

Submission for the Thematic Report to the UN General Assembly on Digital Technology, Social Protection and Human Rights

We are grateful to the United Nations Special Rapporteur on extreme poverty and human rights for the opportunity to make a submission on this important topic.

We are legal academics with specialisations in law and development, international law, and the use of digital technologies in development and humanitarian contexts. We are presently working on an Australian government funded research project, “Data Science in Humanitarianism: Confronting Novel Law and Policy Challenges”.

I. Case study: The Haze Gazer platform in Indonesia

This submission uses the application Haze Gazer – developed by United Nations Pulse Lab Jakarta (PLJ) and used in the Indonesian President’s “control room” – as a case study to highlight concerns related to the use of digital data in social protection decision making. Haze Gazer is an online dashboard designed to provide up-to-the-minute information for decision-making around the management of haze issues that plague Indonesia and neighbouring countries annually. Haze is smog produced by bio-fuel burning and poses a significant social protection challenge for Indonesia. During a widely reported 2015 haze event, up to 100,000 people may have died prematurely across South East Asia; over 5 million children had their schooling disrupted, and the cost to Indonesia alone was estimated at 475 trillion rupiah (over US\$34 billion).

The Haze Gazer platform responded to the Indonesian government’s desire for “more timely data and more information on the dynamics of [haze]”, to enable “Indonesia’s local and national disaster management authorities to target their interventions” accordingly. The platform was developed by PLJ, drawing on the subject matter expertise of the Indonesian Ministry of National Development and Planning (BNBP), with BNBP and the UN Office for REDD+ Coordination in Indonesia developing the social media taxonomy used in the platform. This occurred under the terms of the Memorandum of Understanding between the BNBP and the UN that established PLJ.

Haze Gazer presents data from a number of sources, including Twitter, NASA and the US National Oceanic and Atmospheric Administration (NOAA), to visualize the movement of haze and the fires that produce haze-causing smoke, and the public response to haze. The public response data is drawn from geolocated tweets which are then categorised by type – separating indicators of poor respiratory

health and general comments about haze – amalgamated and plotted on a map. The combination of these thermal, air quality, and social media data is overlaid on OpenStreetMap maps. We understand from ongoing research interviews that some (unspecified) part of the platform has been incorporated into the Indonesian President’s Situation Room, from which the Indonesian executive seeks to understand and manage social protection challenges as they unfold across the country. Presumably, this is with a view to reducing the economic, social, and public health costs highlighted above, although no evaluation of Haze Gazer’s costs and benefits for the Indonesian government has been, to our knowledge, conducted.

While Haze Gazer is not used in the delivery of social protection products to the Indonesian public, it has a distributive function in this context. The platform assists the Indonesian government to decide what, when and where protective capacities – medical, agricultural, economic – need to be deployed, and who might receive them. It is an example of digital media that, while not operating in the front line of social protection, nonetheless funnels, frames, and directs the attention of protection bureaucracies. It is noteworthy, too, as a digital technology developed outside government, and never purchased via a national government procurement process, which has nevertheless been adopted at the highest levels of national government for social protection purposes.

II. Human rights concerns that might arise in connection with the introduction of digital technologies

Several potential human rights concerns arise in relation to the use of digital platforms like Haze Gazer to target social protection measures.

[Embedding a market transaction-oriented approach to government-constituent interaction and prioritising of the most visible](#)

Some types of digital data and digital platforms embed a market orientation in interactions between service providers and their constituents. Insofar as Haze Gazer mediates government-to-governed relations over haze and haze-related assistance in Indonesia, the platform’s use of Twitter data injects market norms into this relationship. This is of concern from a human rights perspective because alternative ways of interacting with, and seeking assistance from, their government that Indonesians may wish to pursue, but which are incompatible these norms, are summarily foreclosed in this medium.

We acknowledge that international human rights law and policy is not antipathic to market-based mechanisms for delivering social protection. For example, General Comment 19 of the Committee for Economic, Social and Cultural Rights, on the right to social security, contemplates “collaboration with civil society, the private sector and international organizations” (at para 72). Nonetheless, the same

Comment also observes: “Where social security schemes... are operated or controlled by third parties, States parties retain the responsibility of administering the national social security system and ensuring that private actors do not compromise equal, adequate, affordable, and accessible social security (at para 46)”. We submit that this general principle should apply to all social protection systems and that it should extend to technological apparatus that mediate social protection claim-making and targeting, such as Haze Gazer.

Markets are designed to be indifferent to the distinction between needs and wants: the ability to pay is what entitles an interested party to a particular good or service. This indifference is replicated by Haze Gazer, as the platform’s analysis of Tweet content does not differentiate between users’ expressions of desire or need. Instead, by presenting information based on keywords alone, both types of expression are construed as equally actionable. Similarly, the geographic aggregation of Twitter data relating to haze or storm events highlights certain communities’ needs but does not say anything about communities’ respective level of preparedness or vulnerability, nor their relative entitlement: the posts do not allow for competing claims’ or needs’ evaluation. Targeting, a central tenet of many social protection systems, requires distinction based on need or likely benefit. The digitally-facilitated move from a needs-based to a ‘most visible’ targeting regime represents a transformative shift in relations between a government and its constituents.

Markets also require individuals to promote their interests by working to improve their relative competitive position. If an actor finds him/herself dissatisfied with a transaction or product, market frameworks encourage expression of this discontent through exit – withdrawal from a transaction or relationship – rather than voice – expressing grievances or arguments for reform. If an Indonesian Twitter user, whose tweets are incorporated into Haze Gazer, is unhappy with these platforms’ representation of their or their community’s situation or needs, the most readily available option for expressing this discontent is “exit” or opting to put forward their needs via a different digital platform. Yet, most people in Indonesian territory will not enjoy capacity to “exit” a national-scale haze experience or exempt themselves from the range of governmental actions (and inactions) around haze, nor may they be able to source, share or input data about their situation otherwise. By incorporating a digital interface (Twitter’s) designed around customer (advertiser) satisfaction, and transient, low-stakes user experience, the Haze Gazer platform deploys a set of assumptions that are fundamentally incompatible with a broad-ranging, needs-based social protection system.

While different interest groups have always competed for state attention, government use of Twitter data (via Haze Gazer, for example) is changing the terms of this competition. Twitter encourages users to post information likely to attract attention, and hence likes and retweets, from other users. To maximize visibility, claims must take forms that are recognised, and promoted, by other users. Thus, Haze Gazer, in mediating the flow of data to the government, fosters a competition for recognition

among individual users’ – not public – interests. Yet the subjectivity of a “user” is different to that of an Indonesian citizen or right-holder for whom the state bears responsibility. Again, what is apparent in Haze Gazer’s incorporation into government management tools is a subtle but increasingly entrenched shift in how the government interacts with and understands the governed population, and in the forms of claim making available to that population. This shift is, in part, associated with governments’ appetite for digital data, most of which is being generated in, and formatted for, commercial settings.

Economic and algorithmic selectivity

Market concerns dovetail strongly with access and equity considerations around the differential access to social protection that digital technologies afford people with differing levels of literacy, electrification, internet access and social connectedness. The incorporation of digital technologies into social protection systems could offer efficacy and cost-saving gains. However, individuals and households without access to electricity or the internet, who are illiterate, or who fear making themselves, their location, and their needs publicly visible, are excluded from using tools like Haze Gazer. This leaves them unrepresented in the “digital smoke signals” that governments are seeking to use to understand the state of the populace they serve – in the Indonesian Government’s case, to develop haze responses.

In a range of ways, Haze Gazer’s back-end infrastructure, which remains invisible to users, shapes what and whose social needs are seen and whose are not. For example, although Haze Gazer enjoys access to the full Twitter firehose, it filters out non-geotagged posts, the overwhelming majority of Twitter content. Haze Gazer thus screens out input from those who have not opted in to geoservices and do not generate geotagged content (and research has suggested that some demographics may be more likely than others to geotag their Twitter posts, such that geotagged Tweets are not likely to be representative of a population). Tweets are then analysed by reference to a narrow lexicon, meaning that if Twitter users do not use particular keywords or express concerns in certain ways (that is, in ways that correspond to the Haze Gazer lexicon of haze-related words), their content goes unnoticed by Haze Gazer.

In addition to these algorithmic prerequisites, there are a number of social preconditions to haze-related distress or need being detected and made legible by the Indonesian Government via Haze Gazer. The person in question must have financial resources sufficient to enjoy internet access (via a phone, tablet, or computer), as well as literacy skills adequate to post a Tweet. He or she must also be

located in a part of the Indonesian archipelago with telecommunications infrastructure that supports data use.

Accordingly, care needs to be taken in incorporating highly selective digital filters into government systems in pursuit of population-wide social protection goals. Designed to amplify the most data-generative contributors whose postings can be analysed automatically, digital platforms like Twitter may make the needs of the most vulnerable harder rather than easier to discern when incorporated into humanitarian or social protection dashboards.

III. Contextual circumstances

International organisations' influence upon the introduction of digital technologies

International organizations are significant drivers of the introduction of digital technologies in government social protection systems in developing countries. As Haze Gazer shows, they actively promote the use of digital technologies in social protection contexts, fund the development of particular products and broker data philanthropy and technology transfer arrangements of various kinds.

The introduction of new technologies into government practice is typically facilitated by memoranda of understanding (among international organisations, governments, and private sector technology companies) which are usually not a matter of public knowledge or debate. This is especially the case where “data philanthropy” is involved. In such circumstances, particular technologies’ adoption may not result from ordinary government procurement processes, bypassing the scrutiny such procedures entail. Moreover, the introduction of such technologies to the state-citizen relationship is often framed as a matter of technical optimization rather than substantive (potentially controversial) change.

This is in part the result of the way international organisations understand digital technologies and the risks they present. Stakeholders working to promote the introduction of digital technologies into social protection systems are typically attuned to privacy and data protection concerns. They may, however, be less attentive to other normative considerations, such as whether a particular contractual arrangement for social protection service delivery is unconscionable or abusive because of its disparate impacts, whether applicable telecommunications law and policy entrenches population bias

in digital data collection, or whether conditions applicable to routine public procurement have been met in relation to a particular digitization initiative.

Relevant Laws

Telecommunications laws regulate matters including company conduct, consumer access to content, competition or antitrust matters, access and pricing considerations, and privacy. Laws of this kind have significant ramifications for which populations have access to mobile services and the quality of these services. Unless all members of a particular population have access to services of comparable quality, the data generated through their “digital smoke signals” is necessarily biased in a statistical sense. This is a particular concern for official statistics, which form the traditional bedrock of social protection.

Contract laws similarly have significant regulatory effects on the use of digital data for social protection, both enabling and otherwise. For example, Haze Gazer users that do not comply with Twitter’s terms of service lose access to a mechanism for national level representation of their concerns. States must pay particular care to such considerations, to ensure the arrangements do not give rise to disparate impacts. To the extent that digitized social protection systems have such impacts, contract law doctrines on unconscionability or abusive clauses could play a role in highlighting and possibly ameliorating, some of those inequities.

Public procurement policies and procedures are designed to ensure transparency and arms-length dealing by public officials. Insofar as the digitization of social protection systems is brought within the ambit of mechanisms for oversight of public procurement, this could foster greater scrutiny of both the contractual arrangements underpinning digital data use, and the design and staffing of such systems. As noted above, however, the process of introducing digital technology to social protection often bypasses such processes, especially when brokered by international organisations.

IV. Specific recommendations

The introduction of digital data collection and representation into social protection systems (whether directly or indirectly) should be subject to a purpose-built government procurement regime designed

to evaluate and address mismatches between the original purposes of digital data collection or generation and the social protection purposes to which that data is to be applied.

Careful consideration should be given, in jurisdictions considering introducing digital technology into social protection systems, to whether the operation of the digital technology in question will be unfair to those most needing social protection.

Insofar as access to social protection is conditioned upon internet access, governments and international organisations cannot take the digital technology landscape as they find it. Rather, they need to think about positive provision of basic technology infrastructure to address technology black spots, consider supporting technology commons infrastructure (collectively owned and supported infrastructure), and otherwise prioritise the needs of those least likely to be able to access digital technology via the market.

Finally, governments should not too hastily abandon or defund analog infrastructure and practices (such as the running of a traditional census) until the complex ramifications of introducing digital technology into social protection systems play out and may be duly evaluated.

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We consent to the publication of this submission on the website of the Special Rapporteur on extreme poverty and human rights.