38/33/Add.1](#), [A/HRC/41/39/Add.1](#) and [A/HRC/50/38](#).

⁶² See [A/HRC/42/59](#) and [A/HRC/44/57](#).

⁶³ See [A/75/590](#) and [A/HRC/48/76](#).

⁶⁴ [A/HRC/47/52](#).

⁶⁵ See [CEDAW/C/TJK/CO/7](#), [CEDAW/C/JAM/CO/8](#), [CEDAW/C/OMN/CO/4](#), [CEDAW/C/DEU/CO/9](#), [CEDAW/C/ESP/CO/9](#) and [CERD/C/DEU/CO/23-26](#).

⁶⁶ See Committee on the Elimination of Racial Discrimination, general recommendation No. 36 (2020); Human Rights Committee, general comment No. 37 (2020); and [CERD/C/ITA/CO/21](#), [CERD/C/BRA/CO/18-20](#), [CERD/C/THA/CO/4-8](#), [CCPR/C/GBR/CO/8](#) and [CEDAW/C/ITA/CO/8](#).

⁶⁷ See [A/74/821](#); <https://www.un.org/en/content/action-for-human-rights/index.shtml>; and <https://www.un.org/sites/un2.un.org/files/our-common-agenda-policy-brief-gobal-digi-compact-en.pdf>.

⁶⁸ See <https://www.un.org/en/ai-advisory-body>.

⁶⁹ [A/HRC/44/24](#).

⁷⁰ [A/HRC/48/31](#). See also [A/HRC/35/9](#) and [A/HRC/39/29](#).

⁷¹ See <https://www.ohchr.org/en/business-and-human-rights/b-tech-project>. Also see section VIII below.

⁷² General Assembly resolutions 77/211 and 78/213; and Human Rights Council resolution 47/16.

⁷³ [A/HRC/48/31](#).

⁷⁴ See paras. 4, 33 and 34 of the present report.

⁷⁵ [A/HRC/50/55](#).

26. In a 2020 report, the Secretary-General described ways in which digital technologies could promote economic, social and cultural rights and development. He presented a detailed vision for a human rights-based approach to technology that would ensure that societies benefited from digitalization while minimizing human rights harms. He highlighted core principles, including equality and non-discrimination, participation, accountability, legality, legitimacy, necessity and proportionality, inclusion, accessibility, availability, affordability, adaptability and the quality of new technologies.⁷⁶

27. The Special Rapporteur on extreme poverty and human rights has worked extensively on aspects of the digitalization of government functions, including in reports on the role of digital technologies in the context of social protection.⁷⁷ Other reports have contained analyses of the concept of universal basic income as a response to technology-related social and economic developments and set out a human rights-based approach to wages, including in the so-called gig economy.⁷⁸

28. The digitalization of education has been addressed in Human Rights Council resolutions and reports of the Special Rapporteur on the right to education.⁷⁹ Treaty bodies have frequently raised concerns about digital divides in education.⁸⁰ The role that digital technologies can play in advancing the development of medical treatments and facilitating universal health coverage has also been recognized.⁸¹ OHCHR has presented a series of reports identifying access to health technologies as a fundamental building block of the right to health⁸² and calling for equitable, affordable, timely and universal access for all countries to vaccines.⁸³ The Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health has raised concerns about the adverse mental health impacts of surveillance measures.⁸⁴ Neurotechnology is another area that has been taken up by the Council.⁸⁵

29. The Special Rapporteur on the right to development has indicated that digital technologies are a mandate priority and has reported on how technology companies can contribute to enabling the right to development.⁸⁶

30. The Special Rapporteur in the field of cultural rights has published reports on technology-related topics, including on the right to science⁸⁷ and the relationship between human rights and intellectual property rights.⁸⁸ The Independent Expert on the effects of foreign debt and other related international financial obligations of States on the full enjoyment of all human rights, particularly economic, social and cultural rights, has presented a report on international financial obligations, digital systems and human rights.⁸⁹

31. OHCHR has examined the human rights dimensions of development finance, including technology-related aspects, in, for example, a benchmarking study on development finance institutions' safeguard policies, a study on remedy in development finance and

⁷⁶ [A/HRC/43/29](#).

⁷⁷ [A/74/493](#) and [A/HRC/50/38](#). See also [A/HRC/38/33/Add.1](#) and [A/HRC/41/39/Add.1](#).

⁷⁸ [A/78/175](#) and [A/HRC/35/26](#).

⁷⁹ Human Rights Council resolutions 47/5, 47/6 and 53/7; and [A/HRC/32/37](#) and [A/HRC/50/32](#). See also [A/HRC/56/58/Add.1](#). The Special Rapporteur on the right to education will also issue a report on education and artificial intelligence; see <https://www.ohchr.org/en/calls-for-input/2024/call-contributions-artificial-intelligence-education-and-its-human-rights>.

⁸⁰ See Committee on the Elimination of Discrimination against Women, general recommendation No. 36 (2017); and [E/C.12/IDN/CO/2](#), [E/C.12/PRT/CO/5](#), [E/C.12/KHM/CO/2](#), [E/C.12/GTM/CO/4](#), [E/C.12/COD/CO/6](#) and [E/C.12/BOL/CO/3](#).

⁸¹ See Human Rights Council resolution 49/25; and [A/HRC/43/29](#) and [A/HRC/53/65](#).

⁸² [E/2023/74](#).

⁸³ [A/HRC/47/23](#) and [A/HRC/52/56](#).

⁸⁴ [A/HRC/44/48](#).

⁸⁵ See Human Rights Council resolution 51/3.

⁸⁶ See [A/78/160](#) and [A/HRC/54/27](#).

⁸⁷ [A/HRC/55/44](#) and [A/HRC/55/44/Corr.1](#).

⁸⁸ [A/70/279](#) and [A/70/279/Corr.1](#) and [A/HRC/28/57](#).

⁸⁹ [A/HRC/52/34](#).

submissions to development finance institutions addressing technology-related policies and practices.⁹⁰

32. Finally, the Office of the Envoy of the Secretary-General on Technology and the United Nations Development Programme have started developing a safeguards framework for digital public infrastructure.⁹¹

V. Discrimination, equality and specific groups

33. The harms and benefits of new technologies are often experienced in different ways, depending upon the identity of the affected individual or group. Based on the principles of non-discrimination and equality, the human rights system has already engaged with the disparate impacts of digital technologies. That work illustrates that differentiated adverse impacts on members of certain groups often intersect and that discrimination and exclusion can be fully grasped and addressed only through an intersectional approach.⁹² As noted above, digital divides are a major theme across the system. While there are many expressions of and contributors to digital divides, gaps in digital literacy and skills that often affect women, children and disadvantaged groups are frequently mentioned.⁹³

34. Gender digital divides have been a major concern for years.⁹⁴ In a 2017 report, OHCHR outlined a human rights-based approach to such divides.⁹⁵ Gender digital divides in education have been addressed by the Committee on the Elimination of Discrimination against Women in its general recommendation No. 36 (2017), the Committee on Economic, Social and Cultural Rights in its general comment No. 25 (2020) and the Special Rapporteur on the right to education in a 2022 report.⁹⁶ The Special Rapporteur on the right to health has addressed gender digital disparities in a report on digital innovation, technology and the right to health.⁹⁷

35. Online gender-based violence has been raised by special procedure mandate holders,⁹⁸ treaty bodies⁹⁹ and in the universal periodic review.¹⁰⁰ The Secretary-General and UNESCO

⁹⁰ See <https://www.ohchr.org/en/development/development-finance-institutions>.

⁹¹ See <https://www.dpi-safeguards.org>.

⁹² See General Assembly resolution 78/187; Human Rights Council resolutions 38/5, 40/12, 47/16 and 51/10; [A/75/590](#), [A/HRC/38/47](#), [A/HRC/40/60](#), [A/HRC/44/52](#), [A/HRC/44/57](#) and [A/HRC/50/25](#); Committee on the Elimination of Discrimination against Women, general recommendations No. 35 (2017) and No. 39 (2022); Committee on the Elimination of Racial Discrimination, general recommendation No. 36 (2020); [CRC/C/GBR/CO/6-7](#); [CRC/C/CRI/CO/5-6](#); [CRC/C/BOL/CO/5-6](#); [CRC/C/VNM/CO/5-6](#); and [CEDAW/C/FRA/CO/9](#), [CEDAW/C/ESP/CO/9](#), [CEDAW/C/CHN/CO/9](#) and [CEDAW/C/NZL/CO/8](#). See also Committee on the Elimination of Discrimination against Women, general recommendation No. 28 (2010); Committee on the Elimination of Racial Discrimination, general recommendation No. 32 (2009); and <https://www.ohchr.org/sites/default/files/documents/issues/minorities/30th-anniversary/2022-09-22/GuidanceNoteonIntersectionality.pdf>.

⁹³ See General Assembly resolution 78/213; Human Rights Council resolutions 47/16, 50/15 and 51/10; [A/66/290](#), [A/HRC/35/9](#), [A/HRC/50/25](#) and [A/HRC/53/65](#); Committee on the Elimination of Discrimination against Women, general recommendation No. 36 (2017); Committee on the Rights of the Child, general comment No. 25 (2021); and [CEDAW/C/BTN/CO/10](#), [CEDAW/C/UKR/CO/9](#), [CEDAW/C/VEN/CO/9](#), [CEDAW/C/CRI/CO/8](#) and [CEDAW/C/BOL/CO/7](#).

⁹⁴ See Human Rights Council resolutions 23/2, 44/12, 47/5, 50/18 and 53/7.

⁹⁵ [A/HRC/35/9](#).

⁹⁶ [A/HRC/50/32](#).

⁹⁷ [A/HRC/53/65](#).

⁹⁸ See [A/76/258](#), [A/HRC/38/47](#), [A/HRC/38/47/Add.1](#), [A/HRC/41/42/Add.1](#), [A/HRC/41/42/Add.2](#) and [A/HRC/44/52/Add.2](#).

⁹⁹ See Committee on the Elimination of Discrimination against Women, general recommendation No. 39 (2022); and [CEDAW/C/TJK/CO/7](#), [CEDAW/C/URY/CO/10](#), [CEDAW/C/DEU/CO/9](#), [CEDAW/C/VEN/CO/9](#); [CEDAW/C/GMB/CO/6](#); [CEDAW/C/CHE/CO/6](#); [CEDAW/C/BOL/CO/7](#); [CEDAW/C/LBN/CO/6](#), [CEDAW/C/ECU/CO/10](#), [CRC/C/FIN/CO/5-6](#), [CRC/C/JOR/CO/6](#) and [CRC/C/SWE/CO/6-7](#).

¹⁰⁰ See [A/HRC/53/11](#) and [A/HRC/52/6](#).

have identified gender-based online violence as a major threat to women journalists.¹⁰¹ Another topic of major concern has been the technology-mediated facilitation of trafficking in women.¹⁰²

36. There is a growing understanding of the gender dimension of the right to privacy, which has been highlighted by OHCHR and the Special Rapporteur on the right to privacy.¹⁰³ Resolutions on the right to privacy have addressed gender questions prominently, including gender-based violence, abuse and sexual harassment, discrimination, cyberbullying and cyberstalking.¹⁰⁴

37. The Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression has repeatedly addressed gender-related issues, including in reports on gender justice,¹⁰⁵ gendered disinformation¹⁰⁶ and the safety of journalists.¹⁰⁷ The Working Group on discrimination against women and girls has raised concerns about the pervasive online surveillance of women activists.¹⁰⁸

38. The Commission on the Status of Women devoted its sixty-seventh session entirely to technology-related questions.¹⁰⁹

39. The human rights of children are another key topic. In its general comment No. 25 (2021), the Committee on the Rights of the Child provided comprehensive authoritative guidance on the enjoyment of human rights by children in the digital age. Discussions on child rights uniformly recognize that digital technologies are uniquely able to facilitate and expand children's enjoyment of human rights. Reflecting Sustainable Development Goal target 16.2, aimed at ending abuse, exploitation, trafficking and all forms of violence against and torture of children, key issues addressed have included cyberbullying, sexual abuse and exploitation and the sale of children and trafficking.¹¹⁰ OHCHR will soon submit reports to the Human Rights Council on solutions for promoting digital education for young people and ensuring their protection from online threats and on the use of digital technologies to achieve universal birth registration.¹¹¹

40. Racial discrimination in the context of digital technologies is widely recognized as a concern that cuts across the full range of human rights and such issues as hate speech, content

¹⁰¹ See [A/72/290](#); and <https://unesdoc.unesco.org/ark:/48223/pf0000375136.locale=en>.

¹⁰² See Committee on the Elimination of Discrimination against Women, general recommendation No. 38 (2020); and [CEDAW/C/HUN/CO/9](#), [CEDAW/C/TUN/CO/7](#) and [CEDAW/C/LIE/CO/5/Rev.1](#).

¹⁰³ See [A/HRC/35/9](#) and [A/HRC/40/63](#) and annex.

¹⁰⁴ See, for example, General Assembly resolutions 75/176 and 77/211; and Human Rights Council resolution 54/21.

¹⁰⁵ [A/76/258](#).

¹⁰⁶ [A/78/288](#). See also [A/77/288](#).

¹⁰⁷ [A/HRC/50/29](#).

¹⁰⁸ See [A/HRC/50/25](#).

¹⁰⁹ See [E/2023/27-E/CN.6/2023/14](#).

¹¹⁰ See, for example, General Assembly resolutions 74/133 and 78/187; Human Rights Council resolutions 31/7, 38/5, 50/15, 51/10, 52/26 and 54/21; and [A/HRC/17/27](#), [A/HRC/28/56](#), [A/HRC/43/40](#), [A/HRC/46/31](#) and [A/HRC/49/51](#). See also <https://www.ohchr.org/en/news/2023/09/human-rights-council-holds-panel-discussion-cyberbullying-against-children-hearing-it>; Committee on the Rights of the Child, general comment No. 25 (2021); [CRC/C/156](#); <https://www.ohchr.org/sites/default/files/Documents/HRBodies/CRC/OPSC-Guidelines-Explanatory-Report-ECPAT-International-2019.pdf>; [CCPR/C/SWE/CO/7](#), [CEDAW/C/HUN/CO/9](#), [CEDAW/C/LIE/CO/5/Rev.1](#), [CRC/C/BGR/CO/6-7](#), [CRC/C/AND/CO/3-5](#), [CRC/C/LIE/CO/3-4](#), [CRC/C/FRA/CO/6-7](#), [CRC/C/FIN/CO/5-6](#), [CRC/C/BOL/CO/5-6](#) and [CRC/C/IRL/CO/5-6](#); and communications OTH 11/202, OTH 21/2021, OTH 5/2021 and OTH 39/2020; [A/HRC/31/20](#), [A/HRC/52/61](#), [A/71/213](#) and [A/73/265](#); <https://violenceagainstchildren.un.org/news/a-safer-digital-environment-for-children-now-is-the-time-to-act>; and <https://violenceagainstchildren.un.org/news/ending-torment-tackling-bullying-schoolyard-cyberspace>.

¹¹¹ See Human Rights Council resolution 52/25.

governance, health,¹¹² surveillance¹¹³ and artificial intelligence.¹¹⁴ Resolutions have addressed racism and racial discrimination consistently.¹¹⁵ Special procedure mandate holders frequently have addressed racism in the digital environment, including in a series of reports of the Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance.¹¹⁶ The Committee on the Elimination of Racial Discrimination devoted a large part of its general recommendation No. 36 (2020) on preventing and combating racial profiling by law enforcement officials to algorithmic profiling.

41. Important work on people on the move¹¹⁷ includes a report on the use of technology at borders by the Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance,¹¹⁸ papers by the Special Rapporteur on the promotion and protection of human rights and fundamental freedoms while countering terrorism¹¹⁹ and a study on digital border governance by OHCHR and the University of Essex.¹²⁰

42. The Independent Expert on the enjoyment of all human rights by older persons has published a series of thematic and country reports that have shed light on digital divides, the impact of assistive and robotics technology, artificial intelligence and automation on human rights and the significance of data for protecting and promoting the rights of older persons.¹²¹ Several special procedure mandate holders and OHCHR have been contributing to the technology-related work of the Open-ended Working Group on Ageing.¹²²

43. The intersection of the rights of persons with disabilities and digital technologies has been gaining increased visibility, with attention to the opportunities offered by digital technology as a rights enabler and the lack of access of persons with disabilities to adequate digital technology, services and content.¹²³ In its general comment No. 25 (2020), the Committee on Economic, Social and Cultural Rights was outspoken about the deep discrimination against persons with disabilities in the enjoyment of their right to participate in and enjoy the benefits of scientific progress and its applications, outlining minimum steps to be taken to combat that discrimination. The Special Rapporteur on the rights of persons with disabilities has published a comprehensive report on artificial intelligence¹²⁴ and has also addressed digital technology and the rights of older persons with disabilities.¹²⁵ In

¹¹² See [A/HRC/53/65](#).

¹¹³ See, for example, [A/HRC/44/57](#), [A/HRC/50/49](#) and [A/HRC/51/17](#).

¹¹⁴ [A/HRC/48/31](#); conference room paper of the High Commissioner on the promotion and protection of the human rights and fundamental freedoms of Africans and of people of African descent against excessive use of force and other human rights violations by law enforcement officers, available at https://www.ohchr.org/sites/default/files/Documents/Issues/Racism/A_HRC_47_CRP_1.pdf; and Committee on the Elimination of Racial Discrimination, general recommendation No. 36 (2020).

¹¹⁵ See, for example, General Assembly resolutions 77/211 and 78/213; and Human Rights Council resolutions 49/21, 51/10, 53/29 and 54/21.

¹¹⁶ [A/67/326](#), [A/75/590](#), and [A/HRC/48/76](#). See also [A/HRC/42/59](#).

¹¹⁷ See General Assembly resolution 78/187; and Human Rights Council resolution 53/7.

¹¹⁸ [A/75/590](#).

¹¹⁹ See <https://www.ohchr.org/sites/default/files/documents/issues/terrorism/sr/statements/2023-10-30-act-travel-gottravel-position-paper.pdf>; <https://law.umn.edu/human-rights-center/research/use-biometric-data-identify-terrorists>; and [A/HRC/52/39](#).

¹²⁰ See <https://www.ohchr.org/en/documents/tools-and-resources/digital-border-governance-human-rights-based-approach>.

¹²¹ [A/HRC/36/48](#), [A/HRC/42/43](#), [A/HRC/45/14](#), [A/HRC/45/14/Add.1](#) (and comments by the State, [A/HRC/45/14/Add.3](#)) and [A/HRC/51/27/Add.1](#).

¹²² See [A/HRC/52/49](#); working document submitted by OHCHR on substantive inputs in the form of normative content for the development of a possible international standard on the focus areas “right to health and access to health services” and “social inclusion”, available at https://social.un.org/ageing-working-group/documents/fourteenth%20session/A_AC.278_2024_CRP.2.pdf; and <https://social.un.org/ageing-working-group/index.shtml>.

¹²³ General Assembly resolutions 78/187 and 78/213; and [CRPD/C/MRT/CO/1](#), [CRPD/C/MNG/CO/2-3](#) and [CRPD/C/ISR/CO/1](#).

¹²⁴ [A/HRC/49/52](#).

¹²⁵ [A/74/186](#).

addition, OHCHR developed a report on countering cyberbullying against persons with disabilities for submission to the Human Rights Council at its fifty-sixth session.¹²⁶

44. Regarding minorities and Indigenous Peoples, the human rights system has engaged with such issues as hate speech and social media, the role of Indigenous women as scientific and technical knowledge keepers and the right to science in the context of the science and traditional knowledge of Indigenous Peoples.¹²⁷

VI. International security, armed conflict and new and emerging technologies in the military domain

45. Like the specialized United Nations mechanisms,¹²⁸ the Human Rights Council has engaged recently with the issue of human rights law in cyberspace in international security contexts, adopting resolution 51/22, in which it requested its Advisory Committee to prepare a study for its sixtieth session examining the human rights implications of new and emerging technologies in the military domain. It has also established an open-ended intergovernmental working group to elaborate the content of an international regulatory framework, without prejudging the nature thereof, to protect human rights and ensure accountability for violations and abuses relating to the activities of private military and security companies, which would also contain a discussion of cyberspace-related matters.¹²⁹

46. In its general comment No. 36 (2018) on the right to life, the Human Rights Council provided a key interpretation of international human rights law as it relates to the use of new technologies in armed conflict and in the military domain. The Committee on the Rights of the Child, in its general comment No. 25 (2021) on children's rights in relation to the digital environment, affirmed that the State had a duty to ensure that children were not recruited or used in conflicts through technology-facilitated solicitation and grooming.

47. The use of drones or unmanned aerial vehicles to conduct targeted killings and the lack of transparency regarding criteria for drone strikes were among the first issues considered by human rights treaty bodies regarding the human rights implications of new technologies in the military domain.¹³⁰ The Human Rights Committee has raised concerns about the practice of targeted killings in extraterritorial counter-terrorism operations using drones, the lack of transparency about such attacks and the lack of accountability for the loss of life resulting from them. Several treaty bodies have considered the use, transfer and regulation of military technologies.¹³¹

48. Special procedure mandate holders have discussed the human rights implications of technological developments in the military domain and armed conflict since the early 2010s. In several reports, the Special Rapporteur on extrajudicial, summary or arbitrary executions has discussed autonomous weapons and armed drones, including for targeted killings,¹³² and

¹²⁶ [A/HRC/56/31](#).

¹²⁷ See [A/HRC/46/57](#), [A/HRC/51/28](#) and [A/HRC/55/44](#) and [A/HRC/55/44/Corr.1](#). See also Committee on Economic, Social and Cultural Rights, general comment No. 25 (2020); <https://www.ohchr.org/en/events/forums/2020/thirteenth-session-forum-minority-issues>; and Human Rights Council resolutions 38/5, 50/17 and 53/29.

¹²⁸ See reports of the Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security (for example, [A/76/135](#) and [A/70/174](#)). See also final substantive report of the Open-ended Working Group on Developments in the Field of Information and Telecommunications in the Context of International Security, available at <https://front.un-arm.org/wp-content/uploads/2021/03/Final-report-A-AC.290-2021-CRP.2.pdf>; and programme of action to advance responsible State behaviour in the use of information and communications technologies in the context of international security (General Assembly resolution 77/37).

¹²⁹ See <https://www.ohchr.org/en/hr-bodies/hrc/pms-cs/igwg-index1>.

¹³⁰ See [CCPR/C/USA/CO/4](#), [CCPR/C/USA/CO/5](#) and [CCPR/C/DEU/CO/7](#).

¹³¹ See [CRC/C/OPAC/MDA/CO/1](#) and [CEDAW/C/ITA/CO/7](#).

¹³² [A/65/321](#), [A/68/382](#) and [A/68/382/Corr.1](#), [A/69/265](#), [A/71/372](#), [A/HRC/23/47](#), [A/HRC/26/36](#), [A/HRC/29/37](#) and [A/HRC/44/38](#); and conference room paper of the Special Rapporteur on extrajudicial, summary or arbitrary executions, available at

dedicated another report to examining the use of ICT to secure the right to life.¹³³ The Working Group on the use of mercenaries as a means of violating human rights and impeding the exercise of the right of peoples to self-determination has addressed questions around cyberwarfare and the provision of the services of mercenaries, mercenary-related actors and private military and security companies.¹³⁴ Several special procedure communications have addressed the human rights implications of new technologies in the military domain and in conflict, particularly the use of drones for targeted killings as well as the sale of military technologies.¹³⁵

VII. Rule of law and the administration of justice

49. The United Nations human rights system has addressed the effects of digitalization on the administration of justice. A main topic is crime investigation, with a particular focus on surveillance.

50. Another important topic is the digitalization of court systems, from e-filing and digitized case management systems¹³⁶ to the conduct of online hearings.¹³⁷ Issues at the enforcement stage of court decisions include the constant video surveillance of prisoners¹³⁸ and the lack of use of closed-circuit television cameras and other tools monitor police and prison guards¹³⁹ and of electronic monitoring as an alternative to detention.¹⁴⁰ Other concerns raised include disinformation and online attacks targeting judges and lawyers.¹⁴¹

51. The impacts of artificial intelligence on the administration of justice, for example when it is used for predictive policing, as an investigative tool or in the context of making sentencing, parole or release decisions, is another important area.¹⁴² The multifaceted ways in which neurotechnology may undermine fair trial guarantees is a critical emerging field.¹⁴³

VIII. Role of the private sector

52. The private sector has enormous influence in the digital sphere, including through its potential to foster rights-respecting conduct. Indeed, resolutions of the Human Rights Council and the General Assembly have highlighted the increasing centrality of the private sector in the context of digitalization and its relevance to safeguarding and advancing human rights,¹⁴⁴ and specific recommendations to States and businesses have increased in recent years.¹⁴⁵ The Guiding Principles on Business and Human Rights are consistently referred to, confirming their role as the leading framework for preventing and addressing business-related human rights harms connected to digital technologies. The Guiding Principles underscore the business responsibility to respect human rights and re-emphasize

<https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/sessions-regular/session56/a-hrc-56-crp-5.pdf>.

¹³³ [A/HRC/29/37](#).

¹³⁴ [A/75/259](#) and [A/76/151](#).

¹³⁵ Communications USA 5/2015, YEM 1/2015, ISR 9/2014, OTH 131/2023 and ISR 8/2023.

¹³⁶ See [A/78/184](#) and [CEDAW/C/BTN/CO/10](#).

¹³⁷ See [A/HRC/47/35](#) and [A/HRC/47/35/Corr.1](#). See also

<https://www.ohchr.org/sites/default/files/documents/issues/ruleoflaw/Briefer-Online-hearings-justice-systems.pdf>; and [CCPR/C/111/D/2041/2011](#).

¹³⁸ See [CAT/C/ITA/CO/5-6](#) and [CAT/C/KAZ/CO/4](#).

¹³⁹ See [CAT/C/AZE/CO/5](#), [CAT/C/ROU/CO/3](#) and [CAT/C/BRA/CO/2](#).

¹⁴⁰ See Human Rights Committee, general comment No. 35 (2014); and [CAT/OP/MKD/1](#), [CCPR/C/BEL/CO/5](#), [CCPR/C/KAZ/CO/1](#) and [CCPR/C/TUR/CO/1](#).

¹⁴¹ See [A/HRC/53/31](#).

¹⁴² See [A/HRC/48/31](#), [A/HRC/51/17](#) and [A/HRC/53/31](#); and Committee on the Elimination of Racial Discrimination, general recommendation No. 36 (2020). See also [CEDAW/C/ITA/CO/8](#).

¹⁴³ See Human Rights Council resolution 51/3; and [A/76/380](#).

¹⁴⁴ General Assembly resolutions 68/167 and 69/166; and Human Rights Council resolutions 26/13 and 28/16.

¹⁴⁵ See General Assembly resolutions 71/199, 73/179, 75/176, 77/211 and 78/213; and Human Rights Council resolutions 34/7, 42/15, 47/23, 48/4, 53/29 and 54/21.

the State duty to protect human rights and access to remedy for human rights harms relating to business conduct. The report by OHCHR on the practical application of the Guiding Principles on Business and Human Rights to the activities of technology companies provides a comprehensive overview of the role and application of the Guiding Principles with regard to new and emerging technologies.¹⁴⁶

53. Other human rights mechanisms have reflected the growing attention to and more granular analysis of the human rights issues arising from business activities in the digital space. Since at least the early 2010s,¹⁴⁷ special procedure mandate holders have reflected on ways in which the enjoyment of human rights in the digital space depends upon the private sector. The Special Rapporteur on the right to freedom of opinion and expression should be mentioned, in particular, for a groundbreaking series of studies developing a clear human rights-based concept for business conduct by technology companies and an approach to the regulation of digital sectors.¹⁴⁸ The Working Group on the issue of human rights and transnational corporations and other business enterprises has devoted increasing attention to digital matters, including through the communication procedure, and has made optimizing digital transformation through respect for human rights a priority goal for the next decade for business and human rights.¹⁴⁹ Business-related aspects are considered in many other reports. They include reports of the Special Rapporteurs on the rights of persons with disabilities,¹⁵⁰ on contemporary forms of racism, racial discrimination, xenophobia and related intolerance,¹⁵¹ on violence against women and girls, its causes and consequences,¹⁵² on minority issues,¹⁵³ on the sale, sexual exploitation and sexual abuse of children,¹⁵⁴ on freedom of religion or belief,¹⁵⁵ on the promotion and protection of human rights and fundamental freedoms while countering terrorism,¹⁵⁶ on the right to privacy¹⁵⁷ and on extreme poverty and human rights.¹⁵⁸ The Working Group on the use of mercenaries has examined the provision of military and security products and services in cyberspace by mercenaries, mercenary-related actors and private military and security companies and its human rights impacts.¹⁵⁹ Special procedure mandate holders have also addressed businesses and States on matters relating to business conduct, including domestic legal frameworks.^{160 161}

54. The Forum on Business and Human Rights¹⁶² has increasingly considered issues relating to digital technologies.¹⁶³

55. OHCHR has developed extensive guidance for States and the private sector on how to address business-related human rights challenges, including in its reporting to the Council.¹⁶⁴ OHCHR has deep expertise in the application of the Guiding Principles on Business and Human Rights in the digital sphere.¹⁶⁵ Its B-Tech project¹⁶⁶ provides

¹⁴⁶ [A/HRC/50/56](#).

¹⁴⁷ See, for example, [A/HRC/17/27](#).

¹⁴⁸ [A/73/348](#), [A/HRC/32/38](#), [A/HRC/35/22](#), [A/HRC/35/22/Add.4](#), [A/HRC/38/35](#) and [A/HRC/41/35](#).

¹⁴⁹ See [A/HRC/50/40/Add.3](#).

¹⁵⁰ [A/HRC/49/52](#).

¹⁵¹ [A/67/326](#), [A/75/590](#), [A/HRC/26/49](#) and [A/HRC/26/49/Corr.1](#) and [A/HRC/44/57](#).

¹⁵² [A/HRC/38/47](#).

¹⁵³ [A/HRC/46/57](#).

¹⁵⁴ [A/HRC/28/56](#) and [A/HRC/49/51](#).

¹⁵⁵ [A/76/380](#).

¹⁵⁶ [A/HRC/52/39](#).

¹⁵⁷ [A/HRC/46/37](#).

¹⁵⁸ [A/78/175](#).

¹⁵⁹ See [A/76/151](#).

¹⁶⁰ See, for example, communications OTH 90/2023 and response, OTH 62/2023 and response, OTH 11/2023, OTH 10/2023, OTH 126/2022 and OTH 211/2021 and response.

¹⁶¹ See, for example, communications USA 13/2024, ISR 5/2023, GBR 5/2022 and response, BRA 6/2020, IND 3/2019 and response and PAK 3/2020 and response.

¹⁶² See <https://www.ohchr.org/en/hrc-subsiary-bodies/united-nations-forum-business-and-human-rights>.

¹⁶³ See [A/HRC/38/49](#), [A/HRC/41/49](#), [A/HRC/44/56](#) and [A/HRC/47/50](#).

¹⁶⁴ [A/HRC/27/37](#), [A/HRC/35/9](#), [A/HRC/39/29](#), [A/HRC/48/31](#), [A/HRC/51/17](#) and [A/HRC/53/42](#).

¹⁶⁵ See [A/HRC/50/45/Add.1](#), [A/HRC/50/56](#) and [A/HRC/50/56/Add.1](#).

¹⁶⁶ See <https://www.ohchr.org/en/business-and-human-rights/b-tech-project>.

authoritative practical guidance and public policy recommendations on applying the Guiding Principles to the development, application and governance of digital technologies. Under that project, OHCHR has established an innovative company community of practice to provide a space for technology companies and the Office to discuss common challenges, solutions and best practices relating to incorporating human rights into company policies and processes. The project addresses business model-related human rights risks, human rights due diligence and end-use, access to remedy, investor responsibilities, the State duty to protect and the smart mix of mandatory and voluntary measures to be taken by States to respond to human rights challenges linked to digital technologies. In 2023, B-Tech launched a project focusing on generative artificial intelligence, resulting in a foundational paper,¹⁶⁷ a taxonomy of generative artificial intelligence human rights harms¹⁶⁸ and an overview of human rights and responsible artificial intelligence company practice.¹⁶⁹

IX. Summary of existing work and identification of gaps

Achievements

56. The review the United Nations human rights system outputs relating to digital technologies revealed an impressive body of work. Its breadth and depth made it difficult to identify and adequately assess all the relevant material within the confines of the present report, confirming a key finding of the mapping: that the human rights system has been immensely productive in responding to the manifold challenges of the digitalization of societies, even if gaps and shortcomings remain.

57. The Human Rights Council and the General Assembly have addressed human rights issues relating to digital technologies in many resolutions, consistently affirming since 2012 that the same rights that people have offline must also be protected online.¹⁷⁰ Panel discussions and other official meetings on digital themes¹⁷¹ have added opportunities to deepen discussions among States and stakeholders.

58. The special procedure mandate holders have tackled the challenges of the digital age for at least 15 years, constantly expanding the scope of their work to new aspects of digitalization across the spectrum of human rights. Thematic reports have provided nuanced

¹⁶⁷ See <https://www.ohchr.org/sites/default/files/documents/issues/business/b-tech/recommendations/advancing-responsible-development-and-deployment-of-GenAI.pdf>.

¹⁶⁸ See <https://www.ohchr.org/sites/default/files/documents/issues/business/b-tech/taxonomy-GenAI-Human-Rights-Harms.pdf>.

¹⁶⁹ See <https://www.ohchr.org/sites/default/files/documents/issues/business/b-tech/overview-human-rights-and-responsible-AI-company-practice.pdf>.

¹⁷⁰ See, for example, Human Rights Council resolution 20/8.

¹⁷¹ See, for example, panel discussion on the right to privacy in the digital age, twenty-seventh session of the Human Rights Council (summary report (A/HRC/28/39)); panel discussion on the impacts, opportunities and challenges of new and emerging digital technologies with regard to the promotion and protection of human rights, forty-fourth session of the Human Rights Council (see https://www.ohchr.org/sites/default/files/HRBodies/HRC/RegularSessions/Session44/Documents/CN_HRC44_newtechupdated.docx); panel discussion on digital, media and information literacy, fifty-third session of the Human Rights Council (summary report (A/HRC/54/49)); annual full-day meeting on the rights of the child on the rights of the child and the digital environment, fifty-second session of the Human Rights Council (see https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ohchr.org%2Fsites%2Fdefault%2Ffiles%2Fdocuments%2Fhrbodies%2Fhrcouncil%2Fsessions-regular%2Fsession52%2Fpanel-discussions%2FCN_RoC_annual-day_23-03-02.docx&wdOrigin=BROWSELINK); panel discussion on cyberbullying against children, fifty-fourth session of the Human Rights Council (see <https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ohchr.org%2Fsites%2Fdefault%2Ffiles%2Fdocuments%2Fhrbodies%2Fhrcouncil%2Fsessions-regular%2Fsession54%2Fcn-cyberbullying-panel-23-09-22.docx&wdOrigin=BROWSELINK>); and intersessional meeting to mark the seventy-fifth anniversary of the Convention on the Prevention and Punishment of the Crime of Genocide and to discuss the role of social media, 4 December 2023 (see <https://www.ohchr.org/en/hr-bodies/hrc/to-mark-the-75th-anniversary-of-the-convention-genocide>). See also <https://www.ohchr.org/en/hr-bodies/hrc/to-mark-the-75th-anniversary-of-the-convention-genocide>.

analysis on topics including Internet access and surveillance, online information controls, hate speech, racism embedded in technology, health, worker's protections in the gig economy, education and the alleviation of poverty. Country visits and related reports as well as communications have enabled more targeted engagement with States and stakeholders.

59. Questions about human rights as they relate to digital technology have been raised many times in the universal periodic review, although with limited scope and depth. Treaty bodies have increasingly taken up topics relating to digital technology, including through general comments and general recommendations, which are particularly helpful in guiding the interpretation of human rights instruments. Concluding observations on key issues are also instrumental in helping States to adjust laws, policies and practices for compliance with human rights obligations. Due to their concise nature, however, universal periodic review recommendations and treaty body concluding observations do not always allow for a full elaboration of the issues.

60. The work of the High Commissioner and OHCHR on digital technologies covers a growing range of topics, including the gender digital divide, data privacy, surveillance, end-to-end encryption, Internet shutdowns, the role of technology in the context of peaceful assemblies, technical standards, the governance of content on Internet platforms and border governance. Thematic reports and studies have helped to advance the human rights discourse around digital technologies, while the B-Tech project has provided guidance to companies, States and other stakeholders on the implementation of the Guiding Principles on Business and Human Rights in the technology sector. OHCHR also provides advice on national and international law-making processes and plays a key role in the mainstreaming of human rights considerations in technology-related discussions across the United Nations. The endorsement in 2024 of human rights due diligence guidance for digital technology use, for example, was a crucial step towards ensuring that the United Nations uses digital technologies in ways that uphold human rights. In 2022, OHCHR and the University of California Berkeley published the *Berkeley Protocol on Digital Open Source Investigations*, identifying international standards for conducting online research into alleged violations of international criminal, human rights and humanitarian law.

61. The present mapping exercise demonstrates the relevance and necessity of using the international human rights framework to govern the development and use of digital technologies. International human rights law provides the guardrails required to maximize the benefits and added value of digital technologies, while reducing and containing their potential detrimental human rights impacts. Any protection gaps result from gaps in implementation rather than a lack of established obligations for States and responsibilities for businesses. Using a human rights lens ensures that the necessary actions can be directed in such a way as to avoid risks and realize opportunities to promote well-being.

62. Several reports of special procedure mandate holders and the High Commissioner have had a constructive impact on international and domestic processes. Many recommendations from such reports have been reflected in human rights resolutions. The reports are cited by courts, including regional human rights courts¹⁷² and used by lawmakers and technology companies and in public debate. Such documents as the Rabat Plan of Action, developed under the auspices of OHCHR, shape international approaches to hate speech, including online. Communications sent by special procedure mandate holders to Governments and other stakeholders, including international organizations and businesses, remain an effective and nimble instrument for raising time-sensitive concerns in the rapidly evolving area of digital technologies. They provide detailed analysis relating, in particular, to specific laws or situations of concern and complement more general thematic reports and universal periodic review and treaty body recommendations. OHCHR also provides inputs and technical assistance to legislative and regulatory processes, where appropriate.

63. The mapping exercise revealed that the human rights system has responded to impacts on the full range of human rights. It also confirmed that the key human rights principles remain highly relevant in the digital realm, including equality and non-discrimination,

¹⁷² See, for example, European Court of Human Rights, *Podchasov v. Russia*, Application No. 33696/19, Judgment, 13 February 2024.

participation, accountability, legality, legitimacy, necessity and proportionality and inclusion. With regard to economic, social and cultural rights, the exercise underscored the importance of accessibility, availability, affordability, adaptability and quality. It is also noteworthy that the concept of human rights due diligence is becoming a central element of efforts to respond to human rights challenges linked to digital technologies.¹⁷³

Gaps

64. While the impact of the outputs of the United Nations human rights ecosystem is undeniably positive, gaps can be identified. The large number of actors and processes in the human rights system addressing issues of digital technology can lead to overlap and, at times, tensions between outcomes, if coordination efforts are not sufficient. In recent years, an increasing number of resolutions have been dedicated to or prominently addressed issues of digital technology, including artificial intelligence. While this is a welcome sign of growing attention, risks include the duplication of effort, the thinning of sparse resources and ambiguity or lack of clarity, with the initiatives approaching related issues in different ways. Given the engagement of many actors on a broad range of topics, such inconsistencies and contradictions will arise, particularly if existing work is not considered. Some challenges may relate to the nature of certain outputs of the human rights mechanisms, including the necessary brevity of universal periodic review recommendations and treaty body concluding observations, sometimes limiting the space for a full reflection of the complexity of an issue. For example, a short recommendation urging the regulation of social media may fail to provide sufficient guidance on how to address adequately the human rights risks of such laws.

65. More needs to be done to ensure that the recommendations of the human rights system are implemented by decision makers on the ground. A major obstacle is the lack of visibility of relevant documents and of easy access to them, as they are currently dispersed across several databases and websites with limited search functionality. The United Nations Human Rights and Digital Technology Hub,¹⁷⁴ which provides access to United Nations documents on technology and human rights, is a valuable initiative but its resources must be increased considerably for it to function as a one-stop shop.

66. Other forums, such as those dealing with trade and e-commerce, intellectual property, technical standard-setting and peace and security, should include a human rights approach in their discussions and decisions, taking into account the views and recommendations of the United Nations human rights mechanisms.

67. The mapping exercise also revealed a gap in tools and capacity to regularly provide detailed, context-specific advice on technology-related questions, especially in relation to legislative and large digital infrastructure processes, where such advice is urgently needed and often requested. The United Nations human rights system's capacity to provide detailed, tailored advice capable of addressing complex and intersecting issues arising from digital technologies must be expanded to respond to growing needs. This means increasing the pool of subject-matter experts capable of working on such issues as they relate to both human rights and specific technologies and sectors, with relevant regional experience and language skills and the support to build on and share good practices and ensure coherence.

X. Recommendations

68. **The High Commissioner for Human Rights recommends that:**

- (a) **States, businesses and other stakeholders duly take into account and implement the recommendations of the United Nations human rights ecosystem that apply to the design, development, operation, use and regulation of digital technologies;**
- (b) **The capacity and effectiveness of the United Nations human rights ecosystem be further increased for comprehensive work on digital technology across**

¹⁷³ See General Assembly resolution 78/213; Human Rights Council resolutions 53/29 and 54/21; and [A/HRC/48/31](#) and [A/HRC/53/42](#).

¹⁷⁴ See <https://www.digitalhub.ohchr.org>.

the full range of rights and relevant technologies, in particular the ability to provide guidance for the implementation of the human rights obligations and responsibilities of States and businesses in the context of digital technologies;

(c) To address gaps in applying human rights in the digital sphere, an advisory service on human rights in the digital space be established by OHCHR to support Member States and stakeholders in integrating human rights into the design, development, operation, use and regulation of digital technologies, as suggested by the Secretary-General.¹⁷⁵ The service would:

(i) Support national and regional policy, regulatory and legislative efforts to integrate human rights standards and approaches relating to digital technology;

(ii) Encourage the technology sector to meet its human rights responsibilities by providing advisory views on key issues with regard to business responsibilities, as well as accountability and remedy;

(d) Appropriate measures be explored and taken to improve discussion and coordination among the United Nations human rights mechanisms to support complementarity and coherence in their work in the field of digital technologies. For example, special procedure mandate holders could enhance the coordination of their work on digital technologies, including by the establishment of a coordination group. OHCHR could support and facilitate exchanges between the various mechanisms and hold regular briefings on technological, policy and regulatory trends;

(e) Efforts be enhanced to ensure that human rights are fully considered across all policy areas relevant to the governance of digital technologies, such as trade, e-commerce, intellectual property, competition law, peace and security, cybercrime¹⁷⁶ and cybersecurity. The Human Rights Council could take a leading role in this regard, for example by systematically hosting panels and other meetings with key actors in those fields or establishing forums and avenues for coordination;

(f) The information management infrastructure across the United Nations human rights ecosystem be improved to ensure streamlined access to all its outputs. Additional resources should be provided to enable OHCHR to create and maintain a state-of-the-art digital resource hub, building on existing databases and search tools and the Human Rights and Digital Technology Hub and aligning it with the OHCHR feasibility study;¹⁷⁷

(g) Capacity on digital technology and human rights be deepened through support of the integration of technical expertise into human rights work, using a variety of means, including dedicated technical expertise provided by OHCHR, strengthened joint efforts with technical entities and the enhancement of capacity-building and training;

(h) Approaches to building on the success of the universal periodic review be considered, including using peer-review approaches to allow for deeper discussions in such cross-cutting areas as digital technologies and human rights and to determine good practices, identify gaps and match resources with areas of need.

¹⁷⁵ See Our Common Agenda policy brief 5.

¹⁷⁶ See the work of OHCHR on the elaboration of a new cybercrime convention, available at https://www.unodc.org/documents/Cybercrime/AdHocCommittee/First_session/OHCHR_17_Jan.pdf; https://www.unodc.org/documents/Cybercrime/AdHocCommittee/6th_Session/Submissions/Multi-stakeholders/OHCHR1.pdf; and <https://www.ohchr.org/en/documents/tools-and-resources/human-rights-and-draft-cybercrime-convention>.

¹⁷⁷ A/HRC/56/27.