

1 **Community-based monitoring as an early warning system: Detecting and countering**  
2 **risks in government-driven COVID-19 response**

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9

10 **Abstract:**

11 During the fast-paced climate of the COVID-19 pandemic and as the official responses  
12 suffered from major inconsistencies and dysfunctions, volunteers and civil society activists  
13 initiated a range of strategies to monitor, gather, and disseminate risk information, going  
14 beyond the traditional top-down and expert-led interpretation of and approaches to risk  
15 mitigations. The current paper draws on growing scholarly recognition that official or  
16 government-led responses to disasters can often cause further risks, harms, and inequalities  
17 in communities (the 'second disaster'), sparking community-based action to monitor and tackle  
18 such risks and harms. In so doing, it seeks to bridge the conversation between two distinct yet  
19 interrelated fields of community-based early warning systems and community-based  
20 monitoring of public goods. Drawing on an exploratory scoping review of peer-reviewed and  
21 grey literature, the paper examines the functioning of community-based monitoring of official  
22 responses to COVID-19 globally. Our analysis distinguishes four distinct functions served by  
23 community-based monitoring: (1) tackling misinformation to enable the public to take  
24 protective action; (2) improving access to health services through service monitoring; (3)  
25 exposing and challenging misuse and abuse of authority and; (4) spearheading inquiries and  
26 probes to hold governments to account. Possibilities and limitations of such collective action  
27 are discussed, in light of what we know from existing disaster risk reduction (DRR) scholarship.

28 The paper concludes by recasting the focus on risk, taking it beyond the conventional realm  
29 of disaster preparedness and mitigation to cover early response and recovery, while drawing  
30 the DRR community's attention to the risk of violation of rights in the name of disaster  
31 response. It underscores the role of community-based monitoring in the wake of emergencies  
32 as an evidence-driven early warning system, raising the possibility of developing a more  
33 democratic and inclusive understanding of risk and protecting and promoting the rights of  
34 those who face the disproportionate burden of disasters.

35

36 Keywords: Covid-19, Early Warning Systems, Community, Monitoring, Risk, Response.

37

### 38 **Significance Statement**

39 As disasters have become more unpredictable, and the concerns over inaccurate and  
40 misleading official warnings have grown, evidenced in the course of the COVID-19  
41 pandemic, there is a growing emphasis on community-driven risk communication and  
42 mitigation. However, relatively little attention has been given to understanding the practical  
43 potential of “spontaneous”, community-led early warning systems (EWS) in the context of a  
44 health emergency. Analysing community-based monitoring of governmental responses to  
45 COVID-19, this paper presents a 4-fold typology of models of community-led risk monitoring.  
46 It brings into dialogue both practical and scholarly debates on people-centred early warning  
47 systems and community-based monitoring of public goods in the interest of promoting an  
48 evidence-based and inclusive understanding of risk and responses to disasters.

49

## 50 INTRODUCTION

51 Monitoring and communication of risks and hazards through Early Warning Systems (EWS)  
52 is considered a key pillar of Disaster Risk Reduction (DRR). While early investigation of EWS  
53 focused on understanding expert-driven and technocratic approaches to risk monitoring and  
54 communication, as disasters have become more complex, and the concerns over inaccurate  
55 and misleading warnings have grown, there is a growing emphasis within the DRR community  
56 on context-specific and community-centric approaches to communication of risk that leverage  
57 pre-existing social networks, experiential knowledge and mutual trust (Mileti & Peek, 2000;  
58 International Federation of Red Cross and Red Crescent Societies, 2013; de Leon, 2014;  
59 Morena, Lara & Torres, 2019; West et al., 2022). Attention to informal, spontaneous, public-  
60 driven, or community-led EWS has grown as the formal warning systems have been found to  
61 suffer from delayed and unclear warnings, forcing communities, especially those with pre-  
62 existing vulnerabilities and limited resources, to bear the burden of disasters (Fussell, 2015;  
63 Morena, Lara & Torres, 2019).

64

65 Recent research also shows that preventing loss of lives and livelihoods from recurring  
66 disasters means forging a partnership between communities and authorities over mutually  
67 agreeable appraisals of risk, evidenced in the commitment to listen to communities,  
68 transparency in the communication of risk, and concerted action to mitigate risks (Cochrane  
69 et al., 2023; West et al., 2022). Scholarly interest has also gone into understanding the  
70 heterogeneous nature of technologies (e.g. geospatial techniques, crowd-sourcing and mobile  
71 applications) and how disaster-prone communities leverage such technologies to act as  
72 "sensors" in monitoring disaster risk (Laituri and Kodrich, 2008). Others have used the term  
73 "safety valves", in referring to individual citizens' spontaneous and informal feedback in  
74 locating and expressing safety-critical information missed or even suppressed by  
75 organisations (Gillespie and Reader, 2022). In general, monitoring multi-hazards through  
76 wider community participation has gained a prominent position within the international disaster

77 risk reduction discourse (United Nations, 2015), and more recently, under the theme of 'early  
78 warnings for all' that emphasises the principles of 'community engagement' and 'community  
79 response capabilities' in DRR (World Meteorological Organization, 2022).

80

81 Beyond technical and infrastructural approaches to risk monitoring and forecasting, recent  
82 scholarship on risk communication also emphasises socio-political aspects of warning  
83 systems that involve, according to Perera et al (2020), "response capabilities" of disaster-  
84 prone communities. This shift towards response capabilities mirrors the renewed calls to treat  
85 risk communication as part of the efforts and struggles of local communities to not just identify  
86 risk but also force decision-makers to take timely action against the identified risk (West et al.,  
87 2022). Action-oriented risk communication aligns with what Lejano, Haque and Berkes (2021)  
88 call the "democratisation of risk knowledge" (p.4). According to this perspective, monitoring  
89 and identification of risks, and how they are responded to are not just limited to the realm of  
90 experts and authorities; rather, the general public is actively involved in interpreting the nature  
91 of risk and devising risk mitigation strategies. Attention to risk-mitigation through public  
92 vigilance also signals that technical and formal channels of risk monitoring and communication  
93 are important but may be insufficient. In such instances, informal or peer-to-peer  
94 communication, together with people's memories and shared narratives about coping  
95 strategies can not only save lives but also help mitigate misinformation and rumours that  
96 complicate longer-term recovery from disasters (Mileti & Peek, 2000; Morena, Lara & Torres,  
97 2019). At the same time, technical aspects of risk monitoring and communication need to be  
98 sufficiently backed by standards of accountability and responsibility that, in turn, offer an  
99 environment of trust for local communities to engage in official disaster management  
100 structures (Garcia & Fearnley, 2012). When considering members of the public as risk  
101 monitors, the interest is not only in increasing public awareness of disaster risks, but also in  
102 improving the collective response capabilities of the public.

103

104 As part of the growing emphasis on people-centred risk communication (e.g. United Nations,  
105 2015), the recent scholarly and practical attention to the collective capabilities of the  
106 communities is a welcome shift. Yet, the conceptualisation of 'warning' within this shifting  
107 terrain of community-based early warning systems is mainly centred on the technical or  
108 informational capabilities of communities in preparing themselves against the direct loss of  
109 lives and livelihoods resulting from natural hazards. In other words, communities are primarily  
110 valued from a technical or utilitarian perspective; relatively less attention has gone into the  
111 political agency and activism of communities in their struggle to defend their rights under  
112 difficult circumstances while preventing the exacerbation of socio-political exclusion and  
113 marginalisation through the disaster response and recovery processes. Indeed, official  
114 responses to disaster can themselves cause further risks, harms, injustices and inequalities  
115 in communities, sometimes termed the "second disaster" (Cuny, 1994, p.3), eroding  
116 communities' ability to anticipate and avert future disasters. The post-disaster environment  
117 often involves authorities downplaying and undermining the right of the affected communities  
118 to know the root causes of disasters, subjecting them to further psycho-social harm (Xu, 2017),  
119 while also stifling the potential for locally-driven recovery efforts ( Klein, 2007).

120

121 This paper approaches the concept of 'warning' from a political perspective. It shows that,  
122 beyond the utilitarian focus on saving immediate lives and livelihoods through community  
123 intelligence and wisdom, community-based monitoring embodies a rights-based ethos,  
124 alerting and activating communities against the erosion of rights and entitlements in the name  
125 of disaster response. In making this argument, we draw on the long-standing literature on  
126 social and anthropological approaches to disasters that show how disasters or the threat of  
127 disasters often trigger and consolidate 'disaster communities' (Matthewman and Uekusa,  
128 2021), which may begin as spontaneous activism in attending to humanitarian suffering, going  
129 on to build on that experience to demand the attention of the authorities to the structural  
130 deficiencies that produce disaster risks, and how such risks are disproportionately borne by

131 marginalised communities (Eyre & Dix, 2014). Disasters, according to Solnit (2010), are fertile  
132 ground for the “rebirth of civil society” (p.143). The transformative possibilities of civil society  
133 have been theorised both in terms of their potential to exert pressure on authorities and as  
134 instantiating alternative, utopian relationships, in developing ethics of care, solidarity and  
135 rights in the context of adversities (Cretney, 2019; Curato, 2019; Cornish, 2021; Firth, 2022).

136

137 Furthermore, the role of the collective voice in locating and highlighting the risk of  
138 misgovernance, inefficiencies and wastages in the provision of relief aid has long been  
139 recognised (Drèze & Sen, 1989). Through their extensive research on hunger and famine,  
140 Drèze and Sen have called attention to the role of the wider public (i.e. media, civil society and  
141 even political opponents) in acting as early warning agents against an imminent disaster. They  
142 argue, in a relatively pluralistic and democratic system, investigative reporting, free press, and  
143 citizen inquiries can play a critical role in compelling the authorities to respond to the risk of  
144 disasters. Beyond its role as an informal public warning system, community-driven monitoring  
145 is considered to have the potential to challenge and reverse the deep-seated cultures of  
146 denialism and inaction that often exacerbate disasters (Button, 2016; Pasma, 2021).

147

148 Beyond the expert-driven and technical approaches to early warning, this paper’s aim is to  
149 examine the role of the emergent phenomenon of community-based monitoring as a form of  
150 early warning system in disaster response and recovery. Attention is drawn to the potential  
151 and challenges inherent in such monitoring in holding authorities to account for their failures  
152 to ensure a timely, transparent and just response to COVID-19. We use the term “community-  
153 based monitoring” (hereafter CBM) to refer to monitoring of government-driven responses,  
154 initiated and led by members of the public acting in a personal or activist capacity, not as  
155 employees of an organisation responsible for formal disaster response. We use the term  
156 “community” to signal that the monitoring is done by affected communities, or those  
157 representing the affected communities (not by official responders, auditors or regulators), and  
158 to reflect the collective nature of such monitoring, which tends to enact the values of rights-

159 based disaster response. While community-based and community-led are terms often  
160 interchangeably used in both health and DRR literature, we consider community-based to be  
161 a more inclusive concept, covering a spectrum of rights-based efforts led by communities at  
162 risk of disasters but also those involving civil society and activist groups who assume the role  
163 of 'watchdogs' on behalf of communities (IFRC, 2013). As its empirical foundation, the paper  
164 builds on the growing recognition that COVID-19 has intensified the risk of exclusion of  
165 marginalised communities, triggering citizen-led movements to counter such marginalisation.  
166 More specifically, the paper draws inspiration from the notion of monitorial activism (Keane,  
167 2021), to show how various forms of bottom-up mechanisms of monitoring have emerged in  
168 the wake of COVID-19 to track and counter misgovernance in the delivery of public goods.  
169 Possibilities and limitations of such monitoring as a form of early warning system are  
170 discussed, in the interest of furthering the debates on community-driven DRR.

171

## 172 **COVID-19, risk environment and collective action**

173 The COVID-19 crisis has been responded to by governments across the world as an  
174 exceptional emergency, warranting extreme use of executive powers. The use of emergency  
175 powers is evident in the forms of strict enforcement of one-size-fits-all lockdowns, tracing and  
176 testing, physical distancing measures, and border closures. The implementation of such  
177 powers has been found to interfere with the basic well-being of historically marginalised  
178 communities such as informal workers and labour migrants (Dhungana, 2020a; Sengupta &  
179 Jha, 2020). Globally, the response to the pandemic has also suffered from unimaginative and  
180 unplanned responses to early warnings (Kelman, 2020), and has been marred by  
181 misinformation and disinformation, often compounded by a deep-seated culture of denialism  
182 and inaction (Abazi, 2020; Pasma, 2021). The magnitude of social suffering inflicted by the  
183 pandemic, especially that experienced by disadvantaged communities, reveals dysfunctions,  
184 deficiencies, and structural inequalities that have long plagued democratic institutions (Keen,  
185 2021), a situation that challenges Drèze and Sen's (1989) assertion that democratic openness  
186 and 'public action' act as an early warning system against disasters. Governments' responses

187 to COVID-19 have also sparked scholarly and public concerns that transparency and  
188 administrative accountability have been undermined and sidelined in the name of emergency  
189 response (Sian & Smyth 2022).

190

191 At the same time, as is common in the aftermath of a major disaster, the COVID-19 pandemic  
192 has triggered heterogeneous forms of solidarity and collective movements as competing  
193 frames for health justice (Firth, 2022). In response to governments' failures to protect the  
194 welfare of poor and disadvantaged communities, protests erupted, challenging various  
195 aspects of the COVID-19 responses in many countries (Ward, 2020), with some scholars  
196 dubbing them a new social movement in the making (Della Porta, 2020). Many of these  
197 initiatives aimed to improve people's access to everyday health and basic services, while  
198 others have emerged to hold governments accountable for their failure to protect and uphold  
199 people's fundamental right to health. For example, Diab (2021) has argued that during the  
200 COVID-19 crisis, conventional and formalised systems of accountability were insufficient, and  
201 the role of holding the government to account has been better met by the actions of citizens  
202 and civil society. Ghosh (2021) highlights the 'monitorial' role of gender non-conforming  
203 communities in India, who first identified the community's needs unmet by the government  
204 and then organised mutual aid efforts. Their activism is reminiscent of 'disaster *communitas*'  
205 (Matthewman & Uekusa, 2021), wherein political alliances are forged among marginalised  
206 groups in the fight against the conditions that expose these communities to risks. In other  
207 instances, health care professionals acted as investigators and whistle-blowers, challenging  
208 the State's effort to suppress the truth about the looming virus (Abazi, 2020), or exposing the  
209 misappropriation in the use of public resources (Teichmann and Falker, 2021). These  
210 represent emergent forms of community-based early warning initiatives, informing the public  
211 about the frontline realities of the COVID-19 response and prompting the global health  
212 community to take evidence-driven precautionary action.

213



214 While the emergence of mutual aid networks (e.g. Diab, 2021) and localised or spontaneous  
215 monitoring action (e.g. Ghosh, 2021) to COVID-19 have been subject to scholarly inquiry, in  
216 this paper, we take as our empirical entry-point the notion of "monitorial activism" as a form of  
217 community-based EWS for DRR. Conceptually, through the lens of monitorial activism, the  
218 paper aims to bridge the conversation between two distinct yet interrelated fields of  
219 community-based monitoring (CBM) and community-centric early warning systems (EWS).  
220 Monitorial activism here is defined as a form of collective movement, independent of and often  
221 in opposition to the formal systems of disaster response and recovery, which focuses on  
222 gathering and communicating information to a) expose the insufficiencies within the formal  
223 response to the disaster, b) defend the rights of citizens, and/or c) prevent the risk of abuse of  
224 authority in the name of disaster response.

225

226 Beyond this interdisciplinary conceptual lens, our paper also departs from existing literature  
227 on community-driven responses to COVID-19 in terms of applying a distinct research design  
228 (i.e. exploratory scoping review) and demonstrating the plural landscape of monitorial activism  
229 that transcends specific temporal-spatial boundaries, as documented by related studies (e.g.  
230 Ghosh, 2021). Such activism serves, we argue, as the early-detectors of risks of insufficiency,  
231 injustice or corruption in the official response. In so doing, we draw on theoretical insights from  
232 participatory and democratic governance of public goods, and particularly on the notion of  
233 "monitory invention", defined as the political potential of citizens to serve as the scrutinisers of  
234 government's power, and counter the misuse and abuse of such power (Keane, 2011). As a  
235 form of participatory movement, monitorial invention or activism has emerged in response to  
236 the inadequacies of representative institutions and officials in delivering on their promises to  
237 implement supportive measures to promote the well-being of the public. Monitoring of the  
238 performance of powerholders may vary in their nature and orientation, ranging from public  
239 hearings, audit committees, citizen inquiries and petitions to consumer protection campaigns.  
240 While interest in the monitorial role of citizens has grown, as discussed below, the potential

241 and challenges facing such activism in the context of a global health emergency, with notable  
242 exception (Ghosh, 2021), are less known.

243

244 Furthermore, we draw on and situate our analysis within the growing literature on the potential  
245 and limits of CBM of public goods in conditions of chronic power imbalances. In the context of  
246 health governance, CBM is increasingly viewed as having the potential to shift the balance of  
247 power from the authorities to service-recipient communities, with the latter taking an active  
248 role in tracking health service outcomes (Björkman & Svensson, 2009). As a form of collective  
249 action, CBM recognises the agency of local communities in gathering information with which  
250 to monitor the delivery and quality of health services, identify inefficiencies and wrongdoings,  
251 and thus hold local authorities to account (Fox, 2015). As part of the wider participatory  
252 movement, CBM may involve communities assuming the role of an 'alarm system' (Brown &  
253 Fox, 1998), or as 'watchdogs' (Joshi & Houtzager, 2012), tackling potential abuses of power.  
254 In other cases, CBM initiatives work in tandem with formal or state-sponsored accountability  
255 and participation mechanisms such as public hearings, social audits, etc, to scrutinise the  
256 provision and distribution of essential public services (Sanyal & Rao, 2018). Such initiatives  
257 typically target slow delivery of health services, absenteeism of health workers, lack of health  
258 inventory, and misappropriation and corruption in health resources, among others. CBM  
259 activities range from reporting on healthcare provision through in-person investigation of the  
260 delivery and quality of health services, identification of discrimination in service provisions to  
261 building larger coalitions and networks aimed at questioning and influencing policy decisions.

262

263 Based on the above debates, for the purposes of this paper, we argue that CBM represents a  
264 form of an evidence-driven initiative that is geared at protecting and promoting the rights and  
265 well-being of the communities who face the disproportionate burden of disasters. As such, the  
266 focus on 'warning' within CBM may transcend the traditional realm of disaster preparedness  
267 and mitigation, to cover early response and recovery, detecting of and alerting the public about  
268 the violation of rights in the name of disaster response and recovery.

269

## 270 **EXPLORATORY SCOPING REVIEW: PURPOSE AND METHODOLOGY**

271

272 The paper relies on an exploratory scoping review based on the following set of questions:

273 How have the communities (COVID-19 affected people, civil society actors and ordinary

274 citizens) pursued 'monitorial activism' to challenge and shape the response to the COVID-19

275 pandemic? What possibilities and challenges do such initiatives entail in response to the

276 COVID-19 pandemic?

277

278 Scoping reviews can help "to identify key characteristics or factors related to a concept" (Munn

279 et al., 2018, p.2). Following Rumrill et al (2010, p.404), our scoping review sought to "identify

280 broad themes and patterns" and to offer "foundations for future study". Furthermore, scoping

281 reviews often use a range of research and non-research materials, when an area of

282 investigation is new, complex, and when it would benefit from conceptualisation. The review

283 included both peer-reviewed articles (given the recency of the phenomenon, a small body),

284 and 'grey' literature (including reports, organisation statements, and webpages produced by

285 monitorial activists). The goal of the review is theory-building, making the qualitative

286 exploratory review a suitable methodological choice, as used elsewhere in analysing the

287 impacts of community-based health monitoring (Fox, 2015).

288

### 289 Search strategies

290 We aimed to search widely and inclusively. For academic literature, we first searched

291 Google Scholar and Web of Science databases, using combinations of search terms

292 informed by our literature review: community-based monitoring; community-led monitoring;

293 right to information; accountability and transparency; citizen monitoring; and COVID-19. The

294 time period covered was March 2020 to January 2023, coinciding with the main duration of

295 COVID-19 globally, and associated official measures to curtail the virus.

296

297 To identify relevant grey and web-based literature, we took a purposive sampling approach,  
298 scanning information produced by various civil society groups. Our initial sampling approach  
299 also drew on our prior academic knowledge, targeting organisations and contexts likely to  
300 spur community-based initiatives. A goal of comprehensiveness could not drive this search  
301 because of the recency of the crisis and the information was written by diverse community  
302 activists and civil society activists, using diverse terminology. We arrived at a targeted aim to  
303 review approximately 15-25 initiatives to balance a manageable amount of information with a  
304 purposive sample. Searches were restricted to the English language, given the language  
305 limitations of the two authors. The unit of analysis for our review is the initiative. One  
306 initiative could be mentioned in more than one source.

307

308 Inclusion/exclusion criteria

309 Although PRISMA is a widely used method for ensuring objectivity, quality and rigour in  
310 conducting systematic literature reviews, the exploratory and theory-building aim of the  
311 paper meant that more flexible and less structured criteria for the inclusion and exclusion of  
312 materials were necessary. Our main unit of analysis was CBM initiatives. Initiatives were  
313 eligible for inclusion in our review if they detailed examples of community-based monitoring  
314 involving collection, documentation and scrutiny of COVID-19 related official responses. We  
315 also focused on advocacy efforts driven by groups or organisations, focusing on those acting  
316 independently of emergency responders who represent the government or formal  
317 emergency management. The inclusion criteria also sought to maintain diversity in the  
318 selection of initiatives, representing a range of global South and global North contexts.

319

320 The term “community-based monitoring” is used inconsistently across grey and peer-  
321 reviewed literature. Hence, three exclusion criteria were used to maintain our focus. First,  
322 reports were excluded if they did not provide case material on an example of an existing  
323 community monitoring effort (e.g. papers only presenting theory, reflections or  
324 recommendations). Second, initiatives directed by major service providers, government

325 bodies, or universities were excluded (e.g. using peers to monitor transmission, as  
326 intelligence for health services). Third, documents using the term monitoring for activities not  
327 focused on information-gathering were excluded (e.g. initiatives that focused primarily on  
328 providing peer-to-peer support, or influencing health behaviour.

329

### 330 Data extraction

331 We extracted key data into a spreadsheet, as a basis for analysis and comparison. We  
332 recorded geographical locations, and brief textual information on (i) monitorial actors (who is  
333 engaged in monitoring); (ii) monitorial aims (what is being monitored); and (iii) monitorial  
334 action (what means or activities were used). Some initiatives were not new, and we recorded  
335 the prior activities where initiatives had a history of engaging in community-based  
336 interventions, to further inform the discussion section about the challenges and opportunities  
337 facing such efforts.

338

### 339 Reduction of error and bias

340 According to Mackieson, Shlonsky and Connolly (2019), establishing rigour in qualitative  
341 literature review goes beyond the process of concrete development, testing and  
342 implementation of research protocols and analytical codes. Rigour and the prospect for  
343 reproducibility in exploratory and interpretive review starts at the process of identification of  
344 research gaps and is further demonstrated through transparent documentation of the  
345 research process, targeted review of a range of sources, and commitment for inter-  
346 researcher exchange and learning (Dixon-Woods et al. 2006; Mackieson, Shlonsky &  
347 Connolly, 2019). To conduct the search, one author took responsibility for the review of  
348 academic literature (FC), and the other author (ND) for the grey and web-based literature.  
349 Each author conducted their initial search, applying the inclusion and exclusion criteria, to  
350 produce a list of initiatives involving monitoring, collection and sharing of information. The  
351 other author checked the application of the inclusion and exclusion criteria. Each author

352 conducted initial data extraction and interpretation for their shortlisted initiatives, which was  
353 checked by the other author. Any disagreements were discussed and resolved, with  
354 reference to our criteria and aims.

355

### 356 Analysis

357 Having extracted key data, we produced a typology of the functions served by community-  
358 based monitoring. While all initiatives gathered and disseminated information to question  
359 and improve official responses, diverse underlying “theories of change” were in operation.

360 The theory of change here means an explicit reference to the change-oriented aims and  
361 assumptions driving the examined community-based initiatives. Such stated aims were  
362 gleaned from the concerned organisations’ websites and/or other associated materials and  
363 served as the main source of analysis, as mentioned above, together with the associated  
364 actions/activities. Figure 1 below shows the summary of the research methodology.

365

366

367

368 Upon further interpretation, inter-author appraisal and situating our emerging findings to our  
369 original literature review, a typology of 4 distinct functions was proposed as being served by  
370 monitory activism: (1) tackling misinformation to enable the public to take protective action;  
371 (2) improving access through service monitoring; (3) exposing and challenging misuse and  
372 abuse of authority (4) spearheading inquiries and probes to hold governments to account.

373 Our findings below discuss each of these in turn, teasing out the possibilities and limitations  
374 that underpin a select sample of initiatives, while further situating them within the existing  
375 literature on health and DRR in the Discussion section. Annexed as Table 1, the paper  
376 contains further details about the four models of community-based monitoring of COVID-19  
377 response.

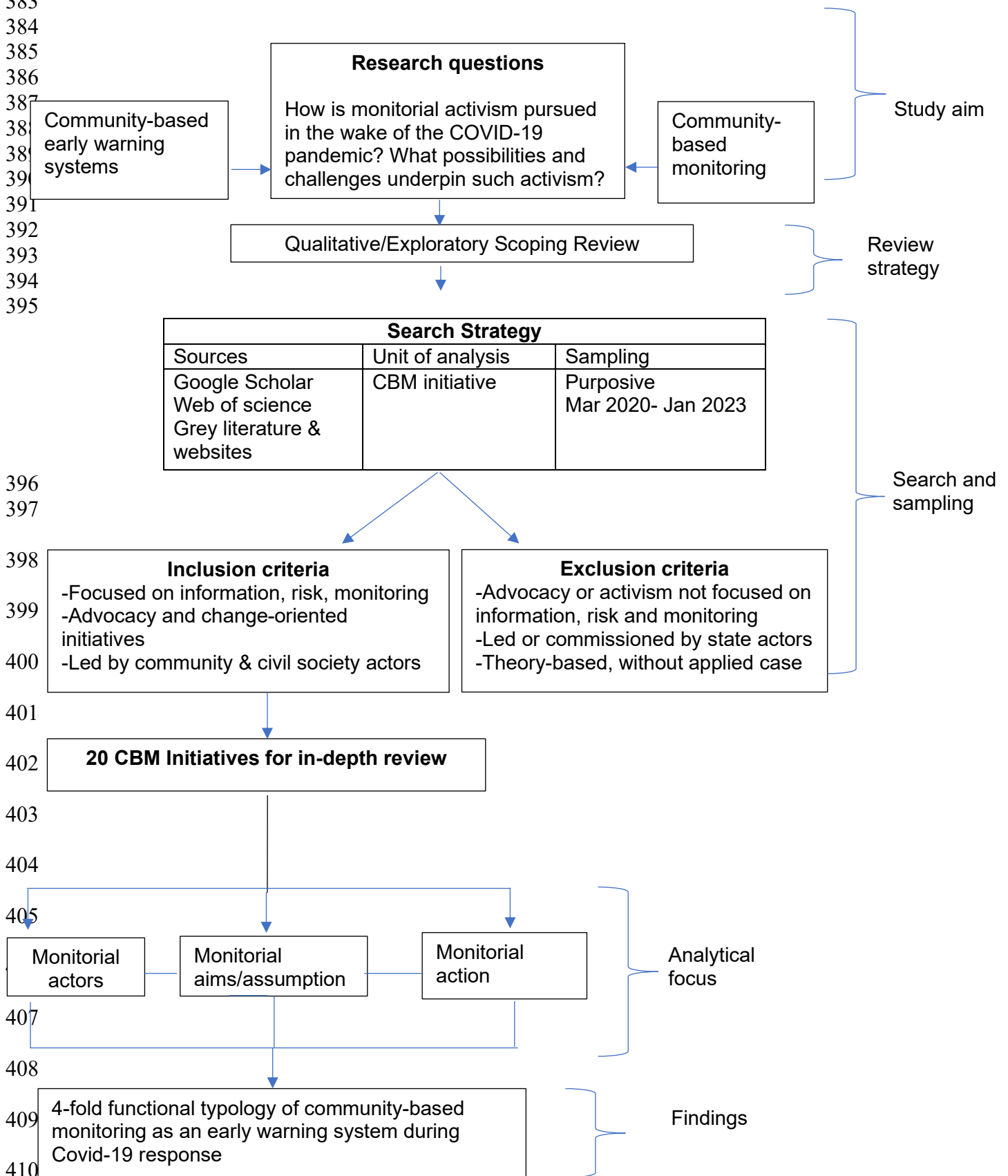
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381

382 **Figure 1: Study Process/Methodology in Brief**





412 **FINDINGS**

413 **Tackling misinformation to enable the public to take protective action**

414 Information gaps and misinformation in a global health emergency can create conditions for  
415 unsafe behaviour, public uncertainty and misdirected actions, or unequal access to social  
416 safety measures (Yamanis, 2020). In the case of COVID-19, monitorial activism emerged to  
417 provide ordinary citizens with valid and scientific information as a basis for protective action,  
418 often in the absence of credible information or appropriate signposting from governments or  
419 non-governmental health authorities. Our review identified several initiatives that centred on  
420 fighting a lack of information, misinformation, disinformation and rumours that increased  
421 vulnerable communities' risks of health and social harms. As much as disinformation is often  
422 manufactured with the intention to maintain the status quo, discredit science, and blame the  
423 vulnerable (Jaiswal, LoSchiavo, & Perlman, 2020), our review shows that disinformation is  
424 also being actively fought by activists.

425

426 Several of the reviewed initiatives are grounded on the principle of people's 'right to know'  
427 about not only the status of the virus outbreak, but also the decisions of the health authorities  
428 concerning the procurement of essential health commodities and accompanying service  
429 provision. G-Watch, a civil society group in the Philippines organised what they termed the  
430 'Local Multi-Stakeholder Consultation Series' to promote people's awareness of social  
431 protection programmes in the wake of COVID-19, combined with efforts to independently  
432 assess the deployment and delivery of such services (G-Watch, 2020). In the Indian state of  
433 Kerala, Ulahannan et al (2020) have shown how local communities assumed the role of citizen  
434 scientists, collecting data and creating user-friendly data visualisation to make people aware  
435 of the risks of the outbreak. Compared to G-Watch, the citizen-scientists' campaign in Kerala  
436 is more spontaneous and focused on the narrower aim of spreading credible information to  
437 the public.

438

439 In Nepal, Accountability Lab, a youth-based organisation, organised the Coronavirus CivActs  
440 Campaign (CCC), to equip labour migrants with credible information regarding the coronavirus  
441 and debunk rumours ranging from unverified claims about COVID-19 treatment to  
442 misinformation about government's unemployment benefits (Accountability Lab, 2020). As  
443 part of the campaign, local activists, termed Community Frontline Associates (CFAs), listened  
444 to the members of the migrant communities, capturing prevailing rumours and misinformation,  
445 and informed them of appropriate health-protective behaviours. In a similar vein, in India, an  
446 online platform, Altnews.in, spearheaded a 'fact-checking' initiative, debunking COVID-19  
447 misinformation (Shaikh & Satani, 2020). Their campaign, among other aims, sought to counter  
448 rumours which undermined international efforts to curb the pandemic, or which stigmatised  
449 minority communities. More recently, Campaign for Accountability, a US-based non-profit  
450 watchdog that uses "research, litigation, and aggressive communications to expose  
451 misconduct and malfeasance in public life," sought to publicise the role of technology platforms  
452 such as Apple Podcasts in distributing risk-promoting communications through programmes  
453 that, for example, discuss ingestion of bleach as a Covid treatment, make unverified claims  
454 about dangers of vaccines, and denounce COVID-19 frontline workers (Campaign for  
455 Accountability, 2022). The campaign, through evidence-based investigative reporting, is  
456 geared at countering conspiracy claims that pose a serious risk to the public and undermine  
457 scientific efforts to tackle the pandemic. The availability of digital information through online  
458 dashboards, and through peer-to-peer sharing of both misinformation and verified information  
459 sought to create opportunities for online citizen scientists to gather, analyse and share  
460 information in a highly distributed way, sometimes by people who had no prior involvement in  
461 civil society organising (Ulahannan et al, 2020).

462

### 463 **Improving access through service monitoring**

464 Globally, the response to COVID-19 was marred by an acute disruption in and de-prioritisation  
465 of routine health services. Under such conditions, locally embedded monitors have sought to  
466 trace, challenge and change the scarcity and misappropriation of health services under the

467 broader rubric of 'service monitoring'. Service monitoring took the form of a community-driven  
468 approach to investigating the availability and the disruption in the delivery of health services  
469 at the local level. Such efforts involved community members organising physical or virtual  
470 visits to the health services to examine whether or how health workers are complying with the  
471 standards of health care. Community members have also focused on identifying and  
472 documenting contextual barriers to health access, for example, cases of discrimination facing  
473 disadvantaged communities. Treatment Action Group (TAG) in South Africa initiated a  
474 campaign 'monitoring the response to HIV and TB', as such health services were de-prioritised  
475 in the wake of COVID-19 (Treatment Action Campaign, n.d.), identifying and reporting on  
476 hospitals and hotspots where people's inherent right to access other routine health services  
477 is undermined. As physical distancing measures made in-person monitoring difficult, TAG  
478 activists took the monitoring online to check in on staff and medicinal stocks at health facilities.  
479 In Uganda, community-based monitors, supported by an international non-profit, World Vision  
480 International, led a similar campaign to identify women who faced severe disruption in  
481 maternal and reproductive health services as the priorities shifted to COVID-19 response  
482 (Mpepo, n.d.). Such shifts in priority mean vulnerable groups such as pregnant women face  
483 increased health risks due to restricted access to health facilities. Local monitors in Uganda,  
484 thus, identified those women and alerted the local health authorities to make provisions for  
485 local pregnant women to have the option to deliver at health facilities.

486

487 In other contexts, citizen activism has transcended the realm of service monitoring to tackling  
488 the rise of exploitative activities under the condition of weakened government oversight. In  
489 Nepal, for instance, Covid Action Team Nepal visited and monitored hospitals in Birgunj, a city  
490 bordering India, where complaints about the mistreatment of patients were rife, and black-  
491 marketing of medicines thrived under limited government oversight (Himalayan News Service,  
492 2021). The team also undertook mutual aid efforts, distributing relief aid to those whose lives  
493 were disrupted by the pandemic while demanding political leaders respond to the larger  
494 problems of shortages of oxygen. As seen in other disasters, where governments failed to

495 address risk-enabling practices in the context of inadequate regulatory oversight, local people  
496 regularly step in to share resources and information to address such risk.

497

### 498 **Exposing and challenging misuse and abuse of authority**

499 The 'state of exception' sparked by the pandemic enabled governments to impose 'stay at  
500 home' orders, restrictions on mobility and social contact, and border controls, which came to  
501 be termed 'lockdowns'. In many instances, the lockdowns were preceded by a period of  
502 dismissals and downplaying of emergent risk by the authorities. In many contexts, when the  
503 lockdown was imposed, it was quick and harsh, without giving enough time for vulnerable  
504 communities such as informal workers, daily wage earners, migrants, or sex workers to devise  
505 self-protective strategies (Alliance India, 2021). State-sponsored social protection measures  
506 were limited, forcing communities to face severe economic deprivation, made worse by  
507 chronic inadequacy and questionable deployment of relief packages (Dhungana, 2020a;  
508 Sengupta & Jha, 2020).

509

510 In response to the risk of socio-economic marginalisation facing local communities, monitorial  
511 activists sought to expose and challenge the arbitrary use of state power. Early on during the  
512 COVID-19 crisis, Alliance India, a network of community-based health activists, led a  
513 campaign that exposed the authorities' failures to prioritise relief aid, and later worked to  
514 ensure vaccine access to marginalised communities such as sex workers and sexual  
515 minorities (Alliance India, 2021). Their efforts centred on holding state actors accountable to  
516 their core responsibility to ensure, as the campaign claimed, 'right to health' and 'dignity' in  
517 health for all. Their campaign also has sought to counter stigmatisation, policing and  
518 harassment of individuals who were seen as defying the government's quarantine rules.  
519 Likewise, behind Taiwan's globally recognised 'success' in managing the pandemic lies,  
520 according to Ho (2020), the critical yet constructive role of pressure groups that compelled the  
521 government to adhere to the principles of the right to information and also challenge the abuse  
522 of data (privacy and confidentiality) in the name of pandemic governance. In Afghanistan,

523 Integrity Watch, a civil society group, conducted a series of independent monitoring exercises  
524 of the government relief interventions titled ‘Relief Efforts for Afghan Communities and  
525 Households (REACH)’. Through investigative reporting in the form of policy briefs, they aimed  
526 to expose the lack of transparency in the release of the aid, made worse by the lack of  
527 engagement of local representatives, and inadequate system of redressal mechanisms for  
528 vulnerable communities excluded from aid distribution. Taken together, these examples  
529 represent the possibilities inherent in civil society and public-led monitoring in questioning,  
530 challenging and changing the misuse and abuse of authority within the COVID-19 response.

531

### 532 **Spearheading inquiries and probes to hold governments to account**

533 Our review shows a fourth model of monitorial activism that goes beyond tracking everyday  
534 deficiencies in health sector performance. It is focused on documenting governments’ failures  
535 and demanding accountability and justice mainly involving and on behalf of COVID-19 victims,  
536 survivors and bereaved families. Much of such monitorial activism has focused on forging a  
537 larger coalition of activists and advocates to hold powerholders accountable for misguided  
538 governance of the pandemic, disregard for fiscal discipline and associated abuse of power  
539 and authority (e.g., International Budget Partnership, 2021).

540

541 The Good Law Project UK, for instance, has been involved in preparing lawsuits, forging  
542 collaboration between legal activists and survivors of the pandemic. Working with the Doctors  
543 Association UK, who represent the National Health Service (NHS) doctors, they have sought  
544 to expose failures to procure and provide adequate PPE for NHS and other care workers (‘the  
545 PPE Issue’) resulting in death and serious illnesses (Good Law Project, 2020). An online  
546 petition organised by activists from the Good Law Project demanded transparency and  
547 accountability from the government regarding the procurement and outsourcing of Personal  
548 Protective Equipment (PPE). The petition garnered over 170,000 signatures, which  
549 demonstrates that the principles of openness and transparency are valued by the public even  
550 during emergencies. The Good Law Project pushed for an independent inquiry into the

551 reasons for the failures, while parallel efforts by the bereaved families compelled the UK  
552 government to set up and pursue an independent inquiry into the government response to  
553 COVID-19. In Zimbabwe, the Zimbabwe Democracy Institute, through in-depth investigation  
554 has exposed how the government's response was marred by inconsistency in vaccine  
555 administration (Zimbabwe Democracy Institute, 2021). Through closer inquiry into the  
556 government's action, it found not only serious irregularities in the distribution of the Sinopharm  
557 vaccine donated by China but also fraudulent awarding of tenders for the procurement and  
558 supply of COVID-19 PPE, test kits and other medical consumables to companies linked to  
559 high profile government officials.

560 Several of such efforts to document and expose irregularities are led by survivors and  
561 bereaved families. For instance, in Brazil, the Coordination of Indigenous Organizations of the  
562 Brazilian Amazon, one of the largest regional indigenous organizations in Brazil, came up with  
563 a technology-enabled documenting of deaths (Fellows et al., 2021). Through a mobile  
564 application called "the Covid Indigenous alert", members of this group counted and verified the  
565 numbers of deaths of indigenous people and in the process, countered official statistics, which  
566 actively downplayed the number of deaths. The group's activism was not limited to tracking  
567 deaths but also leveraging media campaigns and legal support to hold the government  
568 accountable to the unequal impacts of the disaster on indigenous communities. In the US,  
569 Marked by Covid has emerged as a nationwide grassroots coalition of people who are  
570 impacted by Covid (Marked by Covid, n.d.). Among other issues, their work has focused on  
571 what they term "restitution", spearheading inquiries and evidence-based activism in favour of  
572 victims and survivors of COVID-19 for the wilful negligence of the authorities, and demanding  
573 fair compensation for essential workers for their service and sacrifice.

574

## 575 **DISCUSSION: POSSIBILITIES AND CHALLENGES**

576 In recent years, scholarly and practical interest in people-centred approaches to EWS,  
577 aimed at preventing the loss of lives and livelihoods from disasters. Going beyond  
578 preparedness, our review draws attention to CBM as an emergent and distinct model of

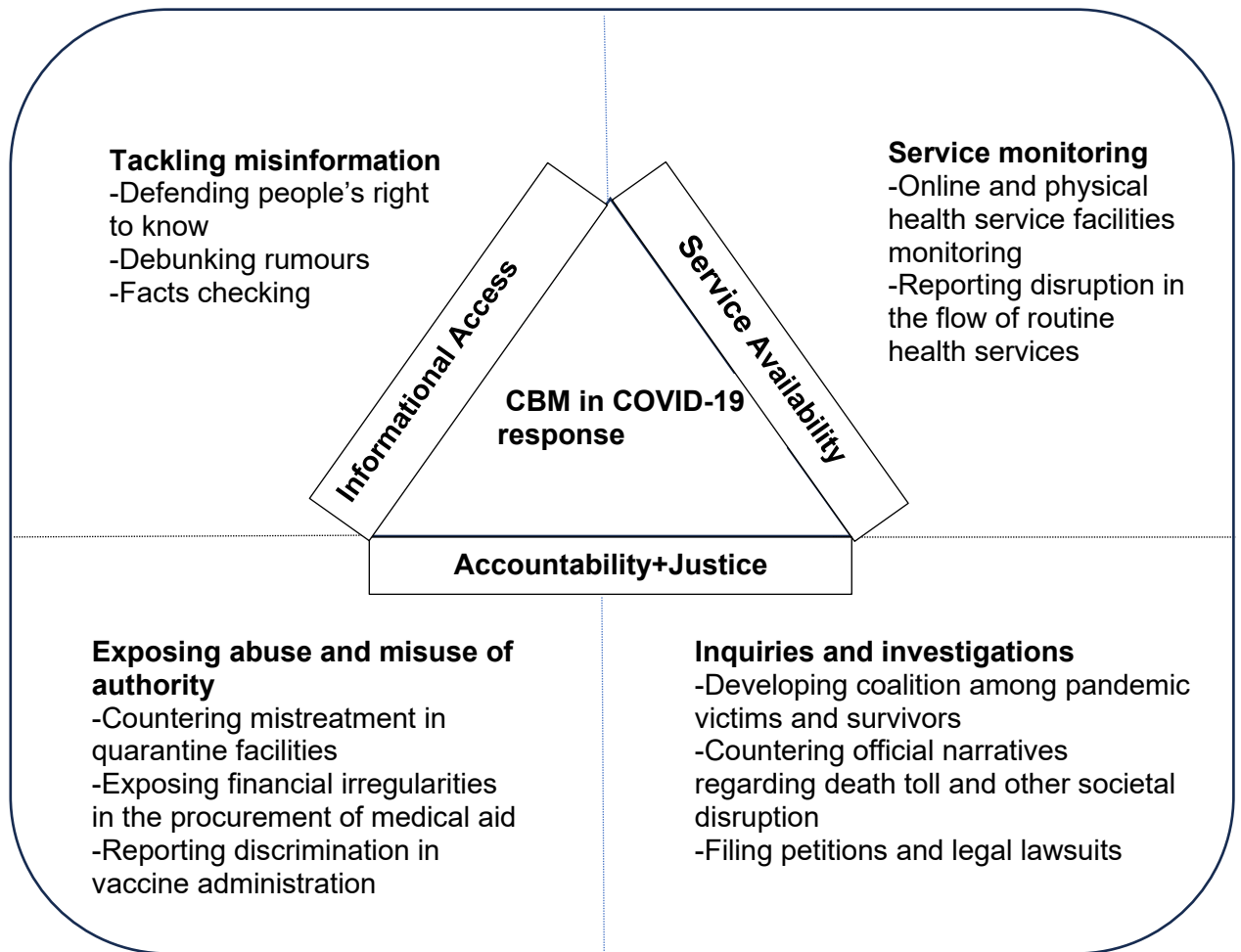
579 warning system within disaster response and recovery, identifying risks in the formal  
580 response, acting to mitigate those risks, and holding governments accountable to address  
581 those risks. In the context of a global disaster, risks are not just those associated with  
582 immediate loss of lives and livelihoods but what Tierney (2014) terms the “potential for loss”  
583 (p.6). This view aligns with the recent DRR policy discourse, notably the Sendai Framework  
584 for DRR, where risk is linked to people’s rights to be protected from various forms of losses  
585 and disruption (United Nations, 2015). The role of CBM as an early warning system, thus,  
586 should be viewed in terms of its rights-based orientation to tackle two forms of risks or  
587 potential losses.

588 First, CBM in response to the COVID-19 is aimed at tackling risks of deprivation of routine  
589 health services. This includes both the risks of failure to serve the general public and risks of  
590 deprivation facing marginalised communities such as migrants, informal workers and ethnic  
591 minorities. As a form of collective early warning system, CBM can serve as an important  
592 source of situational awareness for disaster professionals, where members of the public  
593 serve as “sensors” (Laituri and Kodrich, 2008) or “safety valves” (Gillespie and Reader,  
594 2022) in identifying areas of deprivation and scarcity. Second, CBM addresses fundamental  
595 risks of entrenchment of democratic deficits and lack of accountability under the conditions  
596 of the state of exception. Although the social cost of the pandemic is made worse by long-  
597 standing democratic dysfunctions, combined with the gradual erosion the public health  
598 system (Keen, 2021), the emergence of CBM means such democratic and systemic  
599 dysfunctions have not gone unchallenged. As Figure 2 below summarises, the four models  
600 of CBM in the Covid-19 response jointly show its potential to advance three mutually  
601 reinforcing goals: a) improvement in people’s access to information b) greater availability of  
602 routine health services and c) protection and promotion of the values of accountability and  
603 justice. With its focus on collective anticipation, oversight and evidence-based action, CBM  
604 shows promise to counter secrecy in decision-making and abuse of power in the official  
605 response to COVID-19, promoting a more inclusive and democratic response to disaster.

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**Figure 2: Functional typologies of community-based monitoring as an early warning system during COVID-19 response**



627 Despite the above possibilities, it would be unwise to uncritically embrace and celebrate the  
628 role of CBM's potential in disaster response. While the immediate outcomes of some of the  
629 aforementioned models, such as health facility monitoring, may be found in terms of improved  
630 availability of and access to health services, our analysis should be viewed with caution in  
631 terms of their longer-term impacts. What forms of policy and systemic changes, if any, do  
632 'monitorial activists' achieve? What risks and vulnerabilities are missed by such forms of  
633 activism? How do vulnerable communities see the role of CBM or monitorial activists? How  
634 are authorities responding to these emergent forms of collective efforts? These are questions  
635 that merit further scholarly and practical attention by the DRR community.



636  
637 More specifically, we draw attention to three challenges facing contemporary CBM in disaster  
638 response: uncertainty over the substantive impacts of monitorial activism; questions of  
639 sustainability of voluntary and emergent activities; and threat of civic vigilantism in the guise  
640 of rights protection.

641  
642 First, while much of the focus of the wide-ranging monitorial activism in response to COVID-  
643 19 has sought to promote public voice and demands, the capacity and willingness of formal  
644 state institutions to respond to such voice remains questionable (Fox, 2015; Dhungana,  
645 2021b). Citizens may informally discover and expose valid information as they monitor the  
646 provision of health services or the unequal impacts of government policies, but they may lack  
647 a formal route to hold government service providers accountable. It is difficult to make concrete  
648 and discern the accountability outcomes of some of these initiatives, particularly those with  
649 longer-term or more fundamental goals. On the one hand, the DRR community may value the  
650 short-term impacts of monitorial activism in informing peers and sharing information to  
651 promote protective behaviour. On the other, some forms of monitorial activism (e.g. Marked  
652 by Covid) follow a longer-term goal of truth-seeking and 'restitution' for Covid-19 victims. One  
653 can argue that the process of truth-seeking and truth-telling itself is accountability-driven and  
654 valuable in keeping the memories of the victims and survivors alive, which may also serve as  
655 an alert system against future disasters (Yu, 2021). What these examples jointly suggest is  
656 that the nature of the aims that these activists represent are not always uniform and linear but  
657 are more complex and multidimensional and require a longer-term empirical orientation.

658  
659 Second, and related to the above, future research should also consider the scalability and  
660 sustainability of the different forms of such activism. Several of the CBM initiatives that our  
661 review found are limited to specific geographic locations. While localised approaches to health  
662 sector scrutinising, such as that carried out by the Treatment Action Campaign, may have  
663 enforceability potential in terms of forcing the local authorities to respond to the immediate  
664 health risks facing vulnerable groups, the question of scalability of such action to address the

665 structural and policy neglect facing marginalised groups can be a challenge. In some  
666 instances, civil society actors, building on pre-existing networks and alliances, have been able  
667 to successfully scale-up the campaign across different countries. A case in point is the  
668 Accountability Lab's Coronavirus CivicActs Campaign, whose activism on tracking and  
669 debunking rumours has expanded across several countries in Asia and Africa. Together with  
670 the issues of scalability and sustainability, the internal organising capacity of the activists, and  
671 how the authorities view and approach such activism merit further scholarly attention. Disaster  
672 research has shown that spontaneous activism tends to emerge in the wake of disaster, but it  
673 also runs the risk of being silenced, co-opted, or dissolved as it faces neglect and obstacles  
674 from authorities (Cornish, 2021). These questions surrounding the scalability and  
675 sustainability of activism are not new in the field of participatory governance, calling for in-  
676 depth and longitudinal studies to trace the contextual dynamics and consequential outcomes  
677 of such activism, and locate them within the broader societal struggles to prevent disasters.

678

679 Third, as a form of social practice, CBM is not separate from but closely intertwined with the  
680 issues of power and power politics. Who acts as monitors, under what conditions, and how,  
681 are questions deserving critical questioning. As ordinary citizens and communities exercise  
682 the power to tackle the threat of COVID-19 outbreak, there is a risk of marginalised  
683 communities being targeted as vectors of the virus, fuelling stigma, discrimination and  
684 outright hostility towards racial minorities (Choi, 2021). There have been cases of the rise of  
685 a sceptical public and even civic vigilantism in the name of the protection and promotion of  
686 rights and freedom against state excesses. In the UK, Ahearne & Freudenthal (2021) argue  
687 that the 'state of exception' prompted citizen vigilantism in the form of reporting on  
688 neighbours, calling them 'covidiot' as a way to shame and stigmatise people for failing to  
689 follow prescribed health behaviour. In the guise of bottom-up or citizen-led monitoring,  
690 vulnerable communities such as ethnic minorities and migrants may be targeted and blamed  
691 as the vectors of the disease, while government's failures are overlooked (Keen, 2021).

692

693 In the context of anti-vaccination politics, the ‘monitoring’ and dissemination of accounts of  
694 vaccine-related harms have played a role in anti-vaccination movements’ claims that  
695 government vaccination efforts are infringements of individual freedoms (Megget, 2020). In  
696 short, gathering information to make claims on government is not done only by citizen  
697 monitors with egalitarian intent or advancing good public health practice, but it can be done  
698 with the opposite intentions to maintain and entrench an unequal or discriminatory *status*  
699 *quo*. Fuelled by the proliferation of social media, public interpretation of risks is taking many  
700 forms, resulting in highly polarised contestations over information, truth, and good practice.  
701 Citizen monitors may not always get it “right”, from a public health or disaster response point  
702 of view, but even when they get it “wrong”, monitoring by aggressive peers or “anti-vaxxers”  
703 that stands to do potential harm may be an informative early warning of social and political  
704 tensions requiring the DRR community’s attention.

705

## 706 **CONCLUSION**

707 Moving beyond the expert-driven and technocratic models of EWS, in this paper we have  
708 sought to shed light on the role of CBM as an early warning system, identifying and countering  
709 risks and failures in the official responses to the COVID-19 pandemic. The typology of  
710 monitorial activism discussed in this paper calls for rethinking of the notion of early warning  
711 and risk to include risks identified, monitored and acted on by the public (Wood et al., 2012).  
712 In addition to the conventional understanding of risk mitigation as protection from loss of people  
713 and property through disasters, the paper suggests that the potential of monitorial activism by the  
714 public should be viewed in terms of the democratisation of the understanding and communication  
715 of risk (Lejano, Haque and Berkes, 2022). Across both natural hazards and health emergencies,  
716 the overlap between CBM and EWS lies in their shared focus on monitoring, or early detection  
717 and communication of risks that threaten human well-being. They also align in their growing  
718 emphasis on the wisdom and intelligence of local communities (de Leon, 2014; United  
719 Nations, 2015), together with the emphasis on turning risk information into action or

720 responsiveness from the authorities (West et al., 2022). However, there are two important  
721 differences between the two concepts that the paper underscores. First, while most EWS  
722 concentrate on preparedness, our paper utilises CBM to demonstrate the practice of  
723 community-driven 'alert systems' in response to and recovery from a disaster, calling for the  
724 DRR community to consider the value of CBM not just in disaster preparedness but also in  
725 rights-based disaster response and recovery. Second, beyond EWS' utilitarian logic that often  
726 values community involvement primarily for their local knowledge about disaster risk, CBM  
727 represents plural forms of exercising of the political agency by or on behalf of the communities.  
728 The focus on political agency means that CBM has the potential to redefine the rights of  
729 communities as both the vehicle for and outcome of sustainable DRR, as envisioned in recent  
730 policy discourse, including under 'priority 2' of the Sendai Framework for DRR (United Nations,  
731 2015).

732 The paper urges the DRR community to pay further attention to the monitorial role of  
733 communities, particularly in terms of their political potential to serve as both 'protective' and  
734 'promotional' layers of societal responsiveness to disasters (Drèze & Sen, 1991). And while  
735 the four models of CBM or monitorial activism identified in this paper range across the  
736 spectrum from collaborative to conflictual approaches vis-a-vis the official responses, we  
737 argue that CBM should not be seen as being in opposition to the state governance of disaster,  
738 but as part of a pluralistic democratic accountability process, where a sceptical orientation to  
739 the state's tendency to neglect and downplay the risk of disasters is a positive contribution to  
740 disaster governance. Finally, the paper also seeks to distinguish monitorial activism from other  
741 forms of citizen vigilantism that, instead of promoting and protecting the rights, have the  
742 potential to interfere with and violate the rights of vulnerable communities. Community-based  
743 monitoring as an early warning system foregrounds the rights and welfare of those least  
744 protected in the face of a major crisis. To what extent do these efforts have enforceability  
745 potential in bringing longer-term policy and systemic reforms? And are they scalable and  
746 sustainable? This exploratory study has set the foundation for further scholarly attention to  
747 these questions.

748 **Data Availability Statement**

749 The study made use of publicly available and purposively sampled data on initiatives  
750 involved in the monitoring of COVID-19 responses. Most of the data used during the study  
751 appear in the submitted paper under Table 1 and are available from the corresponding  
752 author by request.

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966 **Table 1: Examples of the 4 models of community-based monitoring of COVID-19 response**

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<b>Monitorial Initiative</b>	<b>Monitorial Location</b>	<b>Monitorial Actors</b>	<b>Monitorial Aims &amp; Actions</b>	<b>URL</b>	<b>Accessed on</b>
Alliance India	India	Community-based outreach workers	Organise community outreach to track and address the distribution of rations, masks, soaps and sanitisers; Organised localised efforts to document cases of stigma and discrimination facing vulnerable populations such as sexual minorities.	<a href="https://allianceindia.org/latest-update/">https://allianceindia.org/latest-update/</a>	12/12/2022
G-Watch	The Philippines	Local activists, mostly youth	Organise community-based feedback system and consultation workshops; monitoring of Covid-related entitlement programmes, with a particular aim to improve transparency and accountability in the provisions of relief and vaccine deployment.	<a href="https://www.g-watch.org/news-release/time-account-covid-19-response-and-chart-citizen-centered-%E2%80%98new-normal%E2%80%99">https://www.g-watch.org/news-release/time-account-covid-19-response-and-chart-citizen-centered-%E2%80%98new-normal%E2%80%99</a>	12/12/2022
ABAAD	Lebanon	Women activists	Track cases of domestic violence during Covid-19; Organise a campaign to highlight the risks of strict lockdown under the theme of lockdownnotlockup.	<a href="https://www.abaadmena.org/?s=lockdownnotlockup">https://www.abaadmena.org/?s=lockdownnotlockup</a>	11/09/2022
CHS Alliance	Various disaster-or crisis-affected communities	International network of humanitarian organisations	Track and combat misinformation through community radios and hotlines; Collect community feedback to ensure Covid-19 related relief provisions reach the most vulnerable.	<a href="https://www.chsalliance.org/get-support/article/covid-19-and-the-chs/">https://www.chsalliance.org/get-support/article/covid-19-and-the-chs/</a>	14/10/2022
Zimbabwe Democracy Institute	Zimbabwe	A group of researchers and activists serving as civic society information hub	Identification of irregularities in vaccine deployment including cases of nepotism and favouritism; Monitoring and addressing sources of misinformation; Identifying and exposing alleged cases of corruption in procurement and delivery of health materials such as PPE	<a href="https://kubana.net/2021/05/11/contradictions-in-covid-19-information-dissemination-zdi-public-health-access-monitoring-report-april-2021/">https://kubana.net/2021/05/11/contradictions-in-covid-19-information-dissemination-zdi-public-health-access-monitoring-report-april-2021/</a>	14/10/2021

<b>Monitorial Initiative</b>	<b>Monitorial Location</b>	<b>Monitorial Actors</b>	<b>Monitorial Aims &amp; Actions</b>	<b>URL</b>	<b>Accessed on</b>
World Vision International's 'Citizen Voice and Action'	Various countries in the Global South	Community-based organisations, health outreach workers & citizens	Support deployment of National Vaccine Deployment Plans by identifying and addressing vaccine hesitancy and sharing of information regarding vaccine benefits; Develop community vigilance through formation of local groups to prevent corruption in the use of health resources; Through community outreach activities, provide local communities with the opportunity to provide feedback on health services; Use right to information to promote access to health.	<a href="https://www.wvi.org/stories/coronavirus-health-crisis/light-covid-19-darkness-social-accountability">https://www.wvi.org/stories/coronavirus-health-crisis/light-covid-19-darkness-social-accountability</a>	12/08/2022
SAATHI India	India	Local health activists and advocates	Capture patients' voices to promote the rights of patients in Covid-19 care and treatment; Identification and documentation of exploitation and overcharging by private health providers during Covid-19; Highlight demands for regulation of the Private health sector in the context of COVID-19	<a href="https://sathicehat.org/wp-content/uploads/2022/04/Compendium-Patients-voices-during-the-pandemic_email.pdf">https://sathicehat.org/wp-content/uploads/2022/04/Compendium-Patients-voices-during-the-pandemic_email.pdf</a>	10/09/2022
Good Law Project	UK	Lawyers and legal experts	Provide legal protection to Covid-19 whistleblowers; Question and challenge the government handling of the Covid-19 response including alleged under-reporting of data related to deaths; Monitor into the government's handling and subcontracting of PPE.	<a href="https://goodlawproject.org/protections-whistleblowers/">https://goodlawproject.org/protections-whistleblowers/</a>	15/10/2022
Kerala Covid-19 Tracker	India	Health Data Scientists and Advocates	Use citizen science to create an open-access database and a bilingual public-friendly dashboard with daily updates	<a href="https://doi.org/10.1093/jamia/ocaa203">https://doi.org/10.1093/jamia/ocaa203</a>	11/11/2022
Multiple indigenous movements	Brazil	Indigenous Communities and Scientists	Counting Covid-related deaths of indigenous peoples, countering official statistics, together with social media campaigns; Organising court cases against the government.	<a href="https://doi.org/10.1016/j.worlddev.2020.105222">https://doi.org/10.1016/j.worlddev.2020.105222</a>	10/11/2022
Integrity Watch Afghanistan	Afghanistan	Community-based health activists and researchers	Monitor health facilities focused on availability of PPE and related medicines and equipment, availability of health care staff etc; Identify and document disparities in the distribution of Covid-19 related aid packages.	<a href="https://integritywatch.org/blog/news/integrity-watch-survey-health-facilities-need-urgent-attention-to-">https://integritywatch.org/blog/news/integrity-watch-survey-health-facilities-need-urgent-attention-to-</a>	11/11/2022

Monitorial Initiative	Monitorial Location	Monitorial Actors	Monitorial Aims & Actions	URL	Accessed on
				<a href="https://www.help-fight-covid-19-in-afghanistan/">help-fight-covid-19-in-afghanistan/</a>	
Librarians monitoring Covid-19	Latin America and Caribbean	Group of librarians	Monitor the cases of Covid-19 and the legal and governmental responses; Multi-staged monitoring process that also focused on cases of domestic violence, vaccine hesitancy.	<a href="https://crln.acrl.org/index.php/crlnews/article/view/25039/32930">https://crln.acrl.org/index.php/crlnews/article/view/25039/32930</a>	11/11/2022
Civicus	Various countries in the global South	Global alliance of civil society activists	Documentation of 'solidarity stories' and 'innovation stories' involving various civil society groups across the globe; Tracking abuse of human rights in quarantine facilities and making public use and abuse of government resources; Monitoring and advocating against the growing cases of domestic violence during lockdown.	<a href="https://www.civicus.org/index.php/covid-19">https://www.civicus.org/index.php/covid-19</a>	12/11/2022
International Budget Group South Africa (Asivikelane initiative)	South Africa	Researchers, investigative reporters and community organisers	Monitor disruption in delivery of everyday public services (e.g. availability of water, waste disposal) and social protection programmes for urban slum residents; Preparation of weekly press releases to influence government response and inform the public.	<a href="https://internationalbudget.org/covid-19-in-south-africa/">https://internationalbudget.org/covid-19-in-south-africa/</a>	11/11/2022
Taiwan Association for Human Rights	Taiwan	Legal activists	Tracking cases of human rights violations during strict quarantine impositions; Defending right to information; Documenting and challenging violation of privacy rights under contact tracing interventions	<a href="https://www.tahr.org.tw/content/3126">https://www.tahr.org.tw/content/3126</a>	12/12/2022
Treatment Action Campaign	South and Southern Africa	Health activists and researchers	Organising virtual facility monitoring to identify and document disruption in the flow of regular health services; Data-driven consultations and online workshops to support the response to the pandemic	<a href="https://www.tac.org.za/wp-content/uploads/TAC-Resilient-Advocacy-Report.pdf">https://www.tac.org.za/wp-content/uploads/TAC-Resilient-Advocacy-Report.pdf</a>	13/12/2022



<b>Monitorial Initiative</b>	<b>Monitorial Location</b>	<b>Monitorial Actors</b>	<b>Monitorial Aims &amp; Actions</b>	<b>URL</b>	<b>Accessed on</b>
Marked by Covid	USA	Covid-19 survivors and bereaved	Organising Covid-19 survivors and bereaved family members to promote accountability and justice to those who are 'harmed by Covid'; Documenting testimonials of survivors and bereaved families; Organising memorials and vigils; Documenting lessons learned, focused on the experiences of the frontline responders.	<a href="https://www.markedbycovid.com/">https://www.markedbycovid.com/</a>	15/12/2022
Institute for Governance Research	Sierra Leone	Researchers and activists	Conduct community-based survey to examine the government's performance in Covid-19, with a focus on how it is observing human rights in pandemic response ; Provide feedback to the government	<a href="http://igrsl.org/sierrapoll-feedback-on-2020-covid-emergency-measures/">http://igrsl.org/sierrapoll-feedback-on-2020-covid-emergency-measures/</a>	12/12/2022
Coronavirus CivicActs Campaign	Nepal (with networks in Nepal, Pakistan, South Africa, Mali, Niger and Nigeria)	Youth Activists	Identifying local and national level Covid-19 related misinformation and rumours and debunking them through credible scientific information; Organising online communication to inform the public, including vulnerable communities such as migrant workers about the Covid-19 response	<a href="https://civacts.org/civactscampaign/">https://civacts.org/civactscampaign/</a>	11/04/2022
Campaign for Accountability	USA	Tech activists and investigative reporters	Documenting and publicising cases of rumours and misinformation about Covid-19 through Big Tech platforms such as Youtube, Apple Podcasts	<a href="https://campaignforaccountability.org/?s=Covid-19&amp;post_type=documents">https://campaignforaccountability.org/?s=Covid-19&amp;post_type=documents</a>	18/01/2023

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972 **Figure Caption List**

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