



COVINFORM

CORONAVIRUS VULNERABILITIES AND INFORMATION DYNAMICS RESEARCH AND MODELLING

D6.4 Synthesis and lessons learnt on community and citizen responses and impacts



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Executive Summary

The present deliverable synthesizes the WP6 findings to date in work package 6, focused on citizen and community responses. These findings are presented within the framework of the COVINFORM vulnerability assessment model developed in COVINFORM's work package WP2 (Risk assessment model to evaluate the response and impact at different geographical Levels) and the social-ecological systems framework (SESF) (Ostrom & McGinnis 2014) adopted in WP3 work package 3 (Case study design and evaluation). After reviewing the data collection procedures, which include desk-based and empirical research, in this report maps the CSO interview findings along:

- The dimensions of the COVINFORM vulnerability assessment model:
 - Direct threats and systemic multipliers;
 - Physical/health, social, economic, and informational vulnerabilities;
 - Physical/health, social, economic, and environmental consequences;
 - Two dimensions of resilience: ability to recover and ability to adapt.
- The domains of the social-ecological systems framework:
 - Governance systems;
 - Resource systems and units;
 - Actor systems;
 - Action situations.

The deliverable then draws out lessons learnt based on the above analysis and current literature in vulnerability assessment and socio-ecological systems theory. In brief, it argues that:

- Both CSOs and target groups inherently understand vulnerability as multidimensional, but sometimes assign weights to different dimensions in a manner that diverges from policymakers.
- When threats meet vulnerabilities, the effects often cascade across the physical/health, social, economic, and informational domains. These cascades are sometimes difficult to predict.
- Vulnerabilities and resources alike are often networked. Vulnerabilities in one node in a network can impact other nodes, including across geographical boundaries.
- CSOs can act as “bridging organisations” (Folke et al. 2005) that leverage the elements of community to enhance the effectiveness of multilevel governance.

The deliverable concludes by drawing links between the concept of multidimensional vulnerability and the concept of intersectionality, which will be explored during forthcoming interviews with a particular vulnerable group: women with a low socio-economic status.

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Acronyms & Abbreviations

Term	Description
FSW	Female Sex Worker
GDPR	General Data Protection Regulation
GRG	Greenhouse gases
GRT	Gypsy, Roma, Traveller (UK abbreviation)
PPE	Personal protective equipment

1 Introduction

This document provides an initial descriptive analysis of local COVID-19 impacts and responses in nine sub-municipal/municipal research sites across Europe, based on interviews with representatives of civil society organisations and grassroots initiatives that were active in these sites.

Within the COVINFORM project, work package 6 is concerned with studying COVID-19 impact and response at the “community” level. The aims of WP6 are:

- To review and describe community structures and stakeholder networks, local implementations and impacts of governmental responses, and voluntary and citizen-led responses in selected sub-national research sites in the 15 project target countries;
- To carry out primary empirical research among civil society stakeholders and residents in selected sub-national research sites in 10 target countries;
- To perform an in-depth analysis of key dimensions of impact in the project target countries;
- To synthesise research findings on citizen responses and impacts in a complex systems framework and prepare recommendations and other inputs for WP8.

Deliverables D6.1 ‘Baseline report Community and citizen responses’ established a foundation for these aims via desk research in 15 sites, whereas D6.2 ‘Research design: Community and citizen responses’ defined procedures for empirical research in 10 sites, in order to build upon this foundation. D6.3 reported on the empirical research conducted with CSO representatives in the sub-national research sites during Winter 2021 and Spring 2022.

Task 6.4 synthesises and interprets the findings of T6.1 – T6.3 from an interdisciplinary perspective, against the background of the indicators and theoretical frameworks established in WP2 and WP3. It furthermore establishes the groundwork for policy and practice recommendations to be delivered to policymakers in WP8.

2 Background

2.1 Desk research

The first phase of WP6 (T6.1) entailed desk research guided by the following questions:

1. How have COVID-19 and policy responses to COVID-19 impacted the target sub-national units?
2. How have the sub-national units reacted to COVID-19 and policy responses to COVID-19?
3. Can promising practices be identified for policy co-production or co-implementation in partnership with governmental organisations in the sub-national units, and/or with selected vulnerable groups?

Target sub-national units were defined as one geographical community / administrative region in each of the 15 target countries. Definitions of scope (NUTS2, NUTS3, or LAU) varied per target country, but the sub-national units were generally municipalities. Within these municipalities, some partners furthermore chose sub-municipal units on which to focus. The task includes a review of relevant primary sources and secondary documentary sources (scholarly studies, grey literature, etc.) in the project target countries. Partners were provided with a findings template and asked to complete a country report and list of references.

The outcome of T6.1 (D6.1) was a compilation of country reports, followed by a comparative analysis. The comparative analysis suggested that the following factors often characterised successful “multi-level governance” practices:

- Organization: well-functioning networks with clear communication channels; coordination between governmental authorities, CSOs, grassroots initiatives; consideration of and synergy with informal support structures.
- Solidarity: proactive outreach to local residents, especially vulnerable individuals and groups.
- Cooperation: e.g., between government, civil society, and the private sector.
- Technology: improvement of infrastructure and promotion of ICT channels that enable risk reduction (e.g., work/study from home, contact tracing).
- Culture and respect for diversity: sensitivity and adaptation to local cultures via cooperation with local actors, including with regard to the proactive mitigation of barriers.
- Door-to-door action: mobile clinics, vaccine vans, etc. to reach vulnerable areas and groups.

These factors were further investigated in the context of a specific theory of community in the empirical research that followed.

2.2 Empirical research

The second phase of WP6 (T6.2 and T6.3) entailed empirical research in sub-national sites in 10 selected countries. It was resolved that the task should not approach “communities” as passive objects impacted by the pandemic, but as configurations of experience and social action produced within structural contexts through the interaction of human and non-human actants. A fitting theory of community, developed by MacQueen et al. (2001) in the context of public health research with vulnerable groups, was adopted. MacQueen et al. identify five core elements that typify vulnerable groups’ experiences of geographically-situated and non-geographically-situated communities alike:

- Locus (spatial factors)
- Sharing (shared attributes, behaviours, resources, etc.)
- Social ties (relationships)
- Diversity (intra-community differences and their effects)
- Joint action (actions taken together or in coordination with others)

A review of prior research confirmed that all five of these elements have determined or mediated COVID-19 outcomes worldwide. Furthermore, it was theorised that these elements could complement the social-ecological systems framework (SESF) utilised in COVINFORM WP39 (see D6.2, Annex 1). Accordingly, they were adopted as a framework for the development of research questions, and subsequently a topic guide for qualitative interviews with representatives of civil society organisations (see D6.2, Annex 2). The target sample was set at N≥5 CSO representatives in each of the ten empirical research sites.

Between February and March 2022, partners recruited and conducted interviews. Due to recruiting challenges, by the end of March 2022, a total of 38 interviews were conducted across nine of the ten intended target sites (76% of the target of N=50). In the framework of the recruiting procedures, ethical and privacy implications were considered, especially with regard to the recruitment of individuals belonging to vulnerable groups. Guidelines provided in deliverables D1.4 Ethical Framework, in D10.1 H - Requirement No. 1 (concerning measures to protect vulnerable groups and minimise the risk of their stigmatization as well as concerning possible incidental findings) and in D10.2 H – Requirement

No. 2 (informed consent procedures) were followed. The respective national regulations on Ethics Committee approvals/opinions were abided by.

Those partners who managed to conduct $N \geq 3$ interviews conducted an analysis guided by standardised template (see D6.2, Annex 3). The country analyses were collected and used as the basis for D6.3, a compilation of country reports followed by a comparative discussion.

2.3 Analysis

The aim of the most recent phase of WP6 (T6.4) has been to conduct a more detailed analysis of the findings to date, within the context of the COVINFORM vulnerability assessment model developed in WP2 and the social-ecological systems framework (McGinnis & Ostrom 2014) utilised in WP3. To this end, each country analysis based on $N \geq 3$ interviews was compiled and coded using QDA Miner (Provalis Research 2021). Partners who conducted $N \geq 3$ interviews were also asked to go through the recordings or transcripts and identify two to five concrete “action situations” that they found particularly interesting, surprising, or useful as lessons learned. McGinnis & Ostrom (2014) define “action situations” as complex interactions in which “actors in positions make choices among available options in light of information about the likely actions of other participants and the benefits and costs of potential outcomes”. These were also submitted using a template, compiled, and coded. The codebook is provided in the Annex. This report was written on the basis of the coded segments, supplemented by revisitation of specific quotes provided by partners in the analysis templates.

3 Synthesis of findings

3.1 CSO findings in the context of vulnerability assessment

COVINFORM D2.3 *Technical report* determines that risk assessment methodologies often define risk as a product of the interaction between threats, vulnerabilities, consequences, and resilience (TVC+R). Accordingly, the COVINFORM vulnerability assessment model encompasses:

- Direct threats and systemic multipliers;
- Physical/health, social, economic, and informational vulnerabilities;
- Physical/health, social, economic, and environmental consequences;
- Two dimensions of resilience: ability to recover and ability to adapt.

The following sections map the CSO interview findings along these dimensions of threats, vulnerabilities, consequences, and resilience.

3.1.1 Threats

The COVINFORM vulnerability assessment model identifies three categories of threats: **the virus, variants of concern, and factors impacting the pandemic’s likelihood of development** (such as mobility, international trade, migration, housing concentration, pollution, temperature, and the age of the population). The latter are notable insofar as they are properties of the societal system rather than discrete threat objects. Similarly, it is possible to analyse the threats mentioned by the CSO interviewees under three categories: 1) the virus and disease itself; 2) other discrete threat objects; and 3) properties of the societal system. In general, the interviews made it clear that both CSOs and

their target groups harbour widely varying definitions of “threats” and perceptions of the severity of different threats.

The SARS-CoV-2 virus and Coronavirus disease

Interviewees clearly perceived the SARS-CoV-2 virus and Coronavirus disease as a health threat to themselves, their colleagues, their target groups, and society at large. However, interviewees reported that their target groups harboured widely varying understandings of the threat status of the virus itself. On the one hand, some interviewees mentioned fear of SARS-CoV-2 and apprehension regarding severe progressions of COVID-19 among their target groups. This fear and apprehension sometimes had knock-on effects such as stress and (semi-)voluntary social distancing, which could result in loss of work and loss of access to social networks. On the other hand, interviewees indicated that some clients **perceived other threats as more severe than the SARS-CoV-2 virus** and Coronavirus disease: namely, economic and social threats such as the aforementioned loss of work or loss of networks.

Other threat objects

Interviewees made it clear that before and during the pandemic, their target groups faced numerous concrete threat objects other than SARS-CoV-2. Concrete threat objects named include:

- **Disinformation and misinformation:** bad information – i.e., the intentional or unintentional proliferation of inaccurate messages about COVID-19, response measures, etc. – was perhaps the single most-commonly-named threat in the CSO interviews. Nearly all interviewees characterised their target groups as vulnerable to disinformation and misinformation, and expressed a need for more effective means of countering these threats. Notably, interviewees praised instances in which governmental risk communicators cooperated proactively with CSOs and representatives of vulnerable groups: examples are the enrolment of bilingual/bicultural “health guides” to work with migrant-background populations in Gothenburg, Sweden and cooperation between administrators and local mosques to debunk myths (e.g., the vaccine being *haram*).
- **Bad actors:** interviewees mentioned several categories of individual bad actors that posed threats to their target groups. These included:
 - **Spreaders of disinformation/misinformation:** in addition to emphasising the danger posed by the “infodemic” as a phenomenon, interviewees were highly critical of specific actors who spread disinformation/misinformation, especially those in positions of authority and trust (such as health care workers).
 - **Abusive family members/partners:** interviewees, particularly those who worked with vulnerable women and children, confirmed that domestic violence was a sustained problem during the pandemic, particularly in cases in which victims had to cohabitate with their abusers.
 - **Abusers outside the social network:** interviewees confirmed that their target groups sometimes faced abuse from outside their social networks, both face-to-face and online and particularly along ethnic/racial lines.
 - **Fellow residents who reject regulations and/or vaccination:** a few interviewees criticised fellow residents who did not comply with regulations (on hygiene, social distancing, etc.) or who rejected vaccines as a threat to their target groups. However, generally, interviewees reserved their critique for institutions rather than individuals.

- **The state/dominant institutions:** finally, some interviewees indicated that members of their target groups harbour mistrust toward the state and other dominant institutions. This is understandable, given long histories of ethnic discrimination throughout Europe. In some cases, they may perceive the state itself as a threat: one Swedish respondent, for instance, indicated that myths had circulated among some migrants that the government was testing vaccines on them, or using vaccines as a cover under which to harm them. In one case, a specific non-COVID-related law was identified as a threat: the UK "Police, Crime, Sentencing and Courts Bill 2021", which one Welsh respondent indicated will aggravate the structural vulnerability of Gypsy, Roma, Traveller (GRT) groups by empowering the police to seize their (mobile) homes and property under a wider range of circumstances.

Systemic threats

In addition to specific threat objects, interviewees made it clear that their target groups faced various threats that can best be characterised as systemic, i.e., stemming from properties of systems rather than concrete objects. Whereas the vulnerability assessment model focused on system characteristics that facilitate or mitigate the spread of COVID-19, the CSO interviewees focused on system characteristics that directly impact their target groups. The included:

- **Structuralised socioeconomic precarity:** nearly all interviewees' target groups suffer social and/or economic precarity. Insofar as precarity is a consequence of structuralised socioeconomic inequality that is recognised and tolerated by European policymakers, it can be characterised as an external threat, as well as an attribute of the subject, i.e., a vulnerability.
- **Structuralised discrimination:** those interviewees who work with migrants and ethnic minorities often mentioned that their target groups suffer discrimination, which, like socioeconomic inequality, is a structural characteristic of European societies that is recognised and, to some extent, tolerated by policymakers.
- **Harmful, inadequate, or inconsistent policy:** in addition to structuralised inequality and discrimination, some interviewees characterised the general approach to policymaking in their countries as harmful to their target groups, or at least inadequate to their needs. Inconsistency and lack of staying power were major points of critique: for instance, an interviewee in Wales suggested that current welfare policies incentivise dependence, but that the trend toward neoliberalism and the retrenchment of welfare systems means that people are being rendered dependent on structures that may degrade or disappear. The same respondent questioned whether the government would have the political will to keep COVID-19-related support measures such as subsidies for precarious small businesses in place once the perceived threat of the disease itself receded. Likewise, an interviewee in Austria suggested that although bringing some social welfare application processes online had resulted in easier access, state institutions would resist transferring the lessons learnt to all application processes because their complexity is planned feature to disincentivise potential applicants.

3.1.2 Vulnerabilities

The vulnerability assessment model identifies four domains of vulnerability: physical, social, economic, and informational. It thus assumes a multidimensional definition of vulnerability, as discussed in Section 4.1 below. Some of the indicators utilised pertain to characteristics of whole systems (e.g., number of hospitals, GDP, etc.), while others pertain to characteristics of both systems and individuals and groups in populations (e.g., prevalence of pre-existing health conditions, education levels, etc.).

The CSO respondents interviewed in WP6 shed light on the ways these vulnerabilities are experienced by their target groups and addressed in their sectors.

Physical/health

Within the vulnerability assessment model, the system characteristics identified under the “physical” category are the **numbers of hospitals, ICU beds, LTCF beds, medical frontline staff, ports, and airports**. CSO representatives interviewed in WP6 did not spontaneously mention these health system resources as frequently as they mentioned physical/material resources in adjacent areas, such as the availability of personal protective equipment for CSOs; which is to say, they focused on the **resource vulnerability of CSOs themselves**. This is likely because the characteristics identified in the model fall within the domain of formal health systems accessed by residents, whereas the interviewees worked primarily in adjacent sectors.

The characteristics of populations identified in the vulnerability assessment model under the “physical” category are **pre-existing health conditions**. Interviewees frequently mentioned pre-existing health conditions, but usually did so in connection with **social determinants of health**, such as low socioeconomic status. Again, as most interviewees worked in adjacent service sectors rather than the formal health system, they tended focus on these social determinants rather than pre-existing health conditions themselves.

One gap between the conception of physical vulnerability elucidated in the assessment model and the implicit conception voiced by interviewees is that the latter mentioned a range of **vulnerabilities to physical threats other than disease**, such as gender violence, drug abuse, child malnutrition, etc. Notably, such vulnerabilities can be worsened by aggressive containment measures intended to curb the spread of disease. Recalling that physical vulnerabilities do not begin and end with disease, much less pandemic disease, can help us think past reductive “health vs. economics” framings of the cost-benefit trade-offs in COVID-19 responses.

Social

The factors identified in the assessment model under the “social” category all attach to populations: **education levels, percentage of rural vs. urban residents, percentage of female residents, and percentage of migrant-background residents**. Interviewees spontaneously mentioned all of these characteristics as vulnerabilities, with the exception of rural vs. urban gaps: this is because all interviews were conducted in urban sites. Their accounts generally validated these factors as **social determinants of health**. Furthermore, as mentioned above, when interviewees discussed health and other vulnerabilities themselves, they often did so within the context of social determinants of health.

Interviewees who worked with migrants and ethnic/linguistic minorities (e.g., in Sweden, Wales, Germany, etc.) paid particular attention to social vulnerabilities, namely **structural discrimination** and the **risk of social exclusion**. They described a wide range of dynamics between their target groups and the ethnic/linguistic majority population, ranging from near-total integration to division into “parallel societies”. In the latter cases, interviewees described a spectrum of perceptions of the ethnic/linguistic majority society and national government. As mentioned above, some interviewees testified that their target groups harbour mistrust toward the state and other dominant institutions, even occasionally perceiving the state itself as a threat. Needless to say, this can significantly impact information-seeking behaviour, reducing awareness of and compliance with regulations and recommendations.

A social vulnerability factor frequently discussed by interviewees that is not included in the current assessment model is **social capital**, i.e., the depth and breadth of social networks to which an individual can turn for information and support. Numerous interviewees indicated that their target groups often rely upon informal networks for both information and support, either in addition to or instead of formal networks. Social contact restrictions imposed during the pandemic blocked their access to such networks (or rather, made it entail the legal risk of non-compliance). In addition to disrupting the informal information and support networks upon which vulnerable persons often rely, the outbreak of the pandemic blocked recent migrants or others who had been uprooted from forming social networks in the first place. Especially when combined with the simultaneous restriction of access to governmental services, this loss of informal networks was a significant problem.

Economic

The factors identified in the assessment model under the “social” category that attach to systems are **GDP and income inequality**, whereas those that attach to populations are the **percentage living in poverty and the percentage employed**. Interviewees spontaneously discussed all of these factors, often referring to **economic vulnerability as the “common denominator”** linking together their diverse target groups. The root economic vulnerability mentioned by interviewees was poverty, which can be caused by unemployment, underemployment, and/or precarious employment, compounded by lack of access to adequate social welfare benefits. Poverty can lead in turn to secondary economic vulnerabilities that connect directly to COVID-19 exposure, such as crowded and/or precarious living conditions, dependence on certain types of work (i.e., care work, sex work, service work, factory work, etc.), and the risk of homelessness. It can also lead to physical vulnerabilities that are not directly COVID-19-related, such as addiction and violence in the family. Going back a step in the causal chain, while poverty is complex and multi-causal, it often correlates with other vulnerability factors such as gender, migration status, and minority status. Such interrelations are discussed further in Section 4.1 below.

Informational

The factors identified in the assessment model under the “informational” category all attach to populations: **literacy, digital access, and digital skills**. The CSO interviewees spontaneously discussed all of these factors. Low literacy was identified primarily as a problem among migration-background groups (though a Welsh respondent indicated that GRT groups also often do not send their children to state schools, so literacy may be a problem). Conversely, **digital divides are a near-universal barrier** across many of the target groups with which the interviewees worked. Interviewees in multiple sites made it clear that the sudden shift from multi-modal service provision (i.e., face-to-face, telephone, and digital) to digital-first or digital-only service provision imposed significant burdens on their target groups. It furthermore fell upon CSOs to help their target groups navigate the new digital landscape, adding further to their workloads.

Within public assessments of risk communications campaigns, attention has been paid to issues such as language and culturally appropriate content. This is positive; however, the overall consensus among CSO interviewees was that the content of the messages sent out is far from the only factor determining their impact on behaviour. The **networks and channels along which messages are transmitted** has an equally substantial role. Informational vulnerabilities at any point in a network can have moderating/mediating effects on the capacity of useful information to traverse the network. Several CSO respondents framed their organisations as intervention points capable of translating

governmental risk communication messages into forms their target groups could understand and introducing them into target group networks; however, CSOs themselves sometimes reported having difficulty accessing information from the government in a consistent and/or timely manner. The concept of **networked vulnerability** is discussed further in Section 4.1 below.

One underacknowledged dimension of informational vulnerability that interviewees addressed is that not all residents have the cognitive and/or affective capacity to grasp a pandemic situation and corresponding health-protective behavioural recommendations, and/or to comply with such recommendations. An example here is individuals with developmental disabilities, learning disorders, or severe mental illness. Similarly, even in cases in which health protective recommendations are fully understood, they may well be instantly flagged as irrelevant if they contradict the basic living conditions of the target group. An example here is GRT communities in Wales, many of whom live in crowded mobile housing in which it would be impossible to quarantine apart from infected family members (as was the recommendation). To an extent, **such barriers must be interpreted as "hard limits"**: i.e., as incapable of being fully mitigated through communicative means. This has a clear impact on policymaking.

Another underacknowledged dimension of informational vulnerability that interviewees addressed – both regard to their target groups’ vulnerability and their own – is that **information exchange should be conceived as bidirectional**. Informational vulnerability can stem from a lack of access to useful information, but also can entail a **lack of opportunities to be heard**, i.e., to provide useful information to others. Notably, this vulnerability extends to both residents (i.e., barriers to providing useful feedback to CSOs and GOs) and CSOs themselves (i.e., barriers to providing useful information to residents and feedback to GOs). In several research sites, both types of channels were lacking: for instance, in Germany, potential participants in the intended target site of Berlin reported that they had no direct line to local health policymakers (one reason why the research site was moved), whereas participants in the target site of Mannheim indicated that feedback they provided to local health policymakers went unanswered for months (by which time the issues it referred to were no longer valid). The potential role of CSOs as “bridging organisations” providing opportunities to be heard is discussed further in Section 4.2 below.

3.1.3 Consequences

The vulnerability assessment model identifies consequences in four domains: health, social, economic, and environmental. The indicators used primarily reflect consequences that can be directly felt by individuals within a population, as well as by the society as a whole. CSO representatives testified that their target groups experienced many of the specified health, social, and economic consequences used in the model; only a few interviewees mentioned environmental consequences, and then in a positive light. Details follow.

Health

Health consequences identified in the vulnerability assessment model are **COVID-related death rates, excess deaths, hospital admissions, and ICU admissions**. Notably, CSO interviewees **focused less on COVID-19 than on a range of accompanying harms**, such as psychosocial issues (e.g., anxiety, burnout, confusion, depression, exhaustion, fear, helplessness, isolation/loneliness, self-harm, etc.) and physical harms such as addiction and gender violence. This should not, however, be interpreted as a

lack of concern regarding COVID-19 itself; interviewees simply tended to focus on the types of problems their own organisations address.

Regarding COVID-19 itself, several respondents mentioned that **lower-than-expected initial incidence rates among their target groups** (e.g., the homeless in Greece and GRT communities in Wales). This could cause members of these groups to underestimate the danger of the pandemic and reject recommendations and regulations. In instances in which this trend reversed and serious cases started appearing in a given community, the physical and mental health impacts could be significant. It is important for governmental and non-governmental responders to be prepared to deal with this eventuality with both pharmaceutical and non-pharmaceutical interventions, i.e., **not to let their guard down in the face of early inactivity**. In Wales, for example, infection rates spiked later than anticipated among the GRT community, and accordingly, interest in a vaccine appeared delayed; however, the organisation of mobile vaccination units helped ensure that once members of the community decided they wanted to be vaccinated, they could do so within minimal barriers (see Section 4.2.1).

Social

Social consequences identified in the vulnerability assessment model are **food insecurity, loss of education, and rates of violence**. CSO interviewees confirmed that their various target groups suffered from such consequences. Regarding food insecurity, interviewees confirmed that in order to avert catastrophes for the “most vulnerable” (see above), certain **critical services (such as food banks) must maintain a street-level/face-to-face presence** regardless of the severity of pandemic conditions. This need is discussed in greater detail in Sections 4.1 and 4.2 below.

Regarding loss of education, this does not only impact children (and by extension, their parents): several interviewees who worked in **adult education** (e.g., language teachers for migrants) indicated that the pandemic reduced access to their services, which are critical in their clients’ lives – not only as means of upskilling, but also as vectors for social integration (which is itself a vector for economic opportunity; see Section 4.1 below).

Interviewees furthermore identified a **wide range of other social consequences** of COVID-19. It should be noted that quantitative indicators for some of these consequences may be viable. These include:

- Diffuse, pervasive anxiety and fear
- Discrimination against ethnic minorities and migrants
- Discrimination against those with low socioeconomic status
- Loss of access to institutions and informal support structures
- Loss of human contact and social cohesion
- Loss of trust in institutions and others
- Polarisation and the retreat into “filter bubbles”
- Social exclusion and drop-out, especially among already-marginal groups such as the migrants houseless/homeless, and migrants
- Worsening socioeconomic inequality

While a number of respondents voiced anxieties that the pandemic would result in a lasting loss of social cohesion and trust, others praised spontaneous expressions of social solidarity and volunteerism in their municipalities. Of course, these outcomes are not necessarily mutually exclusive; their potential interrelations would be a promising topic for future research.

Economic

Economic consequences identified in the vulnerability assessment model are **job losses, reduced income, rates of receiving social support, and disruptions to supply chains**. Several interviewees noted that economic consequences such as job and income loss can be particularly disruptive on two fronts. First, they tend to impact those who are already “most vulnerable”: this is discussed under the heading of **threat multipliers** in Section 4.1 below. Second, they can precipitate a wide range of other health, social, and economic consequences, potentially leading to a spiral into precarity, which is much more difficult to climb out of than to fall into. This risk is discussed further under the heading of **cascading effects** in Section 3.2.4 below.

Several interviewees also mentioned social support: on the one hand, some interviewees indicated that clients who needed social support had more difficulty accessing it under pandemic conditions, due both to digital barriers and poor information (e.g., misconceptions of grants as loans); on the other hand, one interviewee mentioned that clients who had not previously needed social support were forced to receive it for the first time, and did not feel justified in doing so. Conversely, interviewees did not dwell on supply chain issues, which is understandable, given their focus on proximate causes of harm to their target groups, as opposed to “backend” whole-of-society harms.

Environmental

Environmental consequences identified in the vulnerability assessment model are **exposure to outdoor air pollution and GHG emissions**. A few interviewees briefly mentioned lower emissions as a positive side-effect of the pandemic, but in general, environmental consequences were hardly discussed relative to health, social, and economic consequences.

3.1.4 Resilience

The vulnerability assessment model defines resilience as a product of the ability to recover and the ability to adapt. Indicators defined in the former category are **spread of economic activity, emergency investment in healthcare, investment in vaccines, healthcare workforce debt by sector, international support, income support, and vaccine financial support**. Indicators defined in the latter category are **[investment in] rebuilding vulnerable industries, digitisation, innovation, and fiscal measures**. CSO interviewees contributed insight into these indicators and other dimensions of resilience via their impact on their own organisations’ abilities to recover and adapt, their target groups’ abilities to recover and adapt, and their societies’ abilities to recover and adapt.

Resilience of CSOs

With regard to the resilience of CSOs, many respondents indicated that the outbreak of the pandemic posed significant challenges, including:

- Anxiety, confusion, and fear among staff and target groups
- Restrictions on what services could be offered face-to-face, and the consequent need to digitalise many types of services
- Greater demand for material and psychosocial support, including types of support outside organisations’ official
- Demand for new types of practical assistance, e.g., in accessing digitalised governmental services
- Shortages of PPE, etc.

- Unclear governmental risk communication, leading to a lack of clarity regarding regulations and recommendations
- Frustration with the cost-benefit trade-offs inherent in regulations
- Overwork and burnout

A number of CSO respondents indicated that **emergency investment** by the state (i.e., funding) was an important aid in adapting to and recovering from these challenges. The interviews also made it clear that CSOs that had already managed to at least partially **digitalise their services** adapted to remote and hybrid service provision more quickly; those that lacked basic digital infrastructure, such as work laptops, faced a longer adaptive cycle. Other factors mentioned by interviewees align with several of the **success criteria identified in D6.1** (pp. 95-96):

- Organization: CSOs with well-organised workflows and internal and external communication channels were generally better at adapting – though some interviewees also alluded to organisation to the point of over-optimisation, which could impair adaptivity.
- Cooperation: active cooperation between CSOs and governmental organisations was critical in helping both to adapt and recover.
- Face-to-face action: CSOs that were permitted to maintain some kind of face-to-face interaction with their target groups were better able to retain their operational effectiveness, while those that were tightly restricted often reported deep frustration.

Scale may be another factor: interviewees representing large CSOs often described faster adaptive cycles than those representing small CSOs. This is plausible, given the diverse resources upon which the former can draw.

Finally, many CSO respondents indicated that the experience of facing pandemic-related challenges has led them to **meaningfully improve aspects of their operations**. Nearly all reported increased digital competencies and at least some efficiency gains via switching some services to a digital or hybrid mode; many reported new feelings of confidence and stronger bonds among staff; and some reported more volunteer engagement and stronger bonds with their target groups and/or residents in general. However, a number of respondents also testified to lingering negative effects, such as exhaustion, continuing overwork, difficult adapting to digital or hybrid modes of interaction, loss of cohesion with staff, and loss of contact with ex-clients. Notably, the apparent positive and negative impacts of the pandemic on CSOs' resilience were not necessarily framed as mutually exclusive.

Resilience of vulnerable groups

With regard to the resilience of vulnerable groups, interviewees stated that **uninterrupted access** to at least some level of street-level/face-to-face state and CSO support was often decisive in mitigating critical consequences such as food insecurity, houselessness, and self-harm. This is especially the case insofar “the most vulnerable” are at **risk of falling through the safety net**: once contact is lost with them, it can be extraordinarily difficult to re-establish. Interviewees furthermore stressed the importance of **social capital**, making it clear that vulnerable groups often rely upon informal support networks to mitigate health, social, and economic vulnerabilities and consequences. For “the most vulnerable”, the **simultaneous loss of access to both formal services and informal support networks** represented a perfect storm.

Resilience of society as a whole

Interviewees expressed mixed opinions about the resilience of their municipalities, countries, and European society as a whole as they enter a new, currently less severe phase of the pandemic. With regard to the indicators included in the vulnerability assessment model, interviewees recognised the critical importance of **investments** in healthcare, vaccines, income support, rebuilding vulnerable industries, digitisation, innovation, and other social domains. Specifically, they supported investments in agile health and social services capable of meeting vulnerable groups where they are (e.g., mobile vaccination teams), investments in cultural competence (e.g., bilingual/bicultural health guides), and investments in civil society capacity-building. A number of respondents also indicated that an important effect of the pandemic that could enhance social resilience is an increase in volunteerism, mutual support, and other **displays of solidarity**, including within vulnerable communities. Adding an indicator or set of indicators to the vulnerability assessment model on social cohesion and/or volunteer engagement could be considered.

3.2 CSO findings in the context of the social-ecological systems framework (SESF)

COVINFORM D3.1 identifies the Social-Ecological System Framework (SESF) as a “set of limited and basic factors that can be used for the systems description” across COVINFORM research sites and case studies, arguing that “it is impossible to understand the resources of a certain community [... or] describe the way people interact with those resources without describing the proprietary regime, the social norms, and the way people value and perceive the environment [and other factors]” (p. 9). D3.4 further adapts the SESF to the analysis of COVID-19 impacts, drawing on an application by Ling et al. (2021), as well as Yadav et al.’s (2020) “syndemic” framework. The following sections map the CSO interview findings along the SESF domains of governance systems, resource systems and units, actor systems, and action situations.

3.2.1 Governance systems

McGinnis & Ostrom (2014) describe governance systems as comprised of **governmental and non-governmental organisations, network structures, property-rights systems, operational-choice rules, collective-choice rules, constitutional-choice rules, and monitoring and sanctioning rules**. Within the context of COVID-19, Ling et al. (2021) identify top-down leadership, restrictions and norms, an emergency response plan, and testing policies as indicators of governance (p. 3).

During the WP6 interviews, CSO representatives universally indicated that governmental organisations and non-governmental organisations both played important roles in local COVID-19 responses. Their assessments of GO performance and impact were highly varied, whereas their assessments of NGO performance and impact were mostly positive. Interviewees moreover often discussed the interaction between GOs and NGOs at length. They described **a wide range of GO/NGO interactions**, which can be prospectively typified as:

- Cooperative: GOs and NGOs take actions together.
 - Deliberative: GOs and NGOs co-design actions.
 - Delegative: GOs delegate certain tasks to NGOs.
- Synergistic: GOs and NGOs take different types of actions in a coordinated way.
- Complementary: GOs and NGOs take different types of actions, which complement one another, but are not necessarily coordinated.

- Parallel: GOs and NGOs take different types of actions, that are not necessarily complementary, but do not impede one another.
- Contradictory: GOs and NGOs take actions that contradict or impede one another.
- Antagonistic: GOs and NGOs actively seek to block or undermine one another's actions and approaches.

As already discovered during the desk research conducted in D6.1, cooperative, synergistic, and/or complementary actions by GOs and NGOs/CSOs have been associated with positive outcomes and have been widely praised as good practices (pp. 95-96). Interviewees echoed this finding; in particular, they praised instances in which GOs maintained **clear, two-way communication** with CSOs. Likewise, many of the interviewees' more critical comments regarded unclear, inconsistent, and/or unidirectional communication by GOs to CSOs (as well as to the general population; see also Section 3.1.2).

Interviewees also consistently discussed **network structures**, both among stakeholders and among residents. With regard to stakeholders, interviewees often mentioned that they were tightly networked with other CSOs in both their own sectors and other sectors, sometimes praising heightened cooperation with other stakeholders as a positive impact of the pandemic. Network structures among residents are analysed below under "Actor systems".

While few interviewees explicitly discussed **property-rights systems**, some did argue that socioeconomic inequality caused and/or aggravated certain vulnerabilities among their target groups. Moreover, as mentioned in Section 3.1.1, some interviewees indicated that some members of their target group viewed the state and other dominant institutions as threats. With regard to **rule systems**, interviewees primarily focused on the concrete impact of specific COVID-19 regulations, such as social contact restrictions, on their target groups' well-being, often stressing how regulations designed to insulate against COVID-19 infection inadvertently exacerbated other physical/health, economic, social, and informational vulnerabilities.

3.2.2 Resource systems and units

According to McGinnis & Ostrom (2014), resource systems are defined by variables such as **sector** (e.g., water, forests, pasture, fish), **clarity of system boundaries**, **size of resource system**, **productivity of system**, **equilibrium properties**, and **predictability of system dynamics**, whereas resource units are defined by variables such as **resource unit mobility**, **growth/replacement rate**, **interaction between resource units**, etc. Within the context of COVID-19, Ling et al. (2021) identify the indicators of high facility adequacy, high technology availability, and high economic performance (p. 3).

CSO interviewees discussed numerous aspects of **health system** resources, both COVID-19-related (e.g., ICUs, testing, vaccines) and non-COVID-19-related (e.g., general practitioner access, maternity services, etc.). They also made it very clear that while health systems were critical, **other resource systems** must also be taken into account in pandemic planning and response. Resource systems that were discussed by interviewees include:

- Business and commercial systems
- Child and youth service systems
- Cultural ecosystems (e.g., art and music spaces, community centres, sports facilities, etc.)
- Education systems
- Food systems

- Housing systems
- Immigration systems
- Labour systems
- Legislative, legal, law enforcement, and justice systems
- Long-term care systems
- Social welfare systems
- Women’s service systems
- Etc.

Issues that arose across these systems included ability to digitalise services, ability to implement hygiene measures, access to PPE, contact with target groups, funding shortages, human resource availability and protections, and positive and negative relationships with local authorities and GOs. Given sufficient data, some of these issues could be effectively analysed using SESF constructs like equilibrium properties, predictability of system dynamics, resource unit mobility, etc. **Predictability** in particular was an aspect raised by numerous interviewees: especially during the initial phase of the pandemic, both CSOs and their target groups suffered from uncertainty as to what impacts it might eventually have on them and society as a whole.

Especially vexing was the emergence of “**unknown unknowns**”. An example from Austria: a CSO conducting language lessons switched from face-to-face groups of 10 students to WhatsApp groups of two students, enabling the service to continue, but imposing a considerable workload on the teacher and instigating a clash with monitoring and sanctioning rules. Specifically, the standard method of administrative verification, signature rosters, became untenable, thus requiring the teacher to figure out ad hoc means of verifying that the classes had been taught and students had attended. This clash between dimensions of education system digitalisation would have been very difficult to predict.

3.2.3 Actor systems

McGinnis & Ostrom (2014) describe actor systems as defined by the **number of relevant actors and their socioeconomic attributes, histories/past experiences, and locations**; as well as **leadership and entrepreneurship, norms, knowledge, and the importance of different resources** (i.e., **resource dependence**). In the COVID-19 context, Ling et al. (2021) suggest the indicators of low population density, high social homogeneity, high trust in government and trust in others, sufficient management knowledge and experience, and effective migration management (p. 3).

In the WP6 interviews, CSO representatives touched upon all of these factors. The role of **socioeconomic attributes, past experiences, norms, and knowledge** are discussed above in Section 3.1. Regarding **leadership**, several interviewees praised the efforts of colleagues or other responders who went “above and beyond”, working long hours and taking on responsibilities outside their normal mandates; conversely, a few interviewees disparaged individuals who they perceived as retreating from responsibility.

The CSO interviews were particularly illuminating when it came to **resource dependence**. Interviewees made clear the critical role that **informal support structures** -- i.e., immediate and extended social networks, neighbours, etc. -- play in the lives of many of their target groups. It is moreover possible that reliance on informal support networks may go hand-in-hand with reduced use of formal services; a consequence of this is that it is difficult for stakeholders to estimate the vulnerabilities of the community or the types and extent of services that may be needed during a crisis. An unintended and unanticipated, yet catastrophic impact of response measures in some sites appears to have been the

simultaneous retrenchment of formal governmental services (especially face-to-face services) and imposition of social contact restrictions, which curtailed access to both CSOs and informal networks. Interviewees furthermore suggested that particular care must be taken when working with vulnerable individuals who relied primarily upon informal as opposed to formal networks to provide support and services, as it takes time and effort to 'onboard' such individuals into formal support systems -- even under normal conditions, in which face-to-face access is not restricted. Such individuals may also not have previously characterised themselves as vulnerable, may reject this characterisation, and may be reluctant to accept formal support.

3.2.4 Action situations (interactions and outcomes)

McGinnis & Ostrom (2014) define “action situations” as complex interactions in which “actors in positions make choices among available options in light of information about the likely actions of other participants and the benefits and costs of potential outcomes”. Relevant actions cited by McGinnis & Ostrom include **resource use, information sharing, deliberation processes, conflicts, investment activities, lobbying activities, self-organising activities, networking activities, monitoring activities, and evaluative activities**. Ling et al. (2021) draw on quantitative indices to represent a range of COVID-19-related interactions: e.g., the Stringency Index, Health and Containment Index, and Economic Support Index (p. 3). The outcomes of chains of such actions can be assessed using **social performance measures** and **ecological performance measures**.

CSO interviewees discussed all of the above types of actions. They furthermore validated the argument, made in D3.1, that the outcomes of disasters in socio-ecological systems tend to cascade across both domains (e.g., health, social, economic, informational) and scales (e.g., global, national, regional, municipal, neighbourhood, familial, individual) (National Research Council 2006). Pescaroli & Alexander (2016) define “**cascading effects**” as “the dynamics present in disasters, in which the impact of a physical event or the development of an initial technological or human failure generates a sequence of events in human subsystems that result in physical, social or economic disruption” (pp. 64-65). They go on to define “**cascading disasters**” as:

“...extreme events, in which cascading effects increase in progression over time and generate unexpected secondary events of strong impact. These tend to be at least as serious as the original event, and to contribute significantly to the overall duration of the disaster’s effects. These subsequent and unanticipated crises can be exacerbated by the failure of physical structures, and the social functions that depend on them, including critical facilities, or by the inadequacy of disaster mitigation strategies, such as evacuation procedures, land use planning and emergency management strategies. Cascading disasters tend to highlight unresolved vulnerabilities in human society” (p. 65).

Given the unprecedented death toll of COVID-19, it is impossible to assess from a global perspective whether its unexpected secondary effects have been “as serious” as the disease itself. CSO interviewees made it clear, however, that from the perspective of their target groups’ everyday lives, the pandemic’s economic and social effects could be very serious indeed. In certain cases, vulnerable groups prioritised maintaining their perceived economic and social well-being over avoiding COVID-19, placing them in conflict with governmental regulations that prioritised reducing infection rates. Such conflicts can be assessed as cascading effects.

The interviewees furthermore suggest that **cascading informational and emotional effects** must also be taken into account. When mediated by complex group dynamics, these can lead to perverse outcomes. In Wales, for instance, information on the disproportionate impact of COVID-19 on BAME residents provoked fears on the part of white residents that the interests of BAME residents would be prioritised. This fanned already-existing racial resentment, which some CSO respondents indicated resulted in an increase in racist abuse in public and online. Ironically, then, the public framing of BAME residents as physically and economically vulnerable appears to have worked to increase their social vulnerability.

Drawing on tools such as the syndemic framework (Yadav et al. 2021) or the CHASMS model (Cascading Hazards to disAsters that are Socially constructed eMerging out of Social Vulnerability; Thomas et al. 2020) to further analyse specific action situations such as this could help pandemic planners anticipate potential complex interactions across domains, if not necessarily to predict them.

4 Lessons learnt

4.1 Multidimensionality within vulnerability assessment

As emphasised in D2.3 *Technical report*, the COVINFORM vulnerability assessment model was designed to capture the multidimensional vulnerability of European societies. Multidimensionality is an established concept in research on the vulnerability of societies, groups, and individuals alike. For instance, in order to measure the vulnerability of societies, Assa & Meddeb (2021) develop a Multidimensional Vulnerability Index (MVI) comprising eleven indicators across the four dimensions of economic vulnerability, financial vulnerability, environmental vulnerability, and geographic vulnerability. Analysis of secondary data shows that Small Island Developing States could benefit from using the MVI rather than just gross national income to evaluate eligibility for concessional sustainable development financing (p. 13). With regard to the vulnerability of groups, Moro et al. (2021) develop a composite index of multidimensional vulnerability featuring three dimensions: empowerment, civic and social engagement, and employability. Analysis of secondary data on youth revealed significant differences in all three dimensions across European countries, as well as across types of welfare states. Finally, in order to measure the vulnerability of individuals, Mahapatra et al. (2018) develop a composite index of multidimensional vulnerability comprising 16 indicators across the four dimensions of personal attributes, financial security, social protection, and social network. In a survey of female sex workers (FSWs) in India, Mahapatra et al. found that multidimensionally vulnerable FSWs were more likely than less-vulnerable FSWs to report negative health behaviours and to be at increased HIV risk (pp. 7-9).

The interviews conducted with CSO representatives in WP6 confirm that the domains and many of the indicators incorporated in the COVINFORM assessment model are useful in explaining the multidimensional vulnerability of individuals as well as societies. Specifically, interviewees framed COVID-19 as both a direct health threat and a multiplier capable of exacerbating numerous physical/health, social, economic, and informational threats and vulnerabilities. They furthermore described how vulnerabilities in these four domains exacerbate one another, disproportionately impacting society's "most vulnerable" – as well as front-line workers themselves. Finally, they made it clear that both vulnerabilities and resilience factors extended across social networks, and accordingly, that social networks mediated the consequences of both COVID-19 and governmental response

measures. It is important to note here that a multidimensional analysis of vulnerability is not the same as an intersectional analysis of vulnerability: the relationship between this analysis and the COVINFORM intersectional framework is addressed in the Conclusion.

4.1.1 CSO and target group framings of COVID-19

The CSO interviewees made it clear that from the perspective of health and social service providers, COVID-19 acted as a **multidimensional threat multiplier**. Exploring climate change in a human security context, Huntjens & Nachbar (2015) define a threat multiplier as an external event that will “exacerbate existing socioeconomic stress factors in societies with high exposure, high levels of poverty, and little institutional capacity to mitigate or adapt” (p. 9). Within a study of childhood health disparities in St. Louis (United States), Sprague et al. (2022), frame both the COVID-19 pandemic and individual sickness with COVID-19 as multipliers of social determinants associated with negative health outcomes (p. 209). They find that children who suffered extremely negative health outcomes during the pandemic were more likely to be Black and to have guardians who were not married (guardian education level, income, and employment status did not show statistically significant differences) (p. 212). Drawing on a preponderance of evidence on racial childhood health disparities in the United States, Sprague et al. argue that COVID-19 exacerbated these disparities; they furthermore hypothesise that stressed single-parent households may have had fewer resources with which to mitigate negative health effects on their children (pp. 212-213).

CSO interviewees echo the finding that COVID-19 had multiplicative impacts on those that already face significant threats: it **exacerbated harms that disproportionately impact the vulnerable, and sometimes pushed the “near-vulnerable” into a state of precarity** from which it could be difficult to escape. Interviewees provided examples of such multiplicative impacts in the physical/health, social, economic, and information domains. They furthermore suggested that these impacts cross domains: economic impacts of COVID-19 can exacerbate social vulnerabilities, etc. The aggregate impact of these impacts can lead to a state of extreme material deprivation and psychological distress (described by multiple interviewees as “catastrophic”); in the worst cases, it can lead to self-harming behaviours. These multidimensional interactions are described in Section 4.1.2 below.

Erni and Striphas’ (2021) introduction to a special issue of the journal *Cultural Studies* offers a theory-driven perspective on such phenomena. Summarising other traumatic events of 2020-2021 – climate-change-induced fires worldwide, police killings of Black people in the United States, state violence and authoritarianism in Brazil, China, India, and elsewhere – they argue that social and cultural scientists should “recognize the multiplicity of the COVID-19 pandemic – that is, to refuse to accept it as a public health crisis primarily, as though it were somehow separable from these highly charged events; or, in a different vein, to reject the idea that these events were merely the backdrop against which COVID unfolded [...] alongside a biomedical crisis lies the multifarious and disorienting discourses that form a wild ‘**epidemic of signification**’” (pp. 212-213). Citing a list of outlandish COVID-19 conspiracy theories and myths, Erni and Striphas specify the “infodemic” as an expression of this broader “epidemic of signification” (pp. 213-214). They furthermore note that not only COVID-19 impacts and policies, but also COVID-19 discourses and sense-making strategies have often been articulated on a sub-national level, mediated by local cultures and socioeconomic disparities. At worst, for the socioeconomically precarious, the intersection of physical, social, economic, and informational vulnerabilities with broader disruptions to sense-making strategies can amount to a kind of “**slow death** [... the] constant, numbing attenuation of life” (p. 226; cf. Berland 2007).

The **multiplicative impacts of COVID-19 in and across the information domain** warrant specific attention. As mentioned in Section 3.1.1, the threats most commonly named by CSO interviewees were informational in nature (e.g., misinformation and disinformation), and/or impacted vulnerable groups' access to useful, high-quality information (e.g., social exclusion). CSO interviewees also make it clear that informational discrepancies between mainstream social institutions and certain vulnerable groups extend beyond COVID-19: the former and the latter often understand and assess threats, vulnerabilities, and consequences in different ways. Governments and other dominant institutions tend to prioritise physical/health threats and vulnerabilities; accordingly, initial COVID-19 responses demanded that populations accept negative economic and social consequences as a cost for mitigating physical/health consequences. In a number of situations described by CSO interviewees, vulnerable groups tended to prioritise economic and social vulnerabilities.

A cynical view on this is that vulnerable groups may disregard health threats because they are desensitised to “**everyday death**’ (the mirror image of everyday life, in which adverse conditions result in death and dying becoming normalised)” (Erni and Striphos 2021, p. 226; cf. Pezzullo and Depoe 2010). A more empowering view is that by guarding against economic and social threats, vulnerable individuals were also protecting their own physical health: they were undoubtedly aware (if not necessarily in a formalised way) that suffering socioeconomic setbacks could put their health, and the health of their loved ones, at risk. From their perspective, **socioeconomic resilience is health resilience**. Framing pandemics as multidimensional threat multipliers can disrupt reductive and potentially discriminatory “health vs. economics” discourse on response measures and their reception in different social groups.

4.1.2 CSO and target group framings of vulnerability

As already noted in COVINFORM D6.3, CSO interviewees **framed threats, vulnerability, consequences, and resilience in inherently multidimensional terms**:

1. They observed that vulnerability factors often co-occur and overlap, causing and/or aggravating one another.
2. They argued that the societal conditions that perpetuate vulnerability were also structurally interlinked (pp. 69-70).

In a minority of cases, interviewees reported having worked with formal, **unidimensional definitions of vulnerability**: for instance, a Belgian respondent indicated that his organisation defined vulnerable persons based on the indicator of receiving “increased compensation” (*verhoogde tegemoetkoming*). In this case, the pandemic quickly made it evident that this unidimensional indicator did not capture the multidimensional vulnerabilities of the various target groups in need of the organisation's support. Some interviewees expressed criticism toward unidimensional or shallow governmental definitions of vulnerability, and/or toward governmental policy positions that implied a shallow definition (an example being the failure of GOs to recognise gendered unpaid labour in Wales).

As mentioned in the above section, several interviewees furthermore stated explicitly that their target groups’ **emic conceptualisations of threats and vulnerability often diverge from official definitions** used by governmental and civil society organisations – though this is difficult to judge in cases in which organisations have not adopted an explicit definition. A takeaway here is that attention must be paid not only to explicit definitions of concepts like vulnerability, but also the ways these concepts are operationalised in a policy context. The “quasi-definitions” implicit in operationalisation should be

brought into the light of day and critiqued; crisis response policymaking going forward should be based on transparent definitions and assessments (cf. the Open Policy Analysis framework).

4.1.3 Cascading effects across domains of vulnerability

Based on examples and anecdotes conveyed by interviewees, it is possible to illustrate the multidimensional aspect of vulnerability: being affected by one vulnerability often makes an individual more susceptible to other vulnerabilities, often due to structural inequality.

- **Physical vulnerabilities** and their **health consequences** can compound social, economic, and informational vulnerabilities, as well as other physical vulnerabilities. An example is chronic disease, which can negatively impact social participation, employment opportunities, and access to high-quality information (e.g., in the case of sensory impairment), as well as risk of a severe progression of COVID-19.
- **Social vulnerabilities and consequences** can compound physical/health, economic, and informational vulnerabilities, as well as other social vulnerabilities. An example is unresolved residency status, which can negatively impact physical safety and security, employment opportunities, and access to high-quality information (e.g., in the case of illiteracy and/or language barriers), as well as social inclusion.
- **Economic vulnerabilities and consequences** can compound physical/health, social, and informational vulnerabilities, as well as other economic vulnerabilities. An example is intergenerational poverty, which can negatively impact physical and psychological health, social capital, and access to high-quality information (e.g., in the case of digital divides), as well as employment opportunities.
- **Informational vulnerabilities** can compound physical/health, social, and economic vulnerabilities, as well as other informational vulnerabilities. An example is illiteracy, which can impact risk of catching COVID-19 (due to non-compliance with recommendations), social inclusion, and employment opportunities, as well as digital access.

It is furthermore clear based on the interviews that it sometimes is valid to use **concepts such as "the most vulnerable"** in crisis planning. A case in point mentioned by one interviewee is that of ethnic minority sex workers with irregular residency. Especially in such cases, the concept of multidimensional vulnerability alone is inadequate explain to the complexity of the subject's experiences, and should be supplemented with a model of intersectionality. The difference between multidimensionality and intersectionality is discussed further in the Conclusion.

4.1.4 Multidimensional vulnerability among CSO staff

Furthermore, according to the CSO interviewees, their colleagues and other **front-line workers often exhibited multidimensional vulnerability**. First, they were vulnerable by default due to their increased risk of exposure to the virus itself, as well as due to the psychological and/or physical stress that is inherent in many types of care and service work. However, in many sites, they were also more likely than average to belong to vulnerable groups: i.e., to be female, ethnic minority, etc. Finally, interviewees confirmed that labour market conditions in many countries are highly unfavourable to many types of front-line workers, adding economic insufficiency and/or precarity to the mix.

In light of this, the **diversity of reactions to the pandemic among front-line workers** is understandable. Some CSO interviewees, for instance, criticised certain responders for "retracting behind their computers", which made it difficult for vulnerable groups to get help. However, for front-line workers

or even bureaucrats under stress, a certain degree of withdrawal must be seen as a legitimate impulse toward self-protection, to be mitigated through appropriate institutional support – not as a personal moral failing. Conversely, interviewees praised certain responders for going “above and beyond” by working long hours and/or taking on duties outside their normal mandate, such as informal/de facto psychosocial support roles. In group-work contexts, this could even involve mediating interpersonal conflicts, including conflicts that arose around political polarisation on COVID-19 (here, it is interesting to note that numerous interviewees criticised their governments' policies for aggravating social division; this includes interviewees who were otherwise broadly supportive of strict measures; we can speculate that one reason for this is that it fell on them to help mitigate the ground-level consequences). While it is important to recognise extraordinary efforts, we should do so without sliding into an individualistic and meritocratic vision of care work or governance (which is already implicit in mass-media representations like medical and legal dramas, respectively).

4.1.5 Multidimensional vulnerability in social networks

Finally, the interviews made it clear that **vulnerability is not a subjective, but rather a relational and networked property**: i.e., vulnerabilities in one node in a network impact other nodes, including across geographical boundaries. An example of networked health vulnerability mentioned by an interviewee is the stress felt by parents of children with chronic mental and/or physical illnesses. An example of networked economic vulnerability is the pressure felt by economically precarious migrants to contribute remittances to even more precarious family members in their countries of origin. Among all domains of vulnerability, network effects appear very clearly in the information domain: many CSO respondents assert that vulnerable groups are more likely to take seriously information passed along their own social networks than information communicated by official sources.

Guidance for risk communicators should take clear account of such effects. As mentioned in D6.2 and above, several interviewees indicated that their organisations either contributed to risk communication efforts in sync with governmental organisations, or helped translate and contextualise governmental messages and pass them along to their clients. We can assume that insofar as CSOs enjoy their clients' trust, these clients may have been more likely to pass messages communicated by CSOs along their networks than messages communicated by the government. This would give CSO efforts a multiplicative rather than merely additive effect. Such questions can be further investigated during the remainder of the project.

The concept of networked vulnerability intersects with the critical importance of informal support networks – **social capital** – in the lives of many CSO target groups (discussed in Sections 3.1.2 and 3.2.3 above). One research question to explore is whether COVID-19 multiplied the vulnerabilities within social networks, while simultaneously reducing resource affordances within these networks: more generally speaking, is it possible that in a crisis, certain network structures can multiply negative rather than positive effects? A hypothetical example: single parents are often more dependent upon elders in their families for childcare (networked resource), but also bear greater elder care responsibilities, as well as normal anxieties about their well-being (networked vulnerabilities). During a strict lockdown, single parents may be unable to draw on this networked resource, but may well be impacted by these networked vulnerabilities, as well as by the second-order effect of anxiety at not being able to effectively undertake some elder care duties at a distance. This question can be investigated during the remainder of the project.

4.2 CSOs, adaptive governance, and the elements of community

COVINFORM D6.2 proposes that the social-ecological systems framework is compatible with the elements of community identified by MacQueen et al. (2001): locus, sharing, social ties, diversity, and joint action. Specifically, it argues that “the SESF variables and the definitional elements of community are designed to serve different, and complementary, purposes: the former describe discrete objective properties of systems, whereas the latter describe holistic subjective experiences and interpretations of systems” – i.e., the former describe systems as viewed from outside, while the latter describe them as experienced from within (p. 28).

D6.2 furthermore hypothesises that the “extent to which localised socio-ecological (sub-)systems are experienced and interpreted as ‘communities’ correlates with their resilience to both negative impacts of COVID-19 and negative trade-offs of COVID-19 policy responses”. As interviews with residents of the target sites have not yet been conducted (as of June 2022), the WP6 analysis to date has not focused on the extent to which the sites are experienced as “communities”. Rather, the analysis has focused on CSO representatives’ perceptions of their municipalities and target groups, approaches toward vulnerability, and assessment of impacts and responses, with particular attention paid to CSOs’ own responses and interaction with GOs and one another.

This analysis yielded an alternative insight connecting theories of community to socio-ecological systems theory: namely, that CSOs can act as **bridging organisations** that leverage the elements of community to enhance the effectiveness of multilevel governance. Writing on human security, Huntjens & Nachbar (2015) suggest that proactively adopting a **multilevel governance** model – that is, integrating a range of stakeholders from civil society and the private sector into governance processes – could assist efforts to reduce the effects of threat multipliers such as climate change (pp. 9-10). Similarly, writing on natural resource management, Folke et al. (2005) advocate **adaptive governance**, or multilevel governance that is particularly attuned to “social sources of resilience”, namely, social capital, social learning, and social memory (p. 444). They particularly emphasise “the role of bridging organizations that have the ability to strengthen social capital and the capacity for effective governance of multilevel organizations” (p. 445). A bridging organisation is one that has developed the capacity to bridge actors within a locality, as well as to bridge actor systems with governance systems on local and supra-local levels.

Folke et al. note that NGOs/CSOs can act as effective bridging organisations in the context of natural resource management, especially when they invest in connecting with local stakeholders, building up trust and social capital, promoting mutual understanding and social learning, and identifying shared objectives and action pathways (p. 461-462). The interviews conducted in WP6 suggest that CSOs have also acted as bridging organisations in the context of COVID-19 responses. Based on the interviewees’ descriptions of successful and unsuccessful responses on a community level, MacQueen et al.’s (2001) elements of community can be used to analyse the characteristics of effective bridging organisations:

- They are **locally situated**, i.e., present on the street/face-to-face;
- They **share trust** with the target group, and potentially also **share attributes** (e.g., culture and language, etc.);
- They have **social ties** to the target group, can shore up the target group’s social capital, and can act as a vector by which to introduce useful information and recommendations into target group social networks;
- They understand and accept **diversity**, i.e., between the majority society and the target group;

- They are capable of well-coordinate **joint action** with GOs and other CSOs.

Within the social-ecological systems framework, we can envision CSOs as bridges between actor systems and governance systems, and the elements of community as cross-cutting levers that CSOs can utilise to influence feedback between domains:

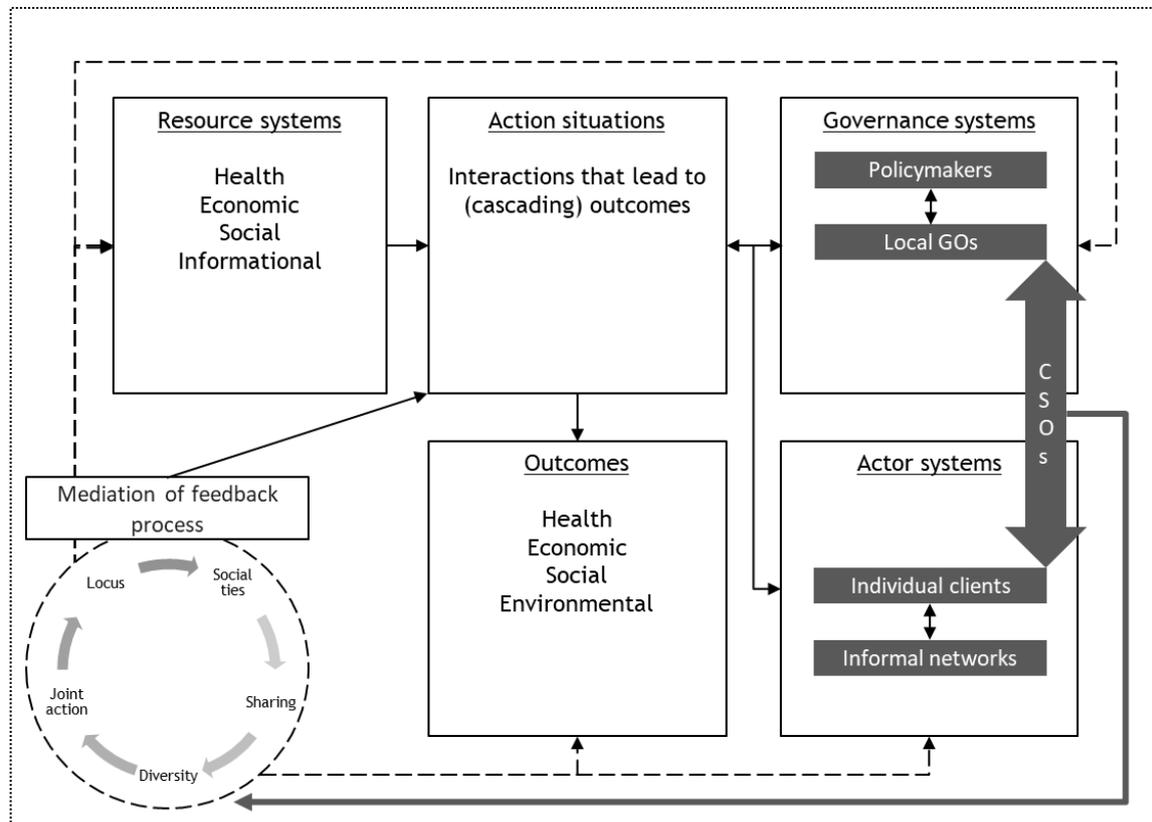


Figure 1. CSOs as bridging organisations within the SESF (McGinnis & Ostrom 2014)

This tentative model, based on CSO interview findings, must be revised in light of data collected during the remainder of the project; however, it could act as a point of connection between the work done in WP6 and that done in WP3 and 7 in particular. On the right-hand side, CSOs directly bridge local GOs with individual clients: they do so both by facilitating clients' access to (digitalised) governmental services, and, ideally, communicating client realities and needs to GOs via clear bi-directional mechanisms. Local GOs can pass insights gathered via CSOs along to policymakers; in parallel, members of vulnerable groups can pass information obtained via CSOs along their informal networks. The less-direct positive impacts of CSOs on entire socio-ecological systems are envisioned in the lower left corner: by reinforcing a local presence and gathering local knowledge, sharing trust and culture, building up social ties and capital, reconciling diverse viewpoints, and catalysing joint action, CSOs can enhance social resilience in ways that feed back across all domains of a system.

The following concrete “action situations”, identified by partners as particularly surprising, interesting, or useful, exemplify the ways each element of community can be leveraged to achieve such outcomes.

4.2.1 Locus

CSO interviewees made it abundantly clear that certain vulnerable groups can only be realistically expected to access certain services when they are available on a street-level/face-to-face basis. Nearly all CSOs represented conducted face-to-face activities; prior to the pandemic, the majority of activities

were conducted face-to-face, while during the pandemic, efforts were often made to restore face-to-face access as quickly as possible.

Some interviewees took particular pride in the fact that even after many governmental services had gone online, their CSOs or others were able to maintain face-to-face access; others praised mobile actions that aimed to meet vulnerable persons where they were, rather than expecting them to come to a fixed site. We find an example of the latter in Wales. The interviewee describes how GOs and CSOs cooperated on a rapid mobile response to sudden demand for vaccinations among Gypsy, Roma, Traveller communities:

“We were quite lucky, but it didn't seem to spread very well very much at all on the sites. And we had a couple of people who had it that really weren't affected that much. And then it came to a gentleman who passed away on the site through COVID. We had a couple that had been taken into hospital. And then we had the gentleman who passed away and I think that was when the alarm bells really rang. Because we have quite a few community members who were of similar age if not older, but with very similar health conditions. And I think they were just like, ‘oh, who, you know, this, if we catch it and end up in the same sort of situation’. And the fact that the Gypsy and traveller community because of their lifestyle actually have 20 years less life expectancy than someone in settled community, a lot to do with the fact that they don't go and see the doctor's, men very often won't go if they've got a problem or a worry or a concern. So lots of lots of issues, sort of with that side of thing. And then we had the gypsies and travellers sort of few of them ring me up that day; [name interviewee], I need my vaccine, where can I get a vaccine?’ [...] So we rang up the NHS – like, our COVID line, spoke to a lady and within about 10 minutes, I had another lady ring me back, I called back and we were like ‘Wait, what are we going to do?’ And I was like; what she said ‘How many people do you think would want to be vaccinated?’ I said ‘at the moment, I said, I've got about 15 people that have spoken to me they want their vaccinations. Should we do a bespoke clinic for the Pembrokeshire Gypsy community?’. And within a week, we had 100 people wanting to do a vaccination. We had the cancer van come down from the Llanelli area set up in an airfield near us, which was with the nurses and the vaccines. As I said, I think that day we vaccinated 90-odd community members.”

In addition to willingness to meet community members where they were, the interviewee's local knowledge and connections proved critical in this case. The interviewee works closely with members of GRT communities, and has formed bonds of trust with them, to the extent that they feel comfortable calling her personal number after hours. Without this connection point, authorities may have remained unaware of the deaths of valued community members, and unable to act on the sudden window of opportunity to provide vaccinations.

4.2.2 Sharing

CSO interviewees emphasised the importance of gaining target groups' trust, often through not only effective service provision, but also shared experiences and mutual understanding. During the pandemic, it is particularly important to leverage CSOs' bonds of trust when approaching vulnerable groups that have experienced social exclusion, as they may explicitly distrust the government and other dominant social institutions.

Trust also acted as a basis for addressing the emotional impacts of the pandemic. We find an example of this in Austria. An interviewee working as an adult language educator described how German basic courses were changed from a face-to-face format to virtual courses via WhatsApp during the lockdowns. Teaching via WhatsApp was difficult; for example, the small screen made it difficult to read out worksheets. However, it also offered some new opportunities to form bonds:

“So, the learning progress was also corresponding, so that was then, I think there was a lot of social work involved. We actually, I have had insights, that is in the living rooms and in the kitchens or in the bathrooms, where they sit and then someone traipses through the picture again, so I think it was important for the women that they don't become lonely, that we are there, you know. That we simply move. The accusative and the dative were put on the back burner, I say now [laughter]. Then it was more about, hey look, the sun is shining. What are you doing in the afternoon? Well, there was really more social work involved than when we are perhaps even present. But that was important. It was really important that we didn't lose contact and that we were there, so to speak”.

The interviewee furthermore noted that during her conversations with her clients, they revealed concerns and needs that may have otherwise gone unnoticed: for instance, anxieties about the situations in their countries of origin. In an ideal situation, such knowledge could be communicated up the chain to policymakers.

4.2.3 Social ties

As mentioned in Sections 3.1.2, 3.2.3, and 4.1.5, the target groups served by the CSO representatives interviewed often depend on social networks for both support and information, either in addition to formal institutions or instead of them. Especially in the case of vulnerable groups that experience social discrimination and exclusion, these social networks may even exist in parallel to – rather than sharing bonds with – dominant networks and institutions. It may be nearly impossible for GOs to leverage such social networks to improve access to support or useful information, much less to stop the transmission of misinformation.

Here in particular, bridging organisations – or individuals – are needed. The city of Gothenburg in Sweden engaged bicultural/bilingual women as “health guides/vaccine guides” specifically to fill this gap. Health/vaccine guides who were interviewed were able to effectively leverage their own social networks to promote health-protective behaviours and improve vaccine uptake among migrants:

“In our network, for example, my friends, my contacts, and their contacts – yes, we had a huge network, and we worked on this network. And I believe we, using this network, had a greater influence compared with my official work. The network was the most important factor”.

It is critical to note that these networks are not based on shared ethnicity alone. They were created by long-term work and embody extensive experience. They can help strengthening community resilience for future crises, and must therefore be sustainable and seen as a crucial resource in crisis management. Unfortunately, interviewees indicate that this is not currently the case: contracts are often temporary, and pay and benefits are not commensurate with the value of the work done. This is an instance in which despite their role in mitigating social vulnerability, ethnic minority stakeholders are subject to structural discrimination.

4.2.4 Diversity

As mentioned in Section 4.1.1., several interviewees cited instances in which members of their target groups expressed very different understandings and prioritisations of COVID-19, other threats, and vulnerability than those embodied in governmental policy. Another Austrian case embodies this. The interviewee described how mandatory testing at day centres for homeless persons were accompanied by decreasing compliance:

“[When testing became mandatory] the people who, for example, left very quickly after a positive test, without us being able to send them to quarantine, became more and more. The refusal to be tested, um, all these things [...] I don't think it's a special phenomenon in the second district or a phenomenon of the target group. It's just that the conditions were perhaps even stricter, because when I'm sitting in my flat and give a positive test, no MA70 [municipal department No. 70 – ambulance services] car comes to pick me up and take me somewhere, yes. But that happens in a day centre [...] they are put in their own quarantine quarters because they cannot isolate themselves. In all the emergency quarters where I have shared rooms, I cannot isolate myself. That is another intrusion into reality, into people's privacy and personal freedom [...] especially if they are people who often come from societies where they have already experienced a lot of repression, yes, for example during the communist regime. Yes, they find it a bit more difficult. Or in the refugee sector, for example, where this being locked up anyway and someone takes me somewhere and I don't quite understand what and why, is once again very, very difficult for people”.

Responding to this perverse outcome requires accepting the diversity of sense-making strategies. As noted by Folke et al. (2005), “sense making implies taking interpretations seriously, inventing and reinventing a meaningful order and then acting upon it” (p. 447). It is self-evident that CSOs are better positioned to do this than policymakers: the former must act based on a calculation of whole-of-society costs and benefits, informed primarily by top-down quantitative epidemiological and socioeconomic models. The latter must work to mitigate the costs incurred by specific populations, informed primarily by bottom-up qualitative knowledge gained in the course of practice. Which is to say, the former must concern themselves with the survivability of the forest, while the latter must understand and care for diverse individual trees – including those harmed by the overall policy framework.

4.2.5 Joint action

As previously stressed in D6.1, D6.3, and throughout this deliverable, joint action between governmental organisations, CSOs, and, ideally, residents themselves is a definitional attribute of adaptive multilevel governance. Indeed, the CSO interviews hint at the possibility that among the elements of community, joint action is a uniquely effective lever. This is because, in Folke et al.'s (2005) terms, joint action can catalyse the formation of social memory. If effective and sustained, joint action become the basis for enhanced social ties and perceptions of sharing – especially shared experiences of agency rather than shared experiences of passivity.

One reason that joint action is critical is that GOs and CSOs have different competences and networks, as well as different operating constraints and tempos. An interviewee working on children's services in Greece confirms this:

“The system of children protection in our country is understaffed and underfunded, and due to this fact, the national mechanism was not ready to address the social consequences

of COVID-19 – which is why several agencies ceased their activities due to challenges [...] During the pandemic, we managed to establish cooperation with governmental and non-governmental organizations, such as municipalities, and have created a network of cooperation for emergency responses that aim to protect children and abused women. Since we lack a set protocol on how networks operate and the modus operandi differ between different actors, sometimes conflicts can exist – nevertheless, in many cases the network does collaborate in a solid manner”.

One lesson learnt from this interview is that GOs and CSOs, despite sometimes having set protocols, must maintain a degree of flexibility in order to work together to address an ever-evolving crisis. The interviewee also made it clear that certain individuals in the GOs and CSOs involved took the initiative and assumed leadership roles, often not adhering completely to the mandates and directives of their organisations. Of course, in a democratic society, we can expect an upper limit on the flexibility of (some) governmental services: demanding faster or broader adaptation might impose undesirable trade-offs (e.g., procedural consistency, equal access, transparency, accountability). CSOs can contribute characteristics like adaptive flexibility to a multilevel governance system, thus mitigating the need for trade-offs.

5 Conclusions

COVINFORM uses an intersectional lens when analysing the experience of vulnerability of individuals and groups. Intersectionality understands identity categories such as race and gender, but also others, as mutually constitutive and not as additive. The concepts of multidimensional vulnerability and intersectionality are related, but not synonymous. Models of multidimensional vulnerability, as explored in this deliverable, can help explain how being affected by a specific vulnerability often leads to a greater exposure to a number of vulnerabilities – due to structural inequality, among other causes. Intersectionality, on the other hand, means that ‘the experience of people who are affected by multiple forms of oppression is not adequately understood if it is simply framed as the experience of racism or sexism.’ (Adler 2022, p. 50). Gender and race intersect with each other and create a specific form of racism, a gendered one. As a result, black women are differently affected by sexism than white women.

Clients and target groups of the interviewed CSOs are often affected by intersectional experiences of exclusion, oppression, and discrimination. For instance, interviewees in Germany and Wales discussed the situation of sex workers, who are socioeconomically precarious, subject to gender discrimination, are stigmatised, may be subject to ethnic discrimination, may be trapped in coercive relationships or even in slavery, and, when also migrants, may lack legal residency status, identity documents, etc. These multidimensional vulnerabilities – and intersectional *experiences* of vulnerability – compound one another in complex ways that can block access to services, and that can hardly be anticipated by practitioners/experts without significant field experience. Other specific examples discussed by interviewees include Muslim migrant women, houseless/homeless migrants, and socioeconomically precarious single parents of special-needs children. In such cases, multiple identity categories often lead to positionalities that make subjects vulnerable to a number of threats and their consequences.

This deliverable explores the ways in which CSO representatives talked about and framed vulnerability, as well as their approaches to helping mitigate its consequences. The interviewees’ work experiences

(and, in some cases, personal experiences) highlighted the fact that vulnerability is not a unidimensional phenomenon, and that being vulnerable to one threat, such as poverty, often means that one is susceptible to other vulnerabilities, such as ill health. Multiple vulnerabilities could stem from the same cause, or one vulnerability could have cascading effects, generating or exacerbating multiple other vulnerabilities. COVINFORM will use a set of forthcoming interviews with a particular vulnerable group, namely women of low socioeconomic status, to understand their specific experiences of vulnerability. Interviewing women who occupy disadvantaged socioeconomic as well as gender positions will allow us to analyse the relationship between the multiplicity or multidimensionality of vulnerability and the intersection of multiple, disadvantaged identity categories. Applying an intersectional lens will bring clarity to the role of power relationships in the articulation of COVID-19 impacts and responses, revealing how individuals occupying multiple disadvantaged social identities are also often affected by multiple vulnerabilities. It is hoped that the outcomes will provide guidance for CSOs and other actors addressing not just the symptoms, but also the structural – and hence, political – causes of multidimensional vulnerability.

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Annex. Codebook

Each country analysis based on $N \geq 3$ interviews was compiled and coded using QDA Miner (Provalis Research 2021). Partners who conducted $N \geq 3$ interviews also submitted two to five concrete “action situations” that they found particularly interesting, surprising, or useful as lessons learned; these were also coded. The following codebook was used:

- First coding round
 - COVINFORM vulnerability assessment model
 - Threats
 - Vulnerabilities
 - Consequences
 - Resilience
 - Social-ecological systems framework
 - Governance systems
 - Resource systems and units
 - Actor systems
 - Interactions
 - Outcomes
 - Elements of community
 - Locus
 - Sharing
 - Social ties
 - Diversity
 - Joint action
- Second coding round
 - Surprising action situations
 - Analytical concepts
 - Cascading effects
 - Network effects
 - Multidimensionality
 - Intersectionality
 - Threat multipliers
 - Unanticipated outcomes
 - Trade-offs
 - Perverse outcomes