

# THE CENTRE FOR HUMANITARIAN DATA

## GUIDANCE NOTE SERIES

### DATA RESPONSIBILITY IN HUMANITARIAN ACTION

# NOTE #4: HUMANITARIAN DATA ETHICS

#### KEY TAKEAWAYS:

- Ethics is the study of what is morally right and wrong, or a set of beliefs about what is morally right and wrong. Ethics helps provide the foundation for norms, can be used to interpret established norms and can be applied directly as guidance in situations for which norms, laws and regulations do not provide direction.
- Humanitarian ethics has developed as a principle-based ethics, grounded in the principles of humanity, impartiality, neutrality and independence that guide the provision of humanitarian assistance and protection. Existing frameworks for humanitarian ethics must be expanded to enable staff and organizations to navigate the challenges and opportunities of the digital age.
- Data ethics is the branch of ethics that studies and evaluates moral problems and offers normative guidance related to data, algorithms, and corresponding practices. Common ethical issues in data management include issues of fairness, validity, bias, ossification, transparency and explainability, anonymity, privacy, and ownership of data and insights.
- In addition, a range of other ethical issues may arise in data-related projects in the humanitarian sector, including: potential harmfulness of humanitarian action, difficulties in association, complicity and moral entrapment, duties of care towards humanitarian staff and the 'cost-effectiveness conundrum'.
- Humanitarian organizations can improve ethical deliberation and decision-making in data-management by: (i) establishing clear codes of conduct for ethical data management; (ii) supporting staff to identify, understand and debate ethical issues using common tools; and (iii) introducing 'ethical audits' as part of standard practice.

## INTRODUCTION

Data responsibility is the safe, ethical and effective management of data.<sup>1</sup> This note focuses on the ethical aspects of humanitarian data management, ranging from standard exercises such as field-level data collection and processing to more advanced applications of data science, such as predictive analytics.

This note aims to support humanitarian practitioners in identifying, assessing and addressing ethical concerns that arise in data-related projects. It begins with an overview of humanitarian ethics and data ethics, with a focus on the values that drive ethical decision-making in the two fields. It then introduces some of the common ethical concerns and challenges that humanitarians may face in data management. Finally, it provides recommendations for humanitarian organizations seeking to improve ethical deliberation regarding the use and impact of data in their operations.

<sup>1</sup> [OCHA Data Responsibility Guidelines](#).

Ethics is defined as the study of what is morally right and wrong, or a set of beliefs about what is morally right and wrong.<sup>2</sup> The role of ethics in guiding practice is essential in the context of a profession such as humanitarian action, where individuals from a diverse range of backgrounds and value systems come together in pursuit of a common goal: helping and protecting people affected by war and disasters.

**“Ethics is not just being rational and affective. Our choices must also seek to be effective... Acts are, therefore, the ultimate outcome of ethics. The practical field of humanitarian ethics is deliberately known as humanitarian action because of this basic moral insight that ethics without action is nonsensical.”<sup>3</sup>**

- Hugo Slim, *Humanitarian Ethics: A Guide to the Morality of Aid in War and Disaster*

Ethics has a particularly important role to play in the domain of data management, as the technical tools for managing data have evolved faster than the instruments that govern their use. As philosopher Luciano Floridi argues, “ethics in general and digital ethics in particular cannot be a mere add-on (...) once digital innovation has taken place, and possibly bad solutions have been implemented, less good alternatives have been chosen, or mistakes have been made.”<sup>4</sup> In a given sector, professionals must identify, assess and develop strategies to mitigate the common ethical concerns that may arise in data management. As these issues become clear, what is ‘good’ or ‘right’ from an ethical perspective should then inform emerging policy and legal instruments that ultimately govern data management in the sector.

#### Common ethical concerns in data management<sup>5</sup>

- **Validity:** is the data and/or model representative of what you want to measure?
- **Bias and Fairness:** is there a systematic skewing of the data collected and/or is there any prejudice or favoritism in the data or model? (e.g. has there been an over- or underestimation of what is being measured or are some members of the population more or less represented than others?)
- **Ossification:** is the model (or underlying data) codifying the current state of the world and thereby making it harder to change? (e.g. are we building models that perpetuate or encore past mistakes)
- **Transparency and Explainability:** is there clear documentation of the data management process and visibility on how the model or algorithm(s) function? (e.g. can someone not directly involved in the process explain what is happening?)
- **Privacy and Anonymity:** is the data or its use revealing the identity of an individual or group of people?
- **Ownership of Data and Insights:** are the rights to the data and related insights clearly defined? (e.g. is it clear how decisions are made regarding how and by whom the data can be used, how problems in or related to the data are rectified and other related issues?)

<sup>2</sup> Cambridge Dictionary, available here: <https://dictionary.cambridge.org/dictionary/english/ethics>.

<sup>3</sup> Hugo Slim, 2015. *Humanitarian Ethics: A Guide to the Morality of Aid in War and Disaster*, 118-119.

<sup>4</sup> Luciano Floridi, 2018. *Soft Ethics and the Governance of the Digital*, *Philos. Technol.* 31: 1.

<sup>5</sup> Luciano Floridi and Mariarosaria Taddeo, 2016. *What is data Ethics?*, *Phil. Trans. R. Soc. A* 374: 20160360.

## HUMANITARIAN ETHICS

As Hugo Slim explains in *Humanitarian Ethics: A Guide to the Morality of Aid in War and Disasters*, “Humanitarian ethics has developed as a principle-based ethics ... grounded in the principles of humanity, impartiality, neutrality and independence that have been developed to guide the provision of humanitarian assistance and protection.”<sup>6</sup> In Slim’s framing, principles specifically serve three main purposes in applied ethics: to affirm moral norms, to act as constant operational guides to ethical decision-making and to generate specific rules.<sup>7</sup>

### Humanitarian Principles

| Humanity  | Neutrality   | Impartiality  | Independence   |
|---|--|---|--|
| Human suffering must be addressed wherever it is found. The purpose of humanitarian action is to protect life and health and ensure respect for human beings. | Humanitarian actors must not take sides in hostilities or engage in controversies of a political, racial, religious or ideological nature. | Humanitarian action must be carried out on the basis of need alone, giving priority to the most urgent cases of distress and making no distinctions on the basis of nationality, race, gender, religious belief, class or political opinions. | Humanitarian action must be autonomous from the political, economic, military or other objectives that any actor may hold with regard to areas where humanitarian action is being implemented. |

Source: OCHA on Message: Humanitarian Principles.<sup>8</sup>

These principles and related rules are enshrined in various codes of conduct now widely recognized as the basis for ethical humanitarian practice, such as the Humanitarian Charter and Minimum Standards in Humanitarian Response, including the Sphere Core Standards and the Protection Principles<sup>9</sup>, the Core Humanitarian Standard<sup>10</sup> and the Red Cross/NGO Code of Conduct.<sup>11</sup> Though these frameworks serve as useful guides to ethical decision making, they cannot simply be applied in practice across the complex range of settings where humanitarians deliver assistance. Rather, as Slim notes, “they are typically interpreted from within a situation. Humanitarian ethics is, therefore, about struggling to interpret ethical limits and balancing various principles.”<sup>12</sup>

The interpretation of these principles becomes both more complex and more essential in areas of humanitarian action where clear standards and sector-wide guidance are lacking. Humanitarian data management is one such domain.

<sup>6</sup> Hugo Slim, 2015. *Humanitarian Ethics: A Guide to the Morality of Aid in War and Disaster*, 40.

<sup>7</sup> *Ibid.*

<sup>8</sup> OCHA on Message: Humanitarian Principles.

<sup>9</sup> Sphere Association, 2018. *The Sphere Handbook: Humanitarian Charter and Minimum Standards in Humanitarian Response*, fourth edition.

<sup>10</sup> CHS Alliance, Groupe URD, and The Sphere Project, 2014. *Core Humanitarian Standard: Core Humanitarian Standard on Quality and Accountability*.

<sup>11</sup> International Committee of the Red Cross and International Federation of the Red Cross, 1994. “Code of Conduct for the International Red Cross and Red Crescent Movement and Non-Governmental Organizations (NGOs) in Disaster Relief”.

<sup>12</sup> Hugo Slim, 2015. *Humanitarian Ethics: A Guide to the Morality of Aid in War and Disaster*, 117.

## DATA ETHICS

Data ethics has emerged in recent years as a distinct area of ethical enquiry and research. In a 2017 whitepaper, the Open Data Institute (ODI) points to the growing importance of data ethics in public discourse. “Increasingly,” ODI observes, “those collecting, sharing and working with data are exploring the ethics of their practices and, in some cases, being forced to confront those ethics in the face of public criticism.”<sup>13</sup>

According to Luciano Floridi and Mariarosario Taddeo, “[d]ata ethics can be defined as a branch of ethics that studies and evaluates moral problems related to data (including generation, recording, curation, processing, dissemination, sharing and use), algorithms (including artificial intelligence, artificial agents, machine learning and robots) and corresponding practices (including responsible innovation, programming, hacking and professional codes).”<sup>14</sup> In practice, public sector institutions typically approach data ethics as “a branch of ethics that evaluates data practices with the potential to adversely impact on people and society — in data collection, sharing and use.”<sup>15</sup>

As data has become increasingly central to how public and private institutions operate, questions of data ethics have grown more common in debates about the impact of data and technology on society. This is seen most prominently in the global discourse around ethical Artificial Intelligence (AI). A landscape analysis of global AI ethics frameworks published in September 2019 identifies a “convergence emerging around five ethical principles (transparency, justice and fairness, non-maleficence, responsibility and privacy), with substantive divergence in relation to how these principles are interpreted, why they are deemed important, what issue, domain or actors they pertain to and how they should be implemented.”<sup>16</sup> The presence of high-level principles alone, however, does not guarantee effective ethical deliberation and decision-making.<sup>17</sup>

Humanitarian ethics forms a stronger foundation for debating issues around the ethical management of data *for humanitarian purposes* than the various stand-alone frameworks for different areas of applied data ethics. Existing frameworks for humanitarian ethics must be expanded to enable humanitarian staff and organizations to navigate the new complexities that data management presents.

## ETHICAL CONSIDERATIONS FOR HUMANITARIAN DATA MANAGEMENT

Humanitarians face difficult choices in delivering assistance and providing protection to populations in crisis. While these different types of dilemmas pertain to humanitarian action as a whole, many of them are particularly prominent or exacerbated in data-related projects. The table below presents some common types of ethical dilemmas and offers examples of how they might manifest in humanitarian data management. When assessing the ethical dimensions of a data-related project, humanitarians must consider the dilemmas outlined below as well as the common concerns in data ethics (described in more detail in the call-out box above), including: fairness, validity, bias, ossification, transparency and explainability, anonymity, privacy, and ownership of data and insights.

<sup>13</sup> Open Data Institute, 2017. [Helping organizations navigate ethical concerns in their data practices.](#)

<sup>14</sup> Luciano Floridi and Mariarosario Taddeo, 2016. [What is data Ethics? \*Phil. Trans. R. Soc. A\* 374: 20160360.](#)

<sup>15</sup> Open Data Institute, 2017. [Helping organizations navigate ethical concerns in their data practices.](#)

<sup>16</sup> Anna Jobin, Marcello Ienca and Effy Vayena, 2019. [The global landscape of AI ethics guidelines. \*Nat Mach Intell\* 1, 389–399.](#)

<sup>17</sup> Brent Mittelstadt, 2019. [Principles alone cannot guarantee ethical AI. \*Nat Mach Intell\* 1, 501–507 \(2019\).](#)

| Common ethical dilemmas in humanitarian action <sup>18</sup>  | Scenarios in humanitarian data management   |
|---|---|
| <p><b>Potential harmfulness or maleficence of humanitarian action</b></p> <p>Direct or indirect harm caused by humanitarian response activities.</p>  | <p>A needs assessment is required to inform response activities. While the data collected during the assessment enables humanitarian organizations to more effectively target assistance based on need, it also reveals the communities in which households have expressed unfavorable views about local authorities. Local authorities obtain this data and systematically exclude those households from future rounds of assistance, causing direct harm. This compromises the protection of life and health of certain members of the population and undermines the independence of the response as a whole. Although aid organizations are not directly involved in this exclusion, the use of data collected by humanitarians for maleficent purposes may compromise their neutrality.</p> |
| <p><b>Difficulties in association</b></p> <p>Past work with partner organizations from various political, religious and other backgrounds can create tensions with new partners.</p>  | <p>A humanitarian organization publicly announces a partnership with a private sector technology firm that has also provided technology services to intelligence agencies. Local political groups opposing the presence of the humanitarian organization use the association with the firm to accuse the humanitarian organization of spying. Engaging in this political controversy endangers the humanitarian organization's neutrality.</p>  |
| <p><b>Complicity and moral entrapment</b></p> <p>Organizations actually cooperate in serious wrongdoing, intentionally or unintentionally, or find themselves 'trapped' in circumstances where they must balance between continued wrongdoing and 'the greater good'.</p>       | <p>As a requirement for letting humanitarians into the country, local authorities demand that a 'scientific approach' be taken. They demand that a model be developed to predict humanitarian need and to be involved in the development of that model. The authorities limit the dataset used to train the model in a way that leads to outcomes that overlook critical needs for an oppressed minority. This undermines the protection of life for the minority in question and compromises the neutrality and independence of humanitarian organizations.</p>  |
| <p><b>Duties of care towards humanitarian staff</b></p> <p>Organizations must balance their obligations to deliver assistance to populations in high-risk areas with their obligations to ensure the protection of frontline staff.</p>   | <p>An organization needs to conduct a rapid assessment in order to respond to a displacement in a conflict zone. The data is expected to elicit a negative reaction from the authorities given the nature of the conflict and sensitivity of the humanitarian response in the region in question. While the head of office understands that there is a risk of reprisal toward staff if they proceed with the assessment, they also know that they cannot deliver assistance without new data. This situation creates a tension between the need to deliver assistance and the obligation to ensure staff safety.</p>   |
| <p><b>Cost-effectiveness conundrum</b></p> <p>Organizations struggle to balance doing as much good as possible with other considerations, such as prioritizing the worst off, prioritising victims of intentional brutality or continuing to assist current aid recipients.</p> | <p>A model is developed to predict evolving humanitarian need. The model is highly effective in predicting need for most of the population, resulting in a major efficiency gain. However, communities that are less visible in the data are now structurally disadvantaged, creating an algorithmically defined and reinforced population that remains underserved. By obfuscating the needs of a particular group, this undermines the impartiality of the response, calls into question the independence of responding organizations, and endangers the life and health of the group(s) underrepresented or missing from the data.</p>   |

<sup>18</sup> These examples draw on the work of Hugo Slim and Jennifer Rubenstein, viz Hugo Slim, 2015. *Humanitarian Ethics: A Guide to the Morality of Aid in War and Disaster*, 117 and Jennifer Rubenstein, 2015. *Between Samaritans and States*, 10-15.

## RECOMMENDATIONS FOR IMPROVING ETHICAL DELIBERATION AND DECISION-MAKING IN HUMANITARIAN DATA MANAGEMENT

When faced with different dilemmas that may arise in data-related projects, humanitarians must interpret ethical limits and balance the various principles that inform good practice in order to determine the appropriate course of action. As acknowledged in the International Association of Professionals in Humanitarian Assistance and Protection (PHAP) Code of Ethics and Professional Conduct, “Questions related to ethical dilemmas are best answered by thoughtful consideration of fundamental principles, rather than reliance on detailed regulations.”<sup>19</sup>

The Centre for Humanitarian Data (the Centre) recommends that organizations invest in three areas to improve ethical deliberation and decision-making in humanitarian data management:

- 1. Establish clear codes of conduct for ethical data management.**
- 2. Support staff to identify, understand and debate ethical issues using common tools.**
- 3. Introduce ‘ethical audits’ as part of standard practice.**

### 1. ESTABLISH CLEAR CODES OF CONDUCT FOR ETHICAL DATA MANAGEMENT

Despite the presence of sector-wide principles and codes of conduct, humanitarians lack clear guidance on their specific ethical obligations vis-a-vis data management. Organizations need to clarify and build collective understanding around how the humanitarian principles and different institutional values apply to data-related work.

To date, most organizations have focused on establishing policies on specific issues such as data protection and data privacy, while the broader set of ethical considerations remains ill defined and insufficiently addressed. Two notable exceptions to this that can serve as inspiration for organizations in defining their own ethical codes of conduct for data management are the UNDG Guidance Note on "Data Privacy, Data Protection and Ethics: Big Data for the achievement of the 2030 Agenda,"<sup>20</sup> and the Signal Program on Human Security and Technology's *Signal Code: Ethical Obligations for Humanitarian Information Activities*.<sup>21</sup>

- The UNDG Guidance Note offers an approach to big data based not only on privacy, but also on ethical and moral obligations concerning data use in development and humanitarian contexts. It offers a set of principles that organizations are encouraged to further adapt in the form of operational guidelines that account for the implementation of their respective mandates as well as their existing regulations, rules and policies concerning data privacy, data protection, data ethics and data security.
- The *Signal Code* translates and applies the foundational sources of ethical humanitarian practice to so-called humanitarian information activities (HIAs), including data collection, storage and analysis. It articulates nine obligations designed to help organizations understand risks and mitigate harms related to the data life-cycle as they engage in HIAs.

### 2. SUPPORT STAFF TO IDENTIFY, UNDERSTAND AND DEBATE ETHICAL ISSUES USING COMMON TOOLS

Most humanitarian organizations do not have staff responsible for ensuring that interventions are designed and delivered in an ethical way. Staff within humanitarian organizations are expected to understand and abide by the humanitarian principles and related codes of conduct in going about their respective duties, often without any formal training or guidance on the topic. Simple measures like the introduction of an ethics checklist and supporting the use of ethical design tools can empower staff to more confidently identify, understand and debate ethical issues that may arise in their work.

<sup>19</sup> International Association of Professionals in Humanitarian Assistance and Protection (PHAP), *Code of Ethics*.

<sup>20</sup> UN Global Pulse, 2017. "Data Privacy, Ethics and Protection: Big Data for the achievement of the 2030 Agenda".

<sup>21</sup> Signal Program on Human Security and Technology, 2018. "The Signal Code: Ethical Obligations for Humanitarian Information Activities".

Humanitarians can use the following set of questions when considering the ethical dimensions of a particular intervention:<sup>22</sup>

- Are we respecting fundamental humanitarian principles and the Code of Conduct?
- Are we likely to increase actions that are in accordance with or in breach of International Humanitarian Law, refugee law and disaster law?<sup>23</sup>
- Are we likely to increase or decrease the ability of humanitarian actors to meet Sphere Standards?
- Are we likely to improve or worsen our target population's dignity and conditions?
- Are we likely to increase or decrease our ability to abide by the principles of good humanitarian management?
- Are the affected likely to understand and respect our decision?

These questions can easily be extended to humanitarian data projects and serve as a strong basis for collective deliberation of the ethical issues that may arise therein.

Organizations can also consider ethical design tools that are more tailored to data-related projects. One example is the “Data Ethics Canvas” from the Open Data Institute. As the ODI explains, “[t]he Data Ethics Canvas is a tool to help anyone who collects, shares or uses data to identify and manage ethical issues at all stages in a project. It is designed as a flexible framework to develop ethical guidance that suits any context.”<sup>24</sup> As such, it can serve as a helpful starting point for humanitarian organizations seeking to more systematically manage ethical issues in data-related work.

### 3. INTRODUCE ‘ETHICAL AUDITS’ AS PART OF STANDARD PRACTICE

To complement more robust ethical deliberation within project teams and organizations as a whole, consider introducing quality control mechanisms that help ‘enforce’ the process of ethical design and decision-making against a common set of criteria. One way to do this is by introducing ‘ethical audits’ as part of standard data management practices. Such audits are particularly helpful in more exploratory areas of data science, for which norms and professional standards are still emerging and for which the different ethical challenges remain less well understood.

As explained in a 2017 guidance note by the International Association of Privacy Professionals and UN Global Pulse, “[v]arious existing frameworks can supplement organizations’ decision-making processes to address the newly emerging field of data ethics. These frameworks offer different perspectives and governance options to organizations with weighty data ethics questions or large-scale processing of sensitive data.”<sup>25</sup> Ethical auditing can be achieved through internal bodies, external bodies or a combination of the two.<sup>26</sup>

Regardless of the approach for introducing ethical audits, the process should entail the following elements:<sup>27</sup>

- Identifying stakeholders affected by the data management exercise in question.
- Facilitating a discussion among people who can represent the different stakeholder groups and comment on their concerns, positive and negative, on the exercise in question (e.g. how the algorithm in a predictive model works, how their data is processed in a large scale survey exercise, etc.).
- Prioritizing concerns based on stakeholder inputs.
- Developing guidance and other measures to address and remedy concerns identified.

<sup>22</sup> Hugo Slim, 2015. *Humanitarian Ethics: A Guide to the Morality of Aid in War and Disaster*, 143-144.

<sup>23</sup> For more on IHL, see: <https://www.icrc.org/en/war-and-law>. For more on refugee law, see: [https://phap.org/PHAP/Themes/Law\\_and\\_protection/IRL/PHAP/Themes/IRL.aspx](https://phap.org/PHAP/Themes/Law_and_protection/IRL/PHAP/Themes/IRL.aspx). For more on disaster law, see: <https://media.ifrc.org/ifrc/what-we-do/disaster-law/>.

<sup>24</sup> Open Data Institute, *Data Ethics Canvas*.

<sup>25</sup> iapp and UN Global Pulse, *Building Ethics into Privacy Frameworks for Big Data and AI*.

<sup>26</sup> *Ibid.*

### Spotlight: Ethics as a Core Component of Peer Review for Predictive Analytics

The Centre has established a [Peer Review Framework for Predictive Analytics in Humanitarian Response](#). The goal of the peer review process is to create standards and processes for the use of models in the humanitarian sector. The Centre's Peer Review Framework is focused on predictive model development and outputs. It considers a model's technical rigour, operational readiness, and related ethical concerns. Through peer review, the Centre seeks to ensure models can be understood and trusted by all stakeholders including affected people.

The ethical review involves identifying all stakeholders and concerns related to how the model could be used. For instance, a model may need to be adjusted in a scenario in which a false negative is unacceptable for affected populations or a false positive is unacceptable for a donor. The ethical considerations of a given model will be assessed using the Ethical Matrix that has been adopted from the work of Cathy O'Neil.<sup>28</sup>

Organizations are encouraged to share their experience in navigating ethical dilemmas in data management with the Centre via [centrehumdata@un.org](mailto:centrehumdata@un.org).

COLLABORATORS: O'NEIL RISK CONSULTING & ALGORITHMIC AUDITING (ORCAA); TILBURG INSTITUTE FOR LAW, TECHNOLOGY, AND SOCIETY (TILT); INTERNATIONAL ORGANIZATION FOR MIGRATION (IOM) DATA SCIENCE AND ETHICS GROUP (DSEG).

The [Centre for Humanitarian Data](#), ('the Centre'), together with key partners, is publishing a series of eight guidance notes on Data Responsibility in Humanitarian Action over the course of 2019 and 2020. The Guidance Note series follows the publication of the [working draft OCHA Data Responsibility Guidelines](#) in March 2019. Through the series, the Centre aims to provide additional guidance on specific issues, processes and tools for data responsibility in practice. This series is made possible with the generous support of the European Union Civil Protection and Humanitarian Aid Operations (DG ECHO). This note was prepared in collaboration with O'Neil Risk Consulting & Algorithmic Auditing, Tilburg Institute for Law, Technology, and Society, and the International Organisation for Migration Data Science and Ethics Group.



This project is co-funded by the European Union

This document covers humanitarian aid activities implemented with the financial assistance of the European Union. The views expressed herein should not be taken, in any way, to reflect the official opinion of the European Union, and the European Commission is not responsible for any use that may be made of the information it contains.

<sup>27</sup> These elements are adapted from the approach to algorithmic auditing recommended by O'Neil Risk Consulting & Algorithmic Auditing (ORCAA).

<sup>28</sup> Cathy O'Neil, 2016. *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*.