



## LEGAL AND PROTECTION POLICY RESEARCH SERIES

# Utilising AI and Emerging Technologies in Humanitarian Operations – responding to Forced Displacement from a Human Rights Perspective

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## EXECUTIVE SUMMARY

Humanitarian actors have had to consider the impact of technological advances before, but the speed of change is faster today, and the advent of machine learning introduces the potential for a greater disconnect between those making decisions and the people in need of protection. International organizations' mandates develop over time but should remain consistent with the original goals: humanitarian actors utilising emerging technologies based on machine learning must still uphold their mandates, respecting international human rights law, the humanitarian principles, and the rule of law. This paper addresses how humanitarian actors use of emerging technologies and AI could affect protection in the context of acute crises and displacement, especially in relation to United Nations agencies. Emerging technologies might enhance certain aspects of protection, but they need to be implemented in such a way as to do no harm, digital or otherwise, to protection in general and human rights? After considering non-discrimination and equality, particularly in relation to algorithmic bias, the article focuses on protection data (data collected by humanitarian actors as part of their operations), an emerging 'right' to the internet, neutrality and political participation, before addressing prevention and root causes.

## 1. INTRODUCTION

Complex emergencies are by their very nature complex in all aspects. A range of different legal frameworks will apply. Any attempt to constrain the analysis to a single framework will inevitably omit a range of protection frameworks in international law that would be available in the emergency. Equally, the wider user-community will not receive the full analysis and guidance that they need to operationalize protection if one constrains the range of frameworks. Nevertheless, in a research paper it is essential to have a focus along with a list of other topics beyond the remit of the paper's title; in this case, the focus is on how international human rights law deals with the use of Artificial Intelligence (AI) and emerging technologies in complex humanitarian crises where forced displacement has occurred. This paper uses the context of forced displacement in acute crises to examine the challenges humanitarian actors, principally UN agencies, face in relation to emerging technologies. Such technologies might enhance aspects of protection, but can they be implemented and deployed in such a way as to do no harm, digital or otherwise, with respect to protection in general and international human rights law in the context of forced displacement?<sup>1</sup> This offers potential benefits: accurate data helps fight misinformation and disinformation, but technology's capacity to hold almost limitless amounts should not lead to unnecessary data being collected. Moreover, emerging technologies can carry significant risks: some technologies, such as live facial recognition, have already been shown to exhibit weaknesses and biases that could impact disproportionately on refugees and asylum-seekers.<sup>2</sup> Other technologies present more opaque risks stemming from their collection and sharing of data. This paper seeks to unpack how AI and emerging technologies could be devised, designed, developed and deployed in humanitarian contexts to enhance protection of forcibly displaced persons, to better understand humanitarian protection in the digital age.

AI and emerging technologies as a term has no consensual definition. This definitional approach incurs advantages, however. Most notably, the highly dynamic nature of technological innovation means granular definitions date quickly. Conversely, the approach taken here allows rapid shifts in this field to be accommodated. As such, this definitional range is unlimited since there will always be further innovation over time. Moreover, this paper not only addresses technologies themselves, but the intricate ways humans engage with them through their application. More specifically, for the purpose of this paper, it is not any specific technology that is under consideration, rather it is the process by which human decision-making is devolved to, and otherwise implicated with, machine learning processes. These in turn use quantities of data that no individual could ever process yet, in doing so, mean human agency becomes devolved to often opaque algorithms. In that same context,

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<sup>1</sup> Privacy International and the ICRC, “‘Doing No Harm’ in the Digital Era”, ICRC, October 2018, available at <https://privacyinternational.org/report/2509/humanitarian-metadata-problem-doing-no-harm-digital-era> (last accessed 29 November 2025). See generally, F. Johns, #Help – Digital Humanitarianism and the Remaking of International Order (2023); and J. Rizk and S. Cordey, ‘What we don’t understand about digital risks in armed conflict and what to do about it’, <https://blogs.icrc.org/law-and-policy/2023/07/27/digital-risks-in-armed-conflict/>, (last accessed, 29 November 2025).

<sup>2</sup> See D. Murray, P. Fussey, L. McGregor, and M. Sunkin, ‘Effective Oversight of Large-Scale Surveillance Activities: A Human Rights Perspective’, 11 *Journal of National Security Law and Policy* 743 (2021).

machine learning requires vast quantities of data in order to be functionally effective and the protection of that data's security, particularly in the field, raises other concerns that will be addressed as they arise.

When a person seeks international protection in a humanitarian crisis, the organization processing their case will need more than just their name and former address. The cause of flight is fundamental to triggering protection in international law, such that the registration process, indeed, registration processes given that several actors may need information as part of a comprehensive response, will require the individual to divulge large amounts of personal information: their religion, their mother-tongue, their sexual orientation or gender identity, whether they were members of the military or a rebel movement, had they been detained, were they tortured, were they raped, and by whom?<sup>3</sup> Such information, if it were to be disclosed, can cause not just digital harm for the individual, but, even if it would not personally identify them, locate her/his group that had been the subject of persecution, risking fresh attacks.<sup>4</sup> The right to privacy in a humanitarian context, thus has collective aspects which affect how one understands the obligation for all actors.

In 2024, UNHCR launched its Digital Gateway that enables forcibly displaced and stateless people to have access to digital services, including registration.<sup>5</sup> While personal information has always been collected, the scope for almost limitless amounts being held in remote but always insecure servers, which can, once accessed, be readily triangulated with other publicly held data. Mobile phones are hardly an emerging technology and are often essential to forcibly displaced persons in terms of providing them with information to aid them in their movements. However, they can also be used to track users once information about the hardware/ firmware has been shared, either knowingly or unknowingly; mobile apps used to access services provided by governments or humanitarian actors, apps that are sometimes the only way to receive communications or the means of subsistence, can also collect such hardware/ firmware under the guise of ensuring only verified users have access. Geolocation of a mobile device can be used with freely accessible satellite imagery data to confirm the movements of large numbers of people, allowing friendly and unfriendly actors to monitor those who, by definition, are fleeing persecution, human rights violations, or armed conflict. The addition of impenetrable and impervious machine learning exacerbates the risks for forcibly displaced persons. Where machine learning is used to sort personal information, the risks from opaque algorithmic biases are added to the mix.

Humanitarian actors have previously been forced to face technological advances. Yet the speed of change is faster, and the advent of machine learning introduces the potential for a greater disconnect

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<sup>3</sup> See Art. 1, 1951 Convention relating to the Status of Refugees, 189 UNTS 137. Not only does that information help decide if they qualify for refugee status or should be excluded, but the medical and psychological interventions that might be necessary, too, to protect their right to health.

<sup>4</sup> See L. Taylor, L. Floridi, and B. van der Sloot, eds. *Group Privacy: new challenges of data technologies*, 2017.

<sup>5</sup> See <https://www.unhcr.org/digitalstrategy/the-digital-gateway/> (last accessed 29 November 2025).

between those making decisions and the people in need of protection.<sup>6</sup> Moreover, unless international organizations fully engage with emerging technologies, and understand how they work and use the data they supply, their implementation in crisis scenarios may well have unseen and overly intrusive consequences for persons who are meant to be protected and whose rights should be respected.

This paper focuses, as stated, on the use of AI and emerging technologies in humanitarian crises and, as will be seen in the discussion and analysis below, there has been a wealth of writing on these issues. Some studies have even considered their use with respect to forced displacement. This paper is innovative in that it takes those elements and views them through the prism of human rights, rule of law and the humanitarian principles. It considers AI and emerging technologies in the context of forced displacement in a humanitarian crisis as regards states' and international organizations' duties to provide protection and uphold human rights. In doing so, it helps advance scholarly thinking on the protection of the rights of forcibly displaced persons, individually and as a group, caught up in acute crises in the digital era, and how such technologies impact on the mandates of humanitarian actors and their obligations under the humanitarian principles. It also has the potential to contribute to the debate on the imperative of involving forcibly displaced persons, the ones directly impacted by the deployment of these technologies, in their design and development in consultation with humanitarian actors and the tech industry.<sup>7</sup> In sum, this paper analyses a range of problems that emerging technologies present in the humanitarian sector, addresses them according to existing frameworks, legal and non-legal, and indicates some of the most significant gaps that remain as to the sector's shaping of its responses in the ever-changing context of protracted humanitarian crises. It argues that the context of forced displacement places obligations on states, humanitarian actors, and the tech industry to include forcibly displaced persons in the design, development and deployment of AI and emerging technologies.<sup>8</sup>

The structure of this paper is to start by exploring the activities of international organizations in humanitarian crises, before studying various legal frameworks that are applicable in a humanitarian crisis to protect forcibly displaced persons. It then looks at the challenges facing humanitarian actors in crises involving forced displacement in relation to emerging technologies and the use of AI: it considers participation and biases and issues pertaining to machine learning, before exploring four specific scenarios - data collection, storage, usage and sharing; an emerging 'right' to the internet; neutrality and political participation; finally, prevention and root causes. It does this in order to

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<sup>6</sup> 'Re-Establishing Trust in the Digital Age of Accelerated Innovation', Caroline Louveaux and Tami Dokken, 22 June 2022, available at [https://blogs.worldbank.org/voices/re-establishing-trust-digital-age-accelerated-innovation?cid=ECR\\_E\\_NewsletterWeekly\\_EN\\_EXT](https://blogs.worldbank.org/voices/re-establishing-trust-digital-age-accelerated-innovation?cid=ECR_E_NewsletterWeekly_EN_EXT) (last accessed 29 November 2025).

<sup>7</sup> See Johns, *supra* note 1, at 205.

<sup>8</sup> On the human rights obligations of businesses, including the tech industry, see T. Van Ho, 'Defining the Relationships: "Cause, Contribute, and Directly Linked to" in the UN Guiding Principles on Business and Human Rights', 43 *Human Rights Quarterly* 625-658 (2021), and A. Yilmaz Vastardis and R. Chambers, '[Human Rights Disclosure and Due Diligence Laws: The Role of Regulatory Oversight in Ensuring Corporate Accountability](#)', 21 *Chicago Journal of International Law* 323-366 (2021) (last accessed 29 November 2025). Business and human rights is a vast and discrete field of research pertinent to this topic, but one beyond the remit of this article.

highlight specific issues that have a particular resonance with respect to forcibly displaced persons and ends with consideration of the consequences of the increasing use of technologies that replace to a certain extent human decision-making. It concludes that the use of such technologies is unavoidable, but that human rights, rule of law and the humanitarian principles provide necessary constraints to ensure forcibly displaced persons receive protection.

## 2. INTERNATIONAL ORGANIZATIONS IN HUMANITARIAN CRISES

Article 1.3 and 1.4 UN Charter establishes that the organization as a whole will aim “[to] achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian character” and “[promote and encourage] respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion”; the UN shall also “be a centre for harmonizing the actions of nations in the attainment of these common ends”.<sup>9</sup> The Charter is directed towards states, but it is equally the foundational document for all the UN agencies, so international co-operation in paragraph 3 includes UN interoperability in humanitarian crises, that is, the engagement by different agencies within their own mandates to achieve the common goal of alleviating human suffering, which is obviously pertinent in responding to forced displacement.

While the different humanitarian actors complement each other in many ways, the plurality of mandates affects the understanding of ‘protection’,<sup>10</sup> which in turn could affect how willing actors are to share data among themselves; the UN itself is not one monolithic entity marching to the beat of a single drum. Nevertheless, the Charter, the Universal Declaration of Human Rights,<sup>11</sup> and the 2012 General Assembly resolution on rule of law at the international and national levels all provide a framework for interoperability that upholds human rights.<sup>12</sup>

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<sup>9</sup> Charter of the United Nations, 892 UNTS 119, 26 June 1945.

<sup>10</sup> The ICRC held a series of workshops for humanitarian actors between 1996 and 2000: a summary was produced, SG. Caverzasio, ‘Strengthening Protection in War: a search for professional standards’, May 2001, available at <https://www.icrc.org/en/publication/0783-strengthening-protection-war-search-professional-standards> (last accessed 29 November 2025) - see ICRC, ‘International humanitarian law and protection’ (Report of the Workshop November 1996), 1996; ‘Protection: Towards Professional Standards’ (Report of the Workshop March 1998), 1998; ‘Workshop on protection for human rights and humanitarian organizations: doing something about it and doing it well’ (Report of the Workshop January 1999), 1999; ‘The Challenges of Complementarity’ (Report of the Workshop February 2000). See also, ‘The Protection of Refugees in Armed Conflict’, (2001) 83 *International Review of the Red Cross* 569.

<sup>11</sup> On the applicability to all parts of the UN of the Universal Declaration of Human Rights, 1948, UNGA Res. 217(III), 10 December 1948, (hereafter, UDHR), see E.H. Riedel, ‘Article 55(c)’ in B. Simma (ed), *The Charter of the United Nations*, vol II (2002) 917–27, where it is argued that there is wide acceptance that Art. 55(c) of the UN Charter is binding on the organization (920, 922–3) and that the UDHR represents the first step by UN organs to realize ‘the programme enshrined in Article 55(c)’ (925).

<sup>12</sup> UNGA Res. 67/1 (2012), Declaration of the High-level Meeting of the General Assembly on the Rule of Law at the National and International Levels, paragraph 2 (emphasis added) – there are references to human rights throughout the resolution. Reference should also be made to the [UN80 Initiative](#), the Secretary-General’s plan to transform the organization (last accessed 29 November 2025). See also, G. Gilbert and AM. Rüsch, ‘Rule of Law and UN Interoperability’, 30 *International Journal of Refugee Law* 31 (2018).

2. We recognize that the rule of law applies to all States equally, *and to international organizations, including the United Nations and its principal organs*, and that respect for and promotion of the rule of law and justice should guide all of their activities and accord predictability and legitimacy to their actions ....

As for displacement, the UN High Commissioner for Refugees (UNHCR), established as a subsidiary organ of the General Assembly under Article 22 of the Charter, has the unique mandate for the international protection of refugees.<sup>13</sup> Under its 1950 Statute, UNHCR shall provide international protection to refugees and assist governments by seeking permanent solutions to the problem of refugees through “voluntary repatriation … or their assimilation in new national communities” (paragraph1). Since 1950, the mandate has expanded organically through practice, in line with the *Reparation* case,<sup>14</sup> to include a wider range of forcibly displaced persons, including those who have not crossed an international border; UNHCR also has Cluster lead for conflict-driven internally displaced persons.<sup>15</sup>

In the context of acute crises and displacement, one must add to the equation alongside the Charter,<sup>16</sup> UNHCR’s Statute,<sup>17</sup> and the UDHR,<sup>18</sup> the humanitarian principles of humanity, impartiality,

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<sup>13</sup> Statute of the Office of the United Nations High Commissioner for Refugees, UNGA Res. 428(V), 14 December 1950 (hereinafter, 1950 Statute) – in this article, unless otherwise stated, the term ‘refugees’ includes refugees, asylum seekers and returning refugees. International refugee law is set out in the 1951 Convention, *supra* note 3.

<sup>14</sup> *Reparation for injuries suffered in the service of the United Nations*, Advisory Opinion, 11 April 1949, [1949] ICJ Reports 174 at 182.

Under international law, the Organization must be deemed to have those powers which, though not expressly provided in the Charter, are conferred upon it by necessary implication, as being essential to the performance of its duties.

See also, *Certain expenses of the United Nations (Article 17, paragraph 2, of the Charter)*, Advisory Opinion, 20 July 1962, [1962] ICJ Reports 151.

Paragraph 9 of the Statute provides that:

The High Commissioner shall engage in such additional activities, including repatriation and resettlement, as the General Assembly may determine, within the limits of the resources placed at his disposal.

As UNHCR has exercised its good offices towards non-refugees, the General Assembly has extended the mandate, which was affirmed by the General Assembly in the Global Compact on Refugees (GCR), UNGA Res. 73/151 (2018), 18 December 2018. See also, V. Türk and E. Eyster, ‘Strengthening Accountability in UNHCR’, 22 *International Journal of Refugee Law* 159 (2010).

<sup>15</sup> The Cluster Approach was established in 2005 under the UN’s Inter-Agency Standing Committee (IASC) and UNHCR has the lead for protection of conflict driven IDPs - <https://www.globalprotectioncluster.org> (last accessed 29 November 2025). The Guiding Principles on Internal Displacement 1998, UN Doc. E/CN.4/1998/53/Add.2, (Guiding Principles), provide in the *Introduction and Scope*, paragraph 3, that they reflect and are consistent with international human rights law and international humanitarian law; paragraph 3 also provides that the Guiding Principles “provide guidance to: … (d) Intergovernmental and non-governmental organizations when addressing internal displacement”.

<sup>16</sup> *Supra*, note 9.

<sup>17</sup> *Supra*, note 13.

<sup>18</sup> *Supra*, note 11.

neutrality, and independence.<sup>19</sup> The humanitarian principles facilitate the protection of human rights; humanity is rooted in the dignity of the individual, impartiality in equality and non-discrimination, neutrality reinforces both, too, and creates an environment that enhances physical security, while independence means that international organizations have a duty to protect forcibly displaced persons from country of asylum interference, including with respect to data protection and privacy.

## 2.1 International organizations, mandates and data sharing

The sharing of data could help to co-ordinate protection and assistance and reduce the likelihood of interview-fatigue amongst the displaced populations as each humanitarian actor requires them to repeat much the same information, but it could put them at risk if not all actors ensure the same levels of security for data.<sup>20</sup> As Parsons and Thornton argued, though, interoperability is reduced where there is no or limited data sharing and inconsistent data collection: “fragmented governance structure[s]” lead to “limited coordination”, resulting in diverse data collection initiatives.<sup>21</sup> While

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<sup>19</sup> UNGA Res. 46/182, 19 December 1991, and subsequent resolutions on the subject, especially UNGA Res. 58/114 (2004), 17 December 2003 - <https://emergency.unhcr.org/sites/default/files/General%20Assembly%20Resolution%2058-114.pdf> – generally, see the website of the Office for Co-ordination of Humanitarian Affairs (OCHA), <https://www.unocha.org> (both accessed 29 November 2025). See also, Fundamental Principles of the International Red Cross and Red Crescent Movement, proclaimed in Vienna in 1965 by the 20th International Conference of the Red Cross and Red Crescent Movement, available at <https://www.icrc.org/en/our-fundamental-principles> (last accessed 29 November 2025). See also, P. Devidal, “Back to basics” with a digital twist: humanitarian principles and dilemmas in the digital age’, 2 February 2023, <https://blogs.icrc.org/law-and-policy/2023/02/02/back-to-basics-digital-twist-humanitarian-principles/>, (last accessed 29 November 2025).

<sup>20</sup> For example, Power of humanity, Council of Delegates of the International Red Cross and Red Crescent Movement, 22–23 June 2022, Geneva, ‘Safeguarding humanitarian data’, CD/22/R12, available at [https://rcrcconference.org/app/uploads/2022/06/CD22-R12-Safeguarding-Humanitarian-Data\\_23-June-2022\\_FINAL\\_EN.pdf](https://rcrcconference.org/app/uploads/2022/06/CD22-R12-Safeguarding-Humanitarian-Data_23-June-2022_FINAL_EN.pdf), (last accessed 29 November 2025); T. Rodenhäuser, B. Staehelin, M. Marelli, ‘Safeguarding humanitarian organizations from digital threats’, <https://blogs.icrc.org/law-and-policy/2022/10/13/safeguarding-humanitarian-organizations-from-digital-threats/> (last accessed 29 November 2025). See also, IOM/ Global Data Institute, ‘Harnessing Data Innovation for Migration Policy a Handbook for Practitioners’, <https://publications.iom.int/books/harnessing-data-innovation-migration-policy-handbook-practitioners> (last accessed 29 November 2025); N. Raymond, L. Walker McDonald and R. Chandran, ‘Opinion: The WFP and Palantir controversy should be a wake-up call for humanitarian community’, 14 February 2019, available at <https://www.devex.com/news/opinion-the-wfp-and-palantir-controversy-should-be-a-wake-up-call-for-humanitarian-community-94307> (last accessed 29 November 2025); Privacy International, ‘One of the UN’s largest aid programmes just signed a deal with the CIA-backed data monolith Palantir’, available at <https://privacyinternational.org/news-analysis/2712/one-uns-largest-aid-programmes-just-signed-deal-cia-backed-data-monolith> (last accessed 29 November 2025). See also, M. Marelli, ‘The SolarWinds hack: lessons for humanitarians’, 18 March 2021, <https://blogs.icrc.org/law-and-policy/2021/03/18/solarwinds-hack-humanitarians/> (last accessed 29 November 2025).

<sup>21</sup> J. Parsons and M. Thornton, ‘Data as a United Nations Rule of Law Programming Tool: Progress and Ongoing Challenges’, in J. Carlos Botero *et al.* (eds.), *Innovations in Rule of Law*, 21-24, at 21, Hague Institute for the Internationalization of Law and the World Justice Project, 26 June 2012, available at [https://worldjusticeproject.org/sites/default/files/data\\_as\\_a\\_united\\_nations\\_rule\\_of\\_law\\_programming\\_tool\\_parsons\\_thornton.pdf](https://worldjusticeproject.org/sites/default/files/data_as_a_united_nations_rule_of_law_programming_tool_parsons_thornton.pdf) (last accessed 29 November 2025); V. Cassard, S. Campo and J. Belina, ‘Responsible data sharing between humanitarian organizations and donors - towards a common approach’, 21 June 2023 <https://blogs.icrc.org/law-and->

Parsons and Thornton wrote this over a decade ago, it highlights fundamental problems with data collection relating to the lack of a commonality of standards, transferability of findings, data protection and divergent intents. These factors can be mitigated, but they are largely unavoidable, and common standards could end up reflecting compromise. Furthermore, beyond mere data collection and storage, emerging technologies and their use over time will exhibit similar divergencies regarding institutional practice, such that a range of standards in the humanitarian sector will inevitably develop, putting at risk the right to privacy of forcibly displaced persons and potentially their protection; there are no straightforward answers to operationalizing interoperability.<sup>22</sup>

Emerging technologies as they might be utilised in a humanitarian crisis also need to operate under the humanitarian principles: humanity (alleviating human suffering and respecting the rights of the displaced persons) and independence, in particular, need to be preserved where vast amounts of data are being collected that need to be shared, not just for better co-ordination, but to access services in the state, or for cash based initiatives and may not be secure against state intervention, whether that be by the country of asylum or the country of nationality<sup>23</sup> Mobile phones and biometric recognition tools may be very useful in various circumstances, which makes them unavoidable if the humanitarian sector is to provide the most far-reaching, up-to-the-minute forms of protection,<sup>24</sup> but humanitarian actors have a duty to safeguard the rights of all those who are within their mandate and that requires a full understanding of those technologies and their implementation in crisis scenarios. And therein lies yet a further concern: the focus of the technological developments. Technology might either be being designed for the humanitarian worker, optimising data collection, or with the rights of the displaced person, the data subject, in mind.<sup>25</sup> Meeting both sets of interests so as to enhance protection and uphold rights is not straightforward and depends on the degree of influence of the humanitarian sector with the developers in the design process to ensure inclusivity and diversity, along with, as necessary, accountability. Many digital developers utilize data collection as an income stream, but that would be contrary to protection mandates. It is axiomatic that in ordinary contexts informed consent is provided by the data subject, consent that can be withdrawn

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policy/2023/06/22/responsible-data-sharing-humanitarian-organizations-common-approach/ (last accessed 29 November 2025).

<sup>22</sup> See Gilbert & Rüsch, *supra* note 12. See also, the UN Secretary-General's Data Strategy, 'Data Strategy of the Secretary-General for Action by Everyone, Everywhere with Insight, Impact and Integrity 2020-22' available at [https://www.un.org/en/content/datastrategy/images/pdf/UN\\_SG\\_Data-Strategy.pdf](https://www.un.org/en/content/datastrategy/images/pdf/UN_SG_Data-Strategy.pdf), last accessed 29 November 2025.

<sup>23</sup> See HRW, 'UN shared Rohingya data without informed consent', 14 June 2021, <https://www.hrw.org/news/2021/06/15/un-shared-rohingya-data-without-informed-consent> (last accessed 29 November 2025). Discussed further below.

<sup>24</sup> See E. Benvenisti, 'Upholding Democracy Amid the Challenges of New Technology: What Role for the Law of Global Governance?', 29 *EJIL* 9 (2018).

<sup>25</sup> According to the Bureau of Investigative Journalism, the technologies considered for tracking COVID-19 in 2020 using mobile phone and GPS data had been tested on data from refugees coming to Europe in 2015 with no element of consent built in – BIJ, 'Monitoring being pitched to fight Covid-19 was tested on refugees', 28 April 2020, available at <https://www.thebureauinvestigates.com/stories/2020-04-28/monitoring-being-pitched-to-fight-covid-19-was-first-tested-on-refugees> (last accessed 29 November 2025). My thanks are due to Dr Ozan Kamiloglu for forwarding me this publication.

at any point. At a reception centre for refugees and IDPs, it is now the norm worldwide to collect biometric data.<sup>26</sup> Only data essential to protection should be collected, rather than simply applying a global, standardised form-filling process that is infinitely more secure if stored on paper but infinitely less sharable or open to quick analysis. The data subject should be able to refuse to provide such information or seek to have it excluded subsequently. Consent should be truly genuine. The benefits are many, but so are the concerns with respect to data acquisition, data use, and any subsequent data sharing.

In the next sections, this article addresses how best to utilize emerging technologies in the humanitarian sector, enhancing protection while upholding human rights and the rule of law. It covers a range of related issues, including equality, non-discrimination, participation and human rights-based approaches to technological developments and their use. Specific cases are then reviewed as to the plethora of questions pertaining to data, access to the internet, how humanitarian neutrality can be maintained with respect to political participation by displaced populations in the era of the internet, before exploring the possibilities for utilising emerging technologies in relation to prevention and root causes. Finally, in a fast-changing landscape, rather than draw some conclusions that would be obsolete before publication, the article examines the consequences of the earlier questions and their interplay as emerging technologies are tried and tested in the crucible of an acute displacement crisis.

### **3. FRAMEWORKS FOR PROTECTION**

There are several different frameworks, some legal, some non-legal, that pertain to utilising emerging technologies in humanitarian crises. Before exploring different aspects of such technologies in humanitarian operations, non-discrimination, equality, human rights-based approaches, and rule of law, as ubiquitous, underpinning elements, need to be considered.

#### **3.1 International legal frameworks and the humanitarian principles**

During humanitarian crises involving forced displacement, not only international refugee law, but also the international law of armed conflict and international human rights law may well provide protection frameworks for those displaced.<sup>27</sup> International organizations are also bound to uphold the

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<sup>26</sup> See UNHCR Data Transformation Strategy 2020-25 available at <https://www.unhcr.org/media/data-transformation-strategy-2020-2025> (last accessed 29 November 2025). See also, UNHCR Digital Transformation Strategy 2022-26, <https://globalcompactrefugees.org/digital-transformation-and-refugees>, and Group of Friends, Digital transformation with and for refugees, Global Refugee Forum 2023, 16 December 2022, <https://globalcompactrefugees.org/pledges-contributions/multistakeholder-pledges-global-refugee-forum-2023> (last accessed 29 November 2025). Cf. Ada Lovelace Institute, *Participatory Data Sharing*. 2021, <https://www.adalovelaceinstitute.org/report/participatory-data-stewardship/> (last accessed 29 November 2025).

<sup>27</sup> Particular rights are discussed further below in relation to specific scenarios. International refugee law and the international law of armed conflict are not explored further in this paper, although they may also influence and expand

humanitarian principles.<sup>28</sup> Beyond the right to privacy, already mentioned, there are a range of other rights for forcibly displaced persons that are pertinent to the deployment of emerging technologies in a humanitarian crisis: freedom from non-discrimination is embedded in applicable legal frameworks;<sup>29</sup> the right to receive and impart information; freedom of movement; and in the worst case scenario, the right to life and freedom from inhuman and degrading treatment. Even though most international human rights law norms are customary international law, accountability and enforceability may well depend on ratification by the country of nationality and the country of asylum. States must uphold the rights of everyone on their territory and within their jurisdiction, but there are also extraterritorial obligations where there is effective control.<sup>30</sup> For certain, a humanitarian crisis might well allow a state to derogate from certain human rights obligations if the proper formalities established by the relevant treaty are met, but the humanitarian principles have no such limitations. The use of technologies that threaten the security and safety of displaced persons would never allow for derogations from relevant rights in any situation, although some aspects of the right to privacy, for instance, might be limited. However, as will be considered below, technology embeds limitations on rights, whereas derogations should be temporary to meet the exigencies of the situation.

As indicated, non-discrimination is also part of the humanitarian principles of humanity, impartiality, neutrality and independence, which apply to states and international organizations operating in the humanitarian sphere. Their legal status in international law is complex and whether they are binding on international organizations, and, if so, how there could be accountability for breach, are issues touched on here only to set the context. Given, however, their adoption by the General Assembly, by analogy with the status of the UDHR, as well as international human rights law, international organizations must also uphold the humanitarian principles that also reinforce the obligation not to discriminate.<sup>31</sup>

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understanding of international human rights law – see, *Case of Georgia v Russia* (II), Appl. no. 38263/08, European Court of Human Rights (GC), 21 January 2021. Similarly, the Sustainable Development Goals (UNGA Res. 70/1, 21 October 2015, ‘Transforming our world: the 2030 Agenda for Sustainable Development’; SDG, hereafter) may aid interpretation of human rights obligations in protracted displacement scenarios. As stated, *supra* note 8, business and the field human rights is also outside the scope of this study.

<sup>28</sup> *Supra*, note 19.

<sup>29</sup> Art. 1.3 UN Charter, *supra* note 9; Art. 2 UDHR, *supra* note 11; Paragraph 2, UNHCR 1950 Statute, *supra* note 13; Art. 3, 1951 Convention, *supra* note 3, provides that states shall apply its provisions to refugees without discrimination as to race, religion or country of origin; the Guiding Principles, *supra* note 13, hold in Principle 1 that IDPs shall not be discriminated against.

<sup>30</sup> See Human Rights Committee General Comment No.31, The Nature of the General Legal Obligation Imposed on States Parties to the Covenant, adopted on 29 March 2004, CCPR/C/21/Rev.1/Add. 13, paragraph 10. See also, *Georgia v Russia* (II), *supra* note 27.

<sup>31</sup> See E.H. Riedel, ‘Article 55(c)’, *supra* note 11. With respect to the ICRC, the humanitarian principles are binding given that the Movement adopted them at its 20<sup>th</sup> International Conference in Vienna, *supra* note 19.

Furthermore, the United Nations has a policy of 'Do No Harm' (DNH). DNH dates from the 1990s when humanitarian actors tried to see how assistance in conflicts affected the conflict.<sup>32</sup> Supplying large amounts of food and medical aid where they are scarce has implications for that country – food and health care may end up being better provided in a refugee settlement than in the neighbouring village.<sup>33</sup> The increased use of emerging technologies and AI in humanitarian crises prompted the development of 'Do No Digital Harm'.<sup>34</sup> The concern here is slightly different from that relating to the delivery of assistance, in that the use by humanitarian actors of digital technologies could lead to the identification of groups and even individuals and put them at risk.<sup>35</sup>

### 3.2 Rule of law

Rule of law is asserted by all states and also applies on the international plane.<sup>36</sup> Equally, international and national rule of law establish standards in every context for every state and international organization without the option for derogations.<sup>37</sup> However, ideas from the national plane cannot be straightforwardly transferred or transposed on to the international plane. What has to be recognised, though, is that the Anglo-American rule of law and the post-WWII *Rechtsstaat*, taken together, best

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<sup>32</sup> See, The Collaborative Learning Projects'. *The Do No Harm Handbook - (The Framework for Analyzing the Impact of Assistance on Conflict)*, available at <https://www.cdacollaborative.org/wp-content/uploads/2016/01/The-Do-No-Harm-Framework-for-Analyzing-the-Impact-of-Assistance-on-Conflict-A-Handbook.pdf>.

<sup>33</sup> On this particular issue, see the express inclusion of host communities in the GCR, *supra* note 14.

<sup>34</sup> See *supra* note 1. See also, J. Mebur and I. Kwamy, 'Do no digital harm', Monday 21 October, 2019, available at <https://www.gsma.com/mobilefordevelopment/blog/do-no-digital-harm/> (last accessed 29 November 2025).

<sup>35</sup> See R. Dette, 'Do No Digital Harm: Mitigating Technology Risks in Humanitarian Contexts', in S. Hostettler et al. (eds.), *Technologies for Development*, available at <https://www.researchgate.net/publication/325796944> *Do No Digital Harm Mitigating Technology Risks in Humanitarian Contexts* (last accessed 29 November 2025). See also, Taylor 2017, *supra* note 4, and below, §4.3 *Specific humanitarian scenarios and their challenges*.

<sup>36</sup> See T. Bingham, *The Rule of Law* (2010); M. Loughlin, *Foundations of Public Law* (2010), ch 11, 'Rechtsstaat, Rule of Law, l'Etat de droit', 312; D. Fairgrieve, 'Etat de Droit and Rule of Law: Comparing Concepts: A Tribute to Roger Errera' [2015] *Public Law* 40; M. Krygier, 'Rule of Law (and Rechtsstaat)' in J.D. Wright (ed), *International Encyclopaedia of the Social and Behavioural Sciences*, vol 20 (2nd ed., Elsevier 2015) 780, 785; Sir Arthur Watts, 'The International Rule of Law' 36 *German Yearbook of International Law* 15 (1993); J.E. Alvarez, 'International Organizations and the Rule of Law' 14 *New Zealand Journal of Public and International Law* 3 (2016); S. Chesterman, 'An International Rule of Law' 56 *American Journal of Comparative Law* 331 (2008); C. Harlow, 'Global Administrative Law: The Quest for Principles and Values' 17 *European Journal of International Law* 187 (2006); European Commission for Democracy through Law (Venice Commission), 'Report on the Rule of Law', adopted by the Venice Commission at its 86th plenary session (Venice, 25–26 March 2011) <[http://www.venice.coe.int/webforms/documents/?pdfL-AD\(2011\)003rev-e](http://www.venice.coe.int/webforms/documents/?pdfL-AD(2011)003rev-e)> (last accessed 29 November 2025); G. Palombella, 'The Rule of Law as an Institutional Ideal' in L. Morlino and G. Palombella (eds), *Rule of Law and Democracy* (2010) 3; R. McCorquodale, 'Defining the International Rule of Law: Defying Gravity?' 65 *International & Comparative Law Quarterly* 277 (2016).

<sup>37</sup> *Supra*, note 12.

suit an understanding relevant to an international organization like the United Nations and its subsidiary organs and agencies:<sup>38</sup>

- (4) the good faith exercise of power in accordance with purpose for which powers were conferred, without exceeding the limits of such powers;
- (5) protection of fundamental human rights (including *nullum crimen sine lege* the right to fair trial, and to liberty, security, and property); and
- (6) access to other means to resolve civil disputes without prohibitive cost or delay.

These elements, while drawn from the common law conceptualization, are not judge-centric and look to the organization to establish a rule of law process for its operations that will lead to a rule of law end-state.

What is important is that humanitarian actors and the states should ensure that rule of law/ *Rechtstaat* is embedded with regard to emerging technologies in acute crisis at all stages, from the design and development through to deployment.

### 3.3 Summary

Despite all the laws and other protective provisions discussed in §§3.1 and 3.2, the increasing use of technology in humanitarian operations could exacerbate existing divides in societies if adopted unthinkingly. Emerging technologies can retrieve and store vast quantities of data where people can access them; the collection of data should be with informed consent and only what is needed should be collected and stored, but both those caveats start from the position that people can access the technologies – both their overuse and their inaccessibility present potential protection challenges and threats to rights, clearly privacy and freedom from discrimination, but in extreme cases, the right to life. Emerging technologies, such as live facial recognition and biometric screening, can also operate autonomously, with the intention that protection can be enhanced through continuous operation, but that comes with the risk of error and without properly supervised safeguards – there can be misplaced trust in technology.

In sum, international human rights law and rule of law, both of which have defined content at national and international levels, must be the basis for assessing whether to apply emerging technologies and AI and must be part of a continuous review of their implementation and use in the field.

## 4. CHALLENGES TO THE FRAMEWORKS

This section looks first at the generic challenges to which emerging technologies and AI might give rise for both the humanitarian actors and for forcibly displaced persons, before turning to four specific

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<sup>38</sup> Gilbert and Rüsch, *supra* note 12, at 35-39, quoting 38-39 (without original footnotes). With respect to international organizations, Bingham's Elements of the Rule of Law (4), (5), and (6), cited by Alvarez, *supra* note 36, would seem most appropriate as regards its application to humanitarian operations

issues. Difficulties inevitably arise during acute crises that are not specific to the particular context, and some aspects of emerging technologies and AI give rise to intrinsic challenges that are global, applicable even outside humanitarian displacement scenarios, although with a particular impact there: participation and biases are one such issue, and machine learning presents related and independent problems. The specific humanitarian context, however, creates problems around data collection, storage, usage, analysis and sharing because of the inherently less orderly nature of a crisis. Added thereto, the incipient so-called ‘right to the internet’ may be more difficult to implement in a humanitarian context, yet without access to the internet forcibly displaced persons are restricted in their ability to take control.<sup>39</sup> If there is access to the internet, though, given the ability to participate remotely in the political affairs of the country of nationality could call into question the neutrality of settlements for forcibly displaced persons. On a more positive note, emerging technologies can possibly be used to address root causes and prevent displacement from the outset.

#### 4.1 Participation and biases

Lack of participation in design, development and deployment along with bias are intrinsic problems for emerging technologies. In crisis contexts, the voice of forcibly displaced persons is difficult to ascertain and take into account when adopting technological approaches.<sup>40</sup> Technology for humanitarian operations that does not listen to the voice of the people it seeks to protect and who are objects of its implementation, without any opportunity to opt out, disempowers and “undermines respect for human beings”<sup>41</sup> and does not uphold the right to human dignity.<sup>42</sup> Further, it provides fertile ground for inculcating and reinforcing bias, particularly with respect to machine learning applications.

Technology can institute biases from two standpoints: as regards its use by humanitarian actors in their work with displaced populations, and in terms of whose information it relies on if there are access issues for displaced populations generally or for particular groups within the displaced populations – and those two concerns can apply in parallel. Data collection through technology can often require good access to the internet, but there are parts of the world where it is patchy, meaning

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<sup>39</sup> At the outset of the pandemic, Rohingya refugees in Cox’s Bazar in Bangladesh had no internet access – see, HRW, ‘Bangladesh: Internet Ban Risks Rohingya Lives: Urgently Act to Prevent COVID-19 Outbreak in Refugee Camps’, available at <https://www.hrw.org/news/2020/03/26/bangladesh-internet-ban-risks-rohingya-lives> (last accessed 29 November 2025).

<sup>40</sup> See C. Earney and A. Krishnan, ‘The Art of Values-Based Innovation for Humanitarian Action’, Stanford Social Innovation Review, available at

[https://ssir.org/articles/entry/the\\_art\\_of\\_values\\_based\\_innovation\\_for\\_humanitarian\\_action#](https://ssir.org/articles/entry/the_art_of_values_based_innovation_for_humanitarian_action#) (last accessed 29 November 2025).

<sup>41</sup> See OCHA website, *supra* note 19. See also, UNHCR Innovation Service ‘Communicating with Communities’ - <https://www.unhcr.org/innovation/communicating-with-communities/> (last accessed 29 November 2025). Even where gender is taken into account, does it reflect the gendered dynamics of the social dimensions of measurement? See D. Buss, ‘Measurement Imperatives and Gender Politics: An Introduction’, (2015) 22 *Social Politics* 381, 382 and 386.

<sup>42</sup> Art. 1 UDHR, *supra* note 11.

that technology that could enhance protection is not available there – Thuraya satellite phones and dedicated networks/ servers facilitate the physical act of data collection by humanitarian actors in remote locations where forcibly displaced persons seek safety, but basic infrastructure such as an electricity supply so that those fleeing can charge their phones so as to access services should not be presumed in the rush to utilise technology. This is not necessarily a reason not to use it, but to be aware that all protection work can be affected by global structural inequalities far beyond the specific context of a humanitarian operation.<sup>43</sup> Secondly, technological developments are value-driven, whether that value be commercial profit or human rights focused; in this sphere of operation, human rights, rule of law and protection of persons of concern have to be the values that govern the developments and their implementation. In light thereof, there are several inherent problems in relying on technology that are to do with access, use and data analysis. Does the data include marginalised groups?<sup>44</sup> Statistics from the International Telecommunications Union (ITU), the UN specialised agency for information and communication technologies, reveal the gender divides in various countries and the access to the internet in developing and developed states.<sup>45</sup> In the past twenty years, the disparity of access to the internet between developed and developing states has narrowed. Statistics from the ITU show that in 2001 nearly 30% of individuals in the developed world were using the internet, while not even 3% were in the developing world; in 2019, the figure was 86.6% for the developed world, a threefold increase, whereas it was 47% in the developing world, an almost seventeen-fold increase – that still meant, though, that only just over half the people on the planet (53.6%) were using the internet. However, the ITU statistics do not reveal in-country divides

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<sup>43</sup> See C. Locke, 'Coping with COVID, Mainstreaming Digital Development', 12 June 2020, available at <https://medium.com/caribou-digital/coping-with-covid-mainstreaming-digital-development-e549776a0595>, (last accessed 29 November 2025) on geographical hierarchies; Ada Lovelace Institute, Rapid Evidence Review, 'Exit through the App Store', 20 April 2020, on privacy-by-design, limiting data retention and taking only such data as is required - available at <https://www.adalovelaceinstitute.org/wp-content/uploads/2020/04/Ada-Lovelace-Institute-Rapid-Evidence-Review-Exit-through-the-App-Store-April-2020-2.pdf> (last accessed 29 November 2025).

<sup>44</sup> See Office for National Statistics, Exploring the UK's Digital Divide, 4 March 2019, available at <https://www.ons.gov.uk/releases/exploringtheuksdigitaldivide> (last accessed 29 November 2025), looking at variations in access and usage broken down by age, sex, ethnicity and disability. See also, Minority Rights Group International, 'Minority and Indigenous Trends 2020: Focus on Technology' (05 October 2020), <[https://minorityrights.org/resources/minority-and-indigenous-trends-2020-focus-on-technology/#:~:text=Technology%20increasingly%20permeates%20every%20aspect,intelligence%20\(AI\)%20and%20automation.](https://minorityrights.org/resources/minority-and-indigenous-trends-2020-focus-on-technology/#:~:text=Technology%20increasingly%20permeates%20every%20aspect,intelligence%20(AI)%20and%20automation.)> (last accessed 29 November 2025).

<sup>45</sup> See <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx> (accessed 29 November 2025). On the appropriateness of distinguishing developing from developed states as if the divide was binary in this sphere, see D. Desierto, 'The Quandaries of Data Analysis and Methodologies in Rule of Law, Development, and Human Rights Assessments: New Challenges for UN Special Rapporteurs', EJILTalk, 20 July 2018, at 1, <https://www.ejiltalk.org/the-quandaries-of-data-analysis-and-methodologies-in-rule-of-law-development-and-human-rights-assessments-new-challenges-for-un-special-rapporteurs/> (last accessed 29 November 2025). See also, GSMA, 'Bridging the mobile gender gap for refugees', 25 March 2019, available at <https://www.gsma.com/mobilefordevelopment/resources/bridging-the-mobile-gender-gap-for-refugees/> (last accessed 29 November 2025), and UNHCR, 'Displaced and Disconnected' and the 'Country Reports' <https://www.unhcr.org/innovation/wp-content/uploads/2019/04/Displaced-Disconnected-WEB.pdf> and <https://reliefweb.int/report/world/country-reports-displaced-and-disconnected> (last accessed 29 November 2025).

between urban and rural populations, male and female,<sup>46</sup> displaced and host community populations.<sup>47</sup> Further, vast disparities still exist between the level of service and bandwidth available in different places, and, for example, smartphone-based high data rate internet access is often still at a premium and only easily accessible in richer states. Another problem with trying to draw conclusions on the use of emerging technologies, which is broader than mere internet usage anyway, is that different organizations do not always use the same categorizations – the ITU uses UN M49 classification for developed and developing countries,<sup>48</sup> while the World Bank has its own classification of development with respect to each state.<sup>49</sup> In sum, trying to reach conclusions about data and technology in humanitarian crises is never going to be straightforward and could well be biased due to structural inequalities that are societal rather than simply the result of the humanitarian crisis, although that might exacerbate those inequalities. And that is before one looks at the use of AI and the algorithms employed for machine learning.<sup>50</sup>

## 4.2 Machine learning

Undoubtedly, machine learning can process vast quantities of data quicker than any human being.<sup>51</sup> Unfortunately, machines learn within the frameworks created for them and then ‘learn for themselves’ based on those self-same presets.<sup>52</sup> The original information might be biased due to

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<sup>46</sup> The ITU Gender breakdown, *supra* note 45, shows that in nearly every state in the world, men have greater access, thus skewing any conclusions that might be drawn. See also Buss, *supra* note 41, and L. Taylor, ‘The Data Revolution: whose revolution, whose data?’ (2016), available at [https://www.academia.edu/22639294/The\\_Data\\_Revolution\\_whose\\_revolution\\_whose\\_data](https://www.academia.edu/22639294/The_Data_Revolution_whose_revolution_whose_data), p.3 (last accessed 29 November 2025).

<sup>47</sup> See Parsons and Thornton, *supra* note 21, 22, discussing well-constructed surveys. See also, UNESCO’s Internet Universality Indicators, 2019, available at <https://unesdoc.unesco.org/ark:/48223/pf0000367617?posInSet=1&queryId=a46642b0-1893-4f04-9bfb-b832b0851652> (last accessed 29 November 2025).

<sup>48</sup> Standard Country or Area Codes for Statistical Use established by the UNDESA Statistics Division – available through 2022 Demographic Yearbook <https://desapublications.un.org/publications/demographic-yearbook-2022> (last accessed 29 November 2025).

<sup>49</sup> See World Bank List of Economies (June 2019), available at <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519> (last accessed 29 November 2025). The World Bank uses the Atlas Method – see <https://datahelpdesk.worldbank.org/knowledgebase/articles/378832-what-is-the-world-bank-atlas-method> (last accessed 29 November 2025). In 2019, UNHCR and the World Bank opened the Joint Data Centre in Copenhagen <https://www.worldbank.org/en/programs/forceddisplacement/brief/unhcr-world-bank-group-joint-data-center-on-forced-displacement-fact-sheet> (last accessed 29 November 2025).

<sup>50</sup> See L. McGregor, D. Murray and V. Ng, ‘International Human Rights Law as a Framework for Algorithmic Accountability’, (2019) 68 *International & Comparative Law Quarterly* 309.

<sup>51</sup> A. Alhelbawy, U. Kruschwitz, C. Fox, and M. Poesio, (2020) ‘An NLP-Powered Human Rights Monitoring Platform. Expert Systems with Applications’, : X. 100023. 10.1016/j.eswax.2020.100023.

<sup>52</sup> L. Gilpin, D. Bau *et al.*, ‘Explaining Explanations: An Overview of Interpretability of Machine Learning’ 2018 IEEE 5th International Conference on Data Science and Advanced Analytics, available at <https://ieeexplore.ieee.org/abstract/document/8631448> (last checked 29 November 2025). See also, D. Lazer and J. Radford, ‘Data ex Machina: Introduction to Big Data’, (2017) 43 *Annual Review of Sociology* 19, available at <https://www.annualreviews.org/doi/full/10.1146/annurev-soc-060116-053457> (last accessed 29 November 2025).

unrepresentative data sources and the algorithms may replicate the biases built in to the code by the programmer,<sup>53</sup> biases that might reflect no specific immediate discriminatory intent, but which are consequent, for example, on using large datasets that do not properly take into account discrete groups within a larger population. The law on non-discrimination has long known that it can be discriminatory to treat all groups the same when there are reasonable distinctions to draw between them:<sup>54</sup>

44. The Court ... [considers] the Convention is also violated when States without an objective and reasonable justification fail to treat differently persons whose situations are significantly different

As McGregor *et al.* explain, though, international human rights law does not offer a panacea.<sup>55</sup>

Rather, our argument is that a human rights-based approach to algorithmic accountability offers an organizing framework for the design, development and deployment of algorithms, and identifies the factors that States and businesses should take into consideration in order to avoid undermining, or violating, human rights.

Without data that is accurate, comprehensive, relevant and pertinent, however, the whole process is flawed.<sup>56</sup> Of course, this is not only a problem in the area of big data and machine learning – groups such as transgender people, are often ignored by humanitarian actors because there is an initial assumption that they are too small a group to merit special attention.<sup>57</sup> Further, one essential safeguard for every use of AI when the lives and protection of displaced persons are at stake is that the results are overseen by human actors<sup>58</sup> – automated decisions, rather than machine driven data selection for humanitarian actors to implement, are a potential major risk.<sup>59</sup> However, that assumes

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<sup>53</sup> McGregor *et al.*, *supra* note 50, 318 *et seq.*; on bias, see 325-6. See also, Buss, *supra* note 41, 383; K. Bergtora Sandvik, 'Technology, Dead Male Bodies, and Feminist Recognition: Gendering ICT Harm Theory' 44 *Australian Feminist Law Journal* 49, 53 and 57 (2018).

<sup>54</sup> See *Christians Against Racism and Fascism v. United Kingdom*, Appl. no. 8440/78, 21 DR 138 at 152 (1980); *Thlimmenos v. Greece*, Appl. no. 34369/97, European Court of Human Rights (Grand Chamber), 6 April 2000. In addition, see *DH and Others v. Czech Republic*, Appl. no. 57325/00, European Court of Human Rights (Grand Chamber), 13 November 2007.

<sup>55</sup> McGregor *et al.*, *supra* note 50, 311 n9.

<sup>56</sup> See H. Krause Hansen and T. Porter, 'What Do Big Data Do in Global Governance?', 2 (2017) 3 *Global Governance* 31.

<sup>57</sup> S. Smiley, 'Out of sight, out of mind? Transgender people in humanitarian emergencies', ICRC BlogPost, 31 March 2020, available at [https://blogs.icrc.org/law-and-policy/2020/03/31/out-sight-mind-transgender-people-humanitarian-emergencies/?utm\\_campaign=DP\\_FORUM%20Out%20of%20sight%2C%20out%20of%20mind%3F%20Transgender%20people%20in%20humanitarian%20emergencies&utm\\_source=hs\\_email&utm\\_medium=email&utm\\_content=85519404&hse\\_nc=p2ANqtz-8sXN7xHOEH0GaKWKhubp8CeGd6PTxennaH7L8ZCO1zpkWZzxtrKKSi0EyP\\_fngMt4Ve3T6y0nNbZBDzRgxVBoup9Ctow&hsmi=85519404](https://blogs.icrc.org/law-and-policy/2020/03/31/out-sight-mind-transgender-people-humanitarian-emergencies/?utm_campaign=DP_FORUM%20Out%20of%20sight%2C%20out%20of%20mind%3F%20Transgender%20people%20in%20humanitarian%20emergencies&utm_source=hs_email&utm_medium=email&utm_content=85519404&hse_nc=p2ANqtz-8sXN7xHOEH0GaKWKhubp8CeGd6PTxennaH7L8ZCO1zpkWZzxtrKKSi0EyP_fngMt4Ve3T6y0nNbZBDzRgxVBoup9Ctow&hsmi=85519404) (last accessed 29 November 2025).

<sup>58</sup> See N. Diakopoulos and M. Koliska, 'Algorithmic Transparency in the News Media', 5(7) *Digital Journalism* 809, at 822 (2017).

<sup>59</sup> See Giulio Coppi, Rebeca Moreno Jimenez and Sofia Kyriazi, 'Explicability of humanitarian AI: a matter of principles', 6 *Journal of International Humanitarian Action* 19 (2021).

the humans implementing the automated processes understand how the algorithm was originally designed to work and, secondly, that machine learning by the algorithm over time has not made unravelling the present process impossible - inserting a human decision-maker into the process may not come close to providing sufficient safeguards.<sup>60</sup> That would suggest that automated data should only ever be but one factor taken into account, although it may, on occasions, unavoidably be the only source of data - in ordinary circumstances, the McGregor *et al.* are clearly right, but in humanitarian crises where access across borders may be restricted, it may be better to use non-transparent algorithm-generated predictions rather than simply wait to see what actually happens because lives might be lost.<sup>61</sup> Related to this is the need for those using the results of AI analysis to be empowered: to be empowered to trust it and act on it from having received comprehensive training, and empowered to recognize its limitations and not rely on it out of some misguided idea that computers are always impartial.<sup>62</sup> Moreover, if it is impossible to see how the machine learning develops the algorithm, there would need to be other data sources so as to be able to assess whether the algorithm still offers the best guidance on protection, and upholding international human rights law and the rule of law – the inability to assess how the machine is “self-learning” means the newly collected data sources could even be inculcating biases that were not there at the outset: to think that there will be constant monitoring of algorithms so that they are adjusted to reflect the latest reality and do not perpetuate biases is probably naïve, but that does not mean it should not be attempted. To give up regulation and review would be to fail to uphold the rule of law, which was explicitly agreed by the General Assembly to apply to states and international organizations.<sup>63</sup>

#### 4.3 Specific humanitarian scenarios and their challenges

Through examining several specific situations, the issues involved for humanitarian actors and those they seek to protect that arise from emerging technologies will be further explored. While issues pertaining to non-discrimination, equality, participation, and human rights-based approaches affect all uses of emerging technologies in the humanitarian sphere, these following cases capture particular problems relating to the unavoidability of what may not be wholly understood by the myriad of actors at so many different levels of a humanitarian operation, let alone the forcibly displaced persons.

- Enhanced protection and assistance require data as has always been the case, but emerging technologies and AI make it easier to collect, collate, analyse and share that data without necessarily guaranteeing that it is secure.
- Separately, the growth of the internet and the potential it offers requires that it be distributed fairly to displaced populations, although questions arise as to who bears the duty to provide access.

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<sup>60</sup> Cf. Benvenisti, *supra* note 24, 63-66.

<sup>61</sup> Cf. McGregor *et al.*, *supra* note 50, 337-38.

<sup>62</sup> See McGregor *et al.*, *supra* note 50, 323 and 335 *et seq.*

<sup>63</sup> UNGA Res. 67/1, *supra* note 11, Para. 2. See also, Gilbert and Rüsch, *supra* note 12; Harlow, Alvarez, Krygier, and Loughlin, all cited *supra* note 36.

- The availability of the internet, moreover, increases the influence of displaced populations in the country of asylum and country of nationality, but since humanitarian actors have to be neutral, it raises the question whether by providing access they could be involved in facilitating political activity by displaced persons or, in the alternative, by denying it they could they be inhibiting what is a right of all individuals to participate in public affairs.
- Finally, humanitarian actors could now be better empowered through emerging technologies to prevent the root causes of displacement but that raises questions as to allocation of resources and whether emerging technologies change the operational focus of humanitarian actors.

#### 4.3.1 *Data collection, storage, usage and sharing*

International human rights law and the humanitarian principles set out obligations for states and international organizations with respect to data concerning displaced persons. Registration and documentation of displaced persons is an essential part of protecting them, ensuring that they receive assistance and thus meeting their human rights. Data collection by humanitarian actors is fundamental to all operations.<sup>64</sup> Accurate data also prevents the spread of fake news that can be so prevalent in humanitarian crises, enhancing human rights protection and the rule of law.<sup>65</sup> However, information as innocent seeming as the person's name, age and former address, the last to indicate whether they have left a conflict-zone, for example, can disclose ethnic identity, possible religion, and whether, if the information is hacked, they would be useful as recruits for a rebel army, let alone as targets of further persecution.<sup>66</sup> Protection data, as always, is subject to the usual rules of data protection.<sup>67</sup> That is the bare minimum that the mandates of international organizations require in

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<sup>64</sup> See the GCR, *supra* note 14, Para. 45.

<sup>65</sup> See Parsons and Thornton, *supra* note 21, at 22.

<sup>66</sup> See *infra*, note 77, and associated text.

<sup>67</sup> UNHCR, *Policy on the Protection of Personal Data of Persons of Concern to UNHCR*, May 2015, available at <https://www.refworld.org/docid/55643c1d4.html> (last accessed 29 November 2025); C. Kuner and M. Marelli, *Handbook on Data Protection in Humanitarian Action* (2020), available through <https://shop.icrc.org/handbook-on-data-protection-in-humanitarian-action-pdf-en> (last accessed 29 November 2025). See also, A. Beck and C. Kuner, 'Data Protection in International Organizations and the New UNHCR Data Protection Policy: Light at the End of the Tunnel?', EJILTalk 31 August 2015, <https://www.ejiltalk.org/data-protection-in-international-organizations-and-the-new-unhcr-data-protection-policy-light-at-the-end-of-the-tunnel/> (last accessed 29 November 2025); 'Monitoring', *supra* note 25. The ICRC has put out a series of short pieces on 'Hacking Humanitarians' that provide insight into the problems of data protection in the field – M. Marelli, 'Hacking humanitarians: moving towards a humanitarian cybersecurity strategy', 16 January 2020, <https://blogs.icrc.org/law-and-policy/2020/01/16/hacking-humanitarians-cybersecurity-strategy/> (last accessed 29 November 2025); M. Marelli and A. Perrig, 'Hacking humanitarians: mapping the cyber environment and threat landscape', 7 May 2020, <https://blogs.icrc.org/law-and-policy/2020/05/07/hacking-humanitarians-mapping-cyber-environment/> (last accessed 29 November 2025); M. Marelli and M Schüepp, 'Hacking humanitarians: operational dialogue and cyberspace', 4 June 2020, <https://blogs.icrc.org/law-and-policy/2020/06/04/hacking-humanitarians-dialogue-cyberspace/> (last accessed 29 November 2025); see also, T. Rodenhäuser, 'Hacking Humanitarians? IHL and the protection of humanitarian organizations against cyber operations', EJILTalk 16 March 2020, <https://www.ejiltalk.org/hacking-humanitarians-ihl-and-the-protection-of-humanitarian-organizations-against-cyber-operations/> (last accessed 29 November 2025).

relation to the impact of emerging technologies and AI on humanitarian protection operations.<sup>68</sup> All of this needs to be embedded in all standard procedures for humanitarian crises so that human rights and rule of law as regards collection, use and storage of data are not ignored in the initial emergency phase.<sup>69</sup> Federated datasets so that not all information is located in one place are one solution to preserving the privacy of forcibly displaced persons who have had to disclose large amounts of personal information.

One preliminary question should be whether the particular type of data is necessary in any given scenario. It is difficult to predict what data might be needed or useful in the future when other, newer questions arise, but the privacy and protection concerns of current displaced persons must have priority over the interests of those wishing to have data for analysis, no matter how important that might be at some abstracted level.<sup>70</sup>

45. Reliable, comparable, and timely data is critical for evidence-based measures to: improve socio-economic conditions for refugees and host communities; assess and address the impact of large refugee populations on host countries in emergency and protracted situations; and identify and plan appropriate solutions. Relevant data protection and data privacy principles are to be applied with respect to all collection and dissemination of personal data, *including the principles of necessity, proportionality, and confidentiality.*

Data availability may be poor, but technology's needs should not require wider than necessary data collection from persons in situations of vulnerability who have to supply data to the 'gatekeepers' of protection and assistance.

If data collected for a specific purpose is scarce, the question arises as to how far one can repurpose other data that addresses a pertinent issue but only tangentially, a data usage question? If one is trying to develop an institutional approach that can be deployed globally to address humanitarian crises as they arise, then reliance on data collected for a variety of different purposes over time will necessarily shape that policy. International lawyers, by training, look for the most exact and pertinent evidence for each argument they put forward; arguments by analogy need to be justified with the utmost care, where every step in the process can be explained by reference to the underpinning facts - every case turns on its own facts. Data analysts, on the other hand, regularly correlate different datasets using longstanding rules and methodologies to establish their findings – the bigger the dataset, the more reliable the findings, although that then adds to their necessarily generalised quality. According to

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<sup>68</sup> See Global Protection Cluster, *Protection in a Climate of Change: Strategic Framework 2020-2024* (2019), 17, 26; see also, UNHCR, 'Legal considerations regarding claims for international protection made in the context of the adverse effects of climate change and disasters, 01 October 2020', available at <https://www.refworld.org/docid/5f75f2734.html> (last accessed 29 November 2025).

<sup>69</sup> See Taylor 2016, *supra* note 46, at 5-6.

<sup>70</sup> See the GCR, *supra* note 14, Para. 45. Cf. Parsons and Thornton, *supra* note 21, at 22, and 'Monitoring', *supra* note 25. See also, 'The use of data to promote age, gender and diversity mainstreaming', Report of a Global Protection Cluster Thematic Roundtable, 11-12 March 2019, held at the University of Essex Human Rights Centre.

Xuan Song, Ryosuke Shibasaki *et al.*, such an approach is applicable when dealing with displacement in situations of acute crisis.<sup>71</sup> Their DeepMob model, based on Japanese earthquake behaviour, is not populated with data identical to the reasons people flee persecution or armed conflict, but the methodology would be transferable. Interestingly, it found that human mobility in small scale disasters was more like normal human movements and, therefore, easier to predict than in large-scale disasters; however, the modelling with respect to both scenarios was better than just using one source of data and no machine learning. As they state:<sup>72</sup>

[We] collected big and heterogeneous data to understand and model human emergency behavior and mobility following natural disasters, and we built an intelligent system called DeepMob. The deep learning architecture of DeepMob can discover the deep knowledge of human behavior or mobility patterns, and the learned predictive model can accurately predict or simulate people's emergency behavior or mobility under different disaster conditions. ... In the future, our system can be extended and improved in the following aspects. (1) Sometimes, human evacuation behavior and mobility following natural disasters will be affected by social networking messages .... Thus, we will try to collect social networking data and analyze how social networking messages could influence human mobility following disasters in the future. Specifically, these social networking data can be considered as another data source input of our deep learning architecture. (2) Currently, our deep learning architecture does not consider the temporal information of human evacuation behavior. Hence, some temporal deep learning approaches, such as recurrent neural networks (RNN), can be carefully considered and explored in the future.

Thus, according to those findings, such approaches with the appropriate heterogenous data sources and more general human mobility data could properly assist prediction, despite concerns about lack of specific information regarding mobility in any particular current crisis. Prediction facilitates preparedness and potentially prevention.

The humanitarian principles call for independence by humanitarian actors which protects forcibly displaced persons' privacy *vis-à-vis* the host state and better guarantees their safety and security, too. Traditionally, humanitarian operations were self-contained and separate from the state, despite the state having given permission for the humanitarian actors to engage in their relief activities. One consequence, though, was the alleged practice of 'warehousing' refugees in remote locations away from urban centres with humanitarian aid delivered and distributed in the camps. If that were ever to have been the case, it is certainly not true anymore, with over 60% of refugees and 80% of internally displaced persons, respectively, now living in urban settings alongside local populations, and where

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<sup>71</sup> [ACM Reference Format] Xuan Song, Ryosuke Shibasaki, Nicholos Jing Yuan, Xing Xie, Tao Li, and Ryutaro Adachi. 2017. 'DeepMob: Learning deep knowledge of human emergency behavior and mobility from big and heterogeneous data', ACM Trans. Inf. Syst. 35, 4, Art. 41 (June 2017), 19 pages. DOI: <http://dx.doi.org/10.1145/3057280>. The Deep Learning Architecture models are set out over pages 6-10.

<sup>72</sup> *Ibid.* 41, 17.

the displaced receive Cash-based Interventions (CBIs) rather than 'rice and blankets' in-kind transfers.<sup>73</sup> The result, however, is that protection is no longer a closed process and data will be shared with or obtained from national and municipal authorities and possibly private actors, such as banks. The humanitarian principle of independence and the human right to privacy still apply, but it is no longer so simple to retain data 'internally' as it used to be.<sup>74</sup> Moreover, humanitarian operations have always been multi-agency activities, so even within that community of actors, regard needs to be had to the policies each one has adopted for the protection of data. And, as the divide between humanitarian and development actors becomes more fluid, the development agencies' approach of national ownership will call into question independence, as will partnerships by all sections of the UN with the private sector generally.<sup>75</sup> The gains made from an inclusive approach to displaced persons in the era of emerging technologies makes protection data privacy more important than ever.<sup>76</sup>

In terms of sharing data analysis, even more concerning is where mere anonymization is seen as a sufficient guarantee of protection. As Taylor, citing Raymond, has shown:<sup>77</sup>

An epidemiological model using mobile phone data to analyse the spread of disease through human mobility is also a model that can show the dissemination of goods such as contraband or weapons, or of dissident activity, and can therefore be valuable to governments for a variety of reasons. The Harvard Signal Program, for example, found that as well as informing international human rights activists, its analysis of satellite data was informing Sudanese aggressors about where to target attacks.

If groups are being targeted, as will normally be the case for displacement in acute crises, then ensuring personal anonymity is pointless and redundant and a human rights-based approach focused just on privacy is not going to guarantee broader protection needs, even the right to life.<sup>78</sup> Moreover, privacy requires that humanitarian actors have active strategies to prevent hacking – establishing

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<sup>73</sup> See H. Park, 'Cities are our future' <https://www.unhcr.org/innovation/the-power-of-cities/> (last accessed 29 November 2025).

<sup>74</sup> See S.M. McDonald, 'A humanitarian duty to integrity', 8 April 2021, <https://blogs.icrc.org/law-and-policy/2021/04/08/humanitarian-duty-to-integrity/> (last accessed 29 November 2025); and P. Devidal, 'Cashless cash: financial inclusion or surveillance humanitarianism?' <https://blogs.icrc.org/law-and-policy/2021/03/02/cashless-cash/> (last accessed 29 November 2025).

<sup>75</sup> See Raymond *et al.*, *supra* note 20, on WFP and Palantir.

<sup>76</sup> According to HRW, data collected by UNHCR and its partners regarding Rohingya refugees was shared with the Bangladeshi government that then shared it with the government of Myanmar – *supra* note 23.

<sup>77</sup> Taylor 2016, *supra* note 46, 5, citing Raymond, *et al.* 'While We Watched: Assessing the Impact of the Satellite Sentinel Project'. (2013) 14 *Georgetown Journal of International Affairs* 185. See also, the ICRC pieces cited *supra* note 67, and see T. Bouffet and M. Marelli, 'The price of virtual proximity: How humanitarian organizations' digital trails can put people at risk', 7 December 2018, <https://blogs.icrc.org/law-and-policy/2018/12/07/price-virtual-proximity-how-humanitarian-organizations-digital-trails-put-people-risk/> (last accessed 29 November 2025).

<sup>78</sup> Nor is transparency by humanitarian actors necessarily compatible with protection – see McGregor *et al.*, *supra* note 50, at 320.

secure storage is simply the first step, technology to monitor for and prevent hacking is also essential and that can be costly.<sup>79</sup>

Finally, while data collection is an essential part of protection during a humanitarian crisis,<sup>80</sup> that is not to say there is no false data out there that can skew the work of humanitarian actors.<sup>81</sup> The emerging technology industry places great emphasis on algorithmic predictability, which, over time, inculcates a cycle of trustworthiness that may or may not be justified in the particular circumstances of any given specific case. One particular area where this is of especial concern is with respect to voluntary repatriation. Hosting states have a vested interest in bringing an end to displacement crises: voluntary repatriation by refugees is therefore very welcome. On the other hand, because of the fluid circumstances in the refugees' country of nationality, it may be difficult for refugees and even humanitarian actors to verify whatever data that can be gleaned. Remote sourcing may indeed provide additional information, but how can refugees give informed consent to return to their country of nationality where the source of the data is remote, difficult to verify and filtered through algorithms? There may be a human right to receive information, but those passing it on have a duty of due diligence regarding its authenticity.<sup>82</sup>

#### 4.3.2 *A 'right' to the internet*

Again, this topic raises issues relating to international human rights law, rule of law and the humanitarian principles. The assertion that everyone has a right to access the internet must clearly be understood in the light of the available coverage of networks in any particular part of the world. That said though, it would be discriminatory to deny refugees and IDPs access to the internet if it were otherwise available in the area where they were housed.<sup>83</sup> The corollary is that there may equally be an obligation to extend coverage to areas where refugees and IDPs are housed if it did not previously reach that part of the country, an obligation that may be shared between the state and the international organization managing the refugee settlement.

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<sup>79</sup> See Marelli, 'Hacking humanitarians: moving towards a humanitarian cybersecurity strategy', 16 January 2020, *supra* note 67.

<sup>80</sup> See GCR, *supra* note 14, Paras. 45-8.

<sup>81</sup> See Benvenisti, *supra* note 24, 68.

<sup>82</sup> See Art.19 International Covenant on Civil and Political Rights (ICCPR), UN Doc. A/6316 (1966), 999 UNTS 171 (ICCPR); Secretary-General's Report on Countering disinformation for the promotion and protection of human rights and fundamental freedoms, UNGA Res.77/287, 12 August 2022.

<sup>83</sup> See HRW, 'Bangladesh: Internet Ban Risks Rohingya Lives', 26 March 2020:

<https://www.hrw.org/news/2020/03/26/bangladesh-internet-ban-risks-rohingya-lives> (last accessed 29 November 2025).

During the COVID-19 pandemic, Bangladesh lifted this ban.

A right to the internet, as such, was seen in 2016 as part of freedom of expression as set out in Article 19 UDHR by the Human Rights Council.<sup>84</sup> However, one could also root it in Article 27 and the right “freely to participate in the cultural life of the community, ... to share in scientific advancement and its benefits”. The UDHR 1948 is not binding on states in and of itself, but those two provisions have been transposed in Article 19 International Covenant on Civil and Political Rights and Article 15 International Covenant on Economic, Social and Cultural Rights and could reflect customary international law in those states not party to the two Covenants.<sup>85</sup> In addition, given the number of child refugees, the internet may be an essential component if they are to access education.<sup>86</sup>

Given that the humanitarian actors have moved to using Cash-Based Initiatives (CBI) as part of empowering displaced populations and restoring their autonomy, the entire system is based on online access. As UNHCR has stated in its report on fulfilling its CBI goals, they are increasingly to be implemented through a digital eco-system.<sup>87</sup>

UNHCR's vision is that people it serves can meet their needs in dignity, are protected and can transition to sustainable solutions through the expanded and innovative use of efficient and effective CBI. In line with its commitment in 2016, the Policy commits UNHCR to continue scaling up the systematic use of CBI while also maximizing the quality and impact of its implementation. ... The implementation of UNHCR's Policy on the 'Protection of Personal Data of Persons of Concern' remains a cornerstone of the implementation of the CBI policy going forward, including through specific data protection impact assessments and data-sharing agreements that ensure adequate safeguards.

UNHCR recognised the need for strong data protection policies, but asserted that CBIs help prevent “displaced populations from resorting to negative coping strategies, such as removing children from schools, child labour and begging, survival sex, early marriage or returning prematurely to conflict zones”.<sup>88</sup> Given that degree of enhanced protection consequent upon implementing CBIs, the necessary expansion of internet services to areas where refugees and IDPs are housed has to be established, but that nevertheless still requires the usual guarantees of rights protection for those accessing online services – there must be no ‘trade-off’ of rights, such as data privacy and non-discrimination towards displaced persons, simply because situations of acute crisis present increased difficulties for states, the technology sector and international organizations, and the ultimate objective

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<sup>84</sup> UN Human Rights Council, ‘The promotion, protection and enjoyment of human rights on the Internet, resolution adopted by the Human Rights Council’, 18 July 2016, A/HRC/RES/32/13, available at:

<https://www.refworld.org/docid/57e916464.html> (last accessed 29 November 2025). See also, Human Rights Committee General Comment 34, CCPR/C/GC/34, 12 September 2011, Para. 15.

<sup>85</sup> ICCPR, *supra* note 82 ; UN Doc. A/6316 (1966), 993 UNTS 3 (ICESCR).

<sup>86</sup> UN Convention on the Rights of the Child, UN Doc. A/44/49 (1989), (UN CRC), Art. 28. See also, Arts. 13, 17, 31.2.

<sup>87</sup> See UNHCR, Implementation of the Policy on Cash-Based Interventions 2022-26, 4 and 9, available at <<https://www.unhcr.org/media/2022-2026-unhcr-policy-cash-based-interventions>> (last accessed 29 November 2025).

<sup>88</sup> *Ibid.* 3.

is positive.<sup>89</sup> Emerging technologies are unavoidable,<sup>90</sup> but international human rights law and the rule of law must govern their implementation, use and all further expansion, including ensuring that all parties, states, the technology sector, international organizations and also refugees, IDPs and host communities, have a voice in those developments – it is part of the protection mandate that humanitarian actors include those being protected in the decision-making processes and that should include designing the technologies that will affect them or fellow displaced persons.<sup>91</sup>

#### 4.3.3 *Neutrality and political participation*

Paragraph 2 of the 1950 Statute lays down that the work of UNHCR shall be “entirely non-political” and “humanitarian”.<sup>92</sup> Furthermore, areas housing refugees ought to be neutral, exclusively civilian, humanitarian, peaceful and demilitarized, an obligation placed jointly on states and refugees so as to better ensure the rights of forcibly displaced persons from attack.<sup>93</sup> It is presumed in all cases that camps and settlements for refugees and IDPs should not be used as bases from which to attack neighbouring states, nor as places to recruit fighters and combatants. However, that is a very simplistic approach in an era of complex and technologically advanced conflicts, where access to the internet can facilitate direct cyber-attacks, disinformation campaigns directed at the military or a civilian population, or simply the planning and co-ordination of traditional conflict. If there is a ‘right to the internet’, but refugees and IDPs are to respect the laws of the country of asylum and to maintain the humanitarian character of camps and settlements,<sup>94</sup> then there are chances for abuse that cannot be met through the traditional disarmament and separation practices, and a much more sophisticated approach to understanding neutrality will need to be adopted – neutral settlements for displaced persons stops them from being targeted that would threaten the right to life.

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<sup>89</sup> See how Bangladesh initially blocked access to mobile technology to Rohingya refugees in Cox’s Bazar – *supra* note 39.

<sup>90</sup> Benvenisti, *supra* note 24.

<sup>91</sup> M. de Waardt and S. Weber, “‘Beyond Victims’ Mere Presence: An Empirical Analysis of Victim Participation in Transitional Justice in Colombia’ (2019) 11 *Journal of Human Rights Practice* 209. See also, R. Bharania and M. Silverman, ‘Protective by design: safely delivering connectivity as aid’, 8 July 2021 <https://blogs.icrc.org/law-and-policy/2021/07/08/protective-by-design-connectivity-as-aid/> (last accessed 29 November 2025).

<sup>92</sup> *Supra*, note 13.

<sup>93</sup> See the Executive Committee of the High Commissioner (ExCom) - UN Economic and Social Council (ECOSOC), UN Economic and Social Council Resolution 672 (XXV): Establishment of the Executive Committee of the Programme of the United Nations High Commissioner for Refugees, 30 April 1958, E/RES/672 (XXV), available at: <https://www.refworld.org/docid/3ae69eecc.html> [accessed 18 April 2020], alongside Para. 3 1950 Statute, *supra* note 13. ExCom Conclusions have laid down the character of camps and settlements: see Conclusions No. 48 (XXXVIII) – 1987, Preambular Paras. 3, 4(a), (b) and (c); Conclusion No. 65 (XLII) – 1991, Para. (c); Conclusion No. 72 (XLIV) – 1993, Preambular Para. 4; Conclusion No. 77 (XLVI) – 1995, Para. (q); Conclusion No. 84 (XLVIII) – 1997, Conclusion on Refugee Children and Adolescents, Para. b(ii); Conclusion No. 87 (L) – 1999, Para. (q); Conclusion No. 89 (LI) – 2000, Preambular Para. 3; Conclusion No. 94 (LIII) – 2002, Preambular Paras. 1, 2, 3, 6 and 7 (a), (b) and (c)(iv) – all available at <<https://www.refworld.org/type,EXCONC,UNHCR,,0.html>>. See also, G. Gilbert and AM. Rüsch, [Creating Safe Zones and Safe Corridors in Conflict Situations: Providing protection at home or preventing the search for asylum?](https://www.refworld.org/type,EXCONC,UNHCR,,0.html) Kaldor Centre for International Refugee Law Policy Brief No.5, at 8-9 (2017) (last accessed 29 November 2025).

<sup>94</sup> Art. 2 1951 Convention, *supra* note 3, and see ExCom Conclusions 72, 77, 87, and 94, *supra* note 93.

On the other hand, all citizens have the right to participate in the conduct of public affairs, to vote and to be elected to office.<sup>95</sup> IDPs will ordinarily be citizens unless stateless, but although unable or unwilling to avail themselves of its protection, refugees remain citizens of their country of nationality.<sup>96</sup> Nevertheless, just because the right to participate exists does not mean that it will be possible to vote out of country, either because of the laws of the country of nationality or those of the country of asylum. Emerging technologies may provide a greater range of options for voting whilst displaced, but participants in the election or any peace process, where the voice of the forcibly displaced must be heard if durable and sustainable solutions are to be achieved,<sup>97</sup> must enjoy the same protections regarding the secrecy of the ballot and freedom from coercion or compulsion.<sup>98</sup> UNHCR's mandate to be entirely non-political does not mean they cannot engage in promoting electoral participation by refugees and IDPs, but rather means that they should not be partisan, so all members of displaced populations must have access to the vote without discrimination.<sup>99</sup> Voting, however, is not the sole means of participating and emerging technologies may not only facilitate out of country voting in the future, they already allow diaspora communities, including refugee populations, to influence elections. According to HRC General Comment 25:<sup>100</sup>

8. Citizens also take part in the conduct of public affairs by exerting influence through public debate and dialogue with their representatives or through their capacity to organize themselves. This participation is supported by ensuring freedom of expression, assembly and association.

Freedom of expression under Article 19 ICCPR is not constrained by international borders.<sup>101</sup> As will be discussed below, however, does that impose an obligation on UNHCR to police social media from displaced persons so as to ensure there is no fake news?

#### 4.3.4 *Prevention and root causes*

Under Paragraph 8(b) of the 1950 Statute, UNHCR in part provides for protection of persons within its mandate by "[promoting] through special agreements with Governments the execution of any

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<sup>95</sup> Art. 25 ICCPR, *supra* note 82. See also, Art. 1 ICCPR on the self-determination of peoples – it has been argued that 'peoples', the 'self' of each state, are the population of each sovereign territory – see R. Higgins, *Problems and Process: International Law and How We Use It* (1994), 120-8; see also, Higgins, Comments, in C. Brölmann, R. Lefebvre and M. Zieck, *Peoples and Minorities in International Law* (1993) 29, and G. Gilbert, 'Autonomy and Minority Groups - A Right in International Law?' 35 *Cornell International Law Journal* (2002) 307.

<sup>96</sup> See G. Gilbert, '[Political participation of refugees in their country of nationality](#)', UNHCR Research Paper Series No.38, November 2018 (last accessed, 29 November 2025).

<sup>97</sup> See GCR, *supra* note 14, Paras. 85-89. See also, Para. 8(c) Statute, *supra* note 13, on promoting voluntary repatriation.

<sup>98</sup> HRC General Comment 25, CCPR/C/21/Rev.1/Add.7, 27 August 1996.

<sup>99</sup> UNHCR Statute, *supra* note 13, Para. 2; UNHCR must operate in accordance with the UDHR and the rule of law – see above, including the reference to Gilbert and Rüsch, *supra* note 12.

<sup>100</sup> *Supra*, note 98.

<sup>101</sup> *Supra*, note 82.

measures calculated to ... reduce the number requiring protection".<sup>102</sup> One of the benefits that emerging technologies are said to offer is greater predictability that might allow interventions, at last, to identify and address root causes and prevent or, at least, minimize refugee flows.<sup>103</sup> The classical view of UNHCR protection, which was never the case in practice, was that the organization would wait across the border and turn up only when reports reached it of the location of the newly arrived refugees; the reality is that UNHCR has always gathered information in order to predict where refugees and IDPs would go – what emerging technologies are meant to achieve is increased forewarning and more accurate predictions. Two problems arise. The first is one that is prevalent in society generally, the belief that emerging technologies can provide solutions.<sup>104</sup>

The good cop in this drama is the ideology of 'solutionism', which has transcended its origins in Silicon Valley and now shapes the thinking of our ruling elites. In its simplest form, it holds that because there is no alternative (or time or funding), the best we can do is to apply digital plasters to the damage. Solutionists deploy technology to avoid politics; they advocate 'post-ideological' measures that keep the wheels of global capitalism turning.<sup>105</sup>

Assuming accurate data is available, it still has to be translated into practice in such a way as to enhance protection: as the example from Taylor regarding an epidemiological spread of a disease, the availability of information to the humanitarian sector does not protect it from misuse by government or rebel forces who observe the humanitarian actors as they prepare;<sup>106</sup> secondly, humanitarian actors in the field who are in a position to access all this data still have to interpret it to put protection workers in the right place in order to physically offer protection – emerging technologies will not remotely build shelters and provide necessary medical services.

There is, however, a prior problem that is general to all uses of emerging technology in the humanitarian sphere: is there a duty to use it? Emerging technology may well receive a 'humanitarian discount' from the large tech corporations, but that does not mean that there is no investment-cost, in terms of time and resources, in using it or in training staff to utilize it.<sup>107</sup> The question remains whether

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<sup>102</sup> *Supra*, note 13.

<sup>103</sup> See GCR, *supra* note 14, Paras. 8 and 9. On the long-awaited promise of addressing root causes, see also, G. Gilbert, 'The Best "Early Warning" – Prevention: "Early Warning" and Refugee Flows – European Responses', 9 *International Journal of Refugee Law* 207 (1997); 'Root Causes and International Law: Refugee Flows in the 1990's', 11 *Netherlands Quarterly of Human Rights* 413-36 (1993).

<sup>104</sup> See E. Morozov, *To Save Everything, Click Here: Technology, Solutionism, and the Urge to Fix Problems that Don't Exist* (2013).

<sup>105</sup> 'The tech "solutions" for coronavirus take the surveillance state to the next level', The Guardian, *Opinion*, <https://www.theguardian.com/commentisfree/2020/apr/15/tech-coronavirus-surveillance-state-digital-disrupt> (last accessed 29 November 2025).

<sup>106</sup> *Supra*, note 77.

<sup>107</sup> See Locke, *supra* note 43. It may also disadvantage the humanitarian sector in terms of reducing its influence over the discounted service and its implementation – short term gain may not be in the long-term interest of anyone. As Chris Earney has pointed out, TV White Space internet access (<https://www.nominet.uk/spectrum-management/solutions/tv->

humanitarian actors should divert resources from direct assistance and protection for refugees and IDPs into adopting emerging technologies. If the improved predictions would enhance protection, do humanitarian actors have a duty to use the emerging technologies despite the costs? Law is not really adapted to nuanced resource allocation, except to the extent that failure to provide funding would constitute a violation of human rights or a breach of the duty to uphold the rule of law at the national and international levels.<sup>108</sup> Nevertheless, to the extent that emerging technologies are known and their capabilities understood, they cannot be ignored by the humanitarian sector. 'Solutionism' has created an additional problem.

## 5. CONSEQUENCES

The aim of this article was to consider the problems that emerging technologies present in protecting displaced populations in acute crises as regards ensuring human rights, rule of law and the humanitarian principles. It attempted to address those concerns within existing frameworks, and to highlight the gaps that remain thus far. If the humanitarian sector is to enhance protection, respect for international human rights law, rule of law and good digital governance, the following *consequences* can be drawn from the above analysis – to deem them 'conclusions' seems too certain in this dynamic and fluid environment.

The dearth of disaggregated data providing specific information concerning refugees and IDPs was raised above in relation to the responses of humanitarian actors to crises: it is difficult to utilize emerging technologies for the protection of forcibly displaced persons if data about them is unavailable. On the other hand, the humanitarian sector as a whole is generally responding to the effects of the crisis on all the population, not just those forcibly displaced – they are UNHCR's concern – and does not need the data to be disaggregated. Moreover, the GCR emphasises the need to provide protection and assistance, rooted in human rights, to refugees and host communities, so UNHCR's new protection paradigm has explicitly moved beyond just those displaced.<sup>109</sup> Disaggregation of big data enhances the distinctive identity in international law of refugees and, thus, protection, with

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[white-space/](#) (last accessed 24 August 2024)) may be wholly redundant in a few years' time, leaving various displaced communities with no connectivity. On the other hand, no-one in the tech sector has yet invented the 100% accurate crystal ball.

<sup>108</sup> For instance, where the failure is as a consequence of discrimination by the state towards particular groups or, where resources are available that would save lives, they are diverted to less important objectives. See, Gilbert and Rüsch, *supra* note 12, 42, 57-58, 65. UNHCR is aware of the interplay of these issues as regards its engagement with the 2015 Sustainable Development Goals, as set out in its 2019 Updated Guidance Note (kindly supplied by UNHCR, a copy is with the author) - SDGs, 'Transforming our World: The 2030 Agenda for Sustainable Development', UNGA Res. 70/1 (25 September 2015): "Goal 16 of the Sustainable Development Goals is dedicated to the promotion of peaceful and inclusive societies for sustainable development, the provision of access to justice for all, and building effective, accountable institutions at all levels ... 16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all".

<sup>109</sup> *Supra*, note 14, Paras 4 and 5, and throughout. It should be noted, that in the field UNHCR has worked with refugees and host communities wherever the populations were mixed; indeed, such a practice falls within Para. 8(b) and (c) 1950 Statute, *supra* note 13. See also, Gilbert and Rüsch, *supra* note 12, fn136.

concomitant human rights, but does not impinge on a co-ordinated response to IDPs and host communities, too.

A second consequence concerns accountability: while accountability was not a discrete issue for analysis above, it pervades all aspects of upholding international human rights law, rule of law and the humanitarian principles. If the nature of data gathering and analysis calls into question the distinctive quality of refugee status and the unique mandate of UNHCR *vis-à-vis* other persons and actors in humanitarian crises, accountability speaks to the relationship between UNHCR and persons within the expanded mandate of the organization. Emerging technologies should not be treated any differently from any other aspect of that relationship, but accountability has taken on a new level of importance for some in response to how to ensure those whose data is collected are not the victims of rights violations.<sup>110</sup> For sure, international organizations can be accountable in international law,<sup>111</sup> but under the 1946 Convention on the Privileges and Immunities of the United Nations, the UN and its organs enjoy immunity before domestic courts akin to that enjoyed by states.<sup>112</sup> Nevertheless, it is increasingly being asserted that under rule of law, as established in Anglo-American jurisprudence, and under post-World War II *Rechtsstaat*, some mechanism to remedy breaches has to be established.<sup>113</sup> Moreover, though, in these scenarios responsibility can often be shared with states.<sup>114</sup> It may even be arguable that because states hold vast quantities of data by comparison with international organizations, there may even be a duty under international rule of law to share it so as to facilitate protection.<sup>115</sup> Emerging technologies will play an increasing role in responses to humanitarian crises. The protection of international human rights standards and rule of law for the benefit of those of concern to UNHCR in humanitarian crises is essential given the situation of particular vulnerability in which they find themselves, unlike non-refugees, outside their country of nationality and unable or unwilling to seek its protection with only UNHCR to provide international protection. However, so much is still developing and in a state of flux that there will need to be an accountability mechanism, probably internal, by which to ensure that international human rights law and rule of law are embedded in the various institutions' day-to-day practices. The unresolved question is how to effectively hold the tech industry to account.<sup>116</sup>

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<sup>110</sup> See McGregor *et al.*, *supra* note 50, and Benvenisti, *supra* note 24.

<sup>111</sup> See *Certain Expenses* case, *supra* note 14, and see International Law Commission (ILC), 'Draft on the Responsibility of International Organizations', UN doc A/66/10 (2011) (DARIO). The General Assembly commended them to governments and international organizations in December 2017, but they have yet to be adopted - UNGA Res. 72/122 (7 December 2017).

<sup>112</sup> 1 UNTS 15. And see Art. 105, UN Charter, *supra* note 9.

<sup>113</sup> For a detailed discussion of these ideas, see Gilbert and Rüsch, *supra* note 12, 65-9, and Türk and Eyster, *supra* note 14.

<sup>114</sup> See Art. 19 DARIO, *supra* note 111; *Affaire D et autres c. Turquie* Appl no. 24245/03 (European Court of Human Rights, Third Section, 22 June 2006); and *Mothers of Srebrenica Association v. State of The Netherlands and the United Nations* 10/04437 (13 April 2012) para 4.3.14 [http://www.asser.nl/upload/documents/20120905T111510-Supreme Court Decision English 13 April 2012.pdf](http://www.asser.nl/upload/documents/20120905T111510-Supreme%20Court%20Decision%20English%2013%20April%202012.pdf) (last accessed 29 November 2025).

<sup>115</sup> See Art. 35, 1951 Convention, *supra* note 3, and Para. 8(f) 1950 Statute, along with the commitment in Paras. 4, 5 and 49 GCR for international co-operation by the international community as a whole.

<sup>116</sup> See McDonald, *supra* note 74, Van Ho and Yilmaz-Vastardis & Chambers, both *supra* note 8, and Johns, *supra* note 1, at 205 *et seq.* It is a topic beyond the scope of this article.

The use of emerging technologies in humanitarian crises will continue. Their design, development and deployment need to respect international human rights law, rule of law and the humanitarian principles. Given the pace of change and the less regulated context of humanitarian crises, displaced populations of concern must be able to ensure their voice is part of the debate to uphold their dignity and their rights.