

Appendix 1. Responses

Description of interventions in response to the COVID-19 crisis that builds resilience (e.g., social distancing)	The response that you identified above, is building the resilience of what and to what?	Strengths and limitations of this response	Geographical location of response
Immediate financial help was offered to full-time workers and students by the Federal government in the form of a monthly benefit cheque. This has allowed many people who lost work because of the pandemic to continue to cover basic expenses. It has also opened a conversation about the possibility of establishing a basic income for all.	The financial benefits build resilience of households to economic shocks associated with the pandemic.	Immediate financial aid to people who need it (\$2000/month; \$1250/month for students); limitations - costly to federal budget, amount might be enough for some people but not others, restrictions to who can apply	Canada
Modularizing - social distance, face masks, hand washing, isolating in 'covipods'	It builds resilience of the individuals, and also builds resilience of society by isolating infected individuals. The idea is to reduce spread of infection and avoid overloading the medical system.	The virus is still out there. Modularization might slow down the crisis until a vaccine is developed. But there is a cost of modularization. An alternative is to rely on the immune systems of individuals and let the virus spread. This avoids cost of modularization and does not wait for a vaccine. However, there could be a lot of deaths especially of older age classes. Sweden is an example to see the age distribution of deaths.	Modularization is happening almost everywhere in the U.S., to varying degrees.
Sensemaking - online platforms for interpreting what is going on; Building New Routines - individuals finding ways to structure their interactions with others in a way that makes them feel in control; Value Orientation- finding ways to connect one's behavioral choices to the concerns of others in a meaningful way	The individual's resilience to the shock and dislocation of the pandemic	It has less to do with a general guideline and more to do with how an individual makes a novel and stressful situation comprehensible, meaningful and manageable (strength). Weakness: generalizability of any particular response	Everywhere
Increased social grants to most vulnerable people who cannot access money or food during lockdowns	Building resilience of people vulnerable to livelihood shocks, e.g., those with piece jobs and lack of formal employment or who are laid off/unable to work due to a crisis.	Strength- provides a safety net so that in nobody should be unable to afford their basic needs like food; Weakness- often not well implemented, people fall through the cracks and often governments don't have the funds to do it adequately. Testing for who qualifies is also problematic.	South Africa
Parking spaces become pedestrian/terrace; summer schools; social distancing labs, local food coops, 'holiday streets'	Greening local neighborhoods, creating social networks, accelerating shared mobility	Very local, no policy instruments readily available, temporary nature	Rotterdam, NL
Rebuilding a big exhibition hall into an emergency hospital with 600 hospital beds for COVID-19 patients in about 2,5 weeks in the Stockholm region. The exhibition hall collaborated with the property manager, the Stockholm regional office (responsible for health care) and the national defense. In the end, it never had to be used and they decided to dismantle it.	Building resilience of the health care system in the face of a pandemic	It builds up a buffer for the health care system, but it also depends on that there is competent staff and adequate materials etc. It makes use of a resource - a venue, that didn't get used since all the exhibitions were cancelled. Like with any buffer, it is very difficult to know if what is enough.	Stockholm, Sweden
There has been a drastic increase in both producers and consumers signed up for and buying from my local "farmer's market" initiative (REKO-ring in Swedish). Several of the producers were impacted by the	It builds resilience of the food system to global shocks that influence the trade of food from beyond the local region. Indirectly, it builds local resilience of the local, as many	It has happened without any coordinated efforts or official support. That means it is unclear how long-lasting this change will be. However, since many have been made	Stockholm

decrease in restaurant sales and discovered the farmer's market as an alternative source of income during the crisis. There was also a lot of coverage on the vulnerability of the very globalized food system that we depend on in Stockholm, which I believe increased the consumers' awareness and willingness to support local food producers.	of these producers have sustainability certifications and are high in biodiversity and ecosystem services. This builds resilience to e.g., extreme weather, climate change, etc.	aware of this initiative, they might want to continue buying some of their groceries there even after the crisis has subsided. The "self-organized" character of this initiative makes it very flexible, which is both a strength and a limitation - it adjusts to changing conditions, but also requires voluntary efforts.	
Shelter in place, especially for elderly	To stop the spread, lower the contagion of the disease	Limitations- all or nothing approach, that doesn't account for other strategy such as creating larger networks or bubbles to allow for people to work.	State of Georgia
Contact tracing	Resilience of communities to COVID	Strengths: helps to identify and isolate potential carriers before they spread it to others. If done effectively early on it can eliminate spread (i.e., New Zealand). Weaknesses: relies on people to accurately report (or if done through e.g. cellphones raises privacy issues) and relies on those exposed to quarantine. Takes resources to do it effectively.	Many places, effectively in South Korea, Germany
Sustainable transport (e.g., walking and cycling)	Building resilience towards more sustainable forms of transportation	cheap (strength), improves physical health (strength), only an option for short distance commuting (limitation)	Montreal
Digital technologies (e.g., apps) for contract tracing	Of the community to the risk of community spread	You need a society willing to have their government track them using their smart phones and give up their personal information. It's a draconian measure that can work in top-down, centralized governments but in countries like the US there is a lot of resistance to this because of infringement to individual rights.	China, Singapore, Korea, I think....
Mandatory wearing of reusable (cloth) masks in public in South Africa, Kenya, Nigeria and other countries (regulations are gazetted in government gazette)	This is tricky to define, but by limiting the spread of droplets, the intervention is slowing the spread of the virus, and therefore could be buying nations time to build resilience of health care systems before the peak infections.	Strengths: fairly easy to implement and to enforce through social pressure (e.g., grocery stores in South Africa do not allow one to enter the store without a mask). Limitations: improper wearing of masks may mean that individuals feel a false sense of security and no longer prioritize other interventions such as handwashing.	South Africa, Kenya, Nigeria, and other countries
Increase in people participating in Community Supported Agriculture or other forms of direct sales from farms	The resilience of household food security to supply chain disturbance	Strengths for HHs: shortens supply chain, fewer links that can be affected negatively so more consistent supply of fresh fruit/veg; increased knowledge of food system. Limitations for HH: price higher and CSA require upfront investment - limits who can participate (excludes low-income households). Strengths for farms: increase income; if CSA, clearer picture of finances for season because all participants invest	US. Maybe EU/UK too?

		at the beginning of the season. Limitations: farms using more single use plastic	
We have been fostering food security in a locality in Oaxaca	Resilience of social ecological food systems to shocks by fostering sovereignty	This is carried out at a local scale. Implementation and follow up is hard given the COVID associated restrictions for gathering people	Santo Domingo Tomaltepec Oaxaca
Monitoring Cases of Covid19	Building resilience of global public health to one where outbreaks can be suppressed quickly	Strength: Highly spatially explicit Limitation: Lag time between contraction and showing symptoms	All over the world, headquartered in public health centers
In the Western Cape Province, South Africa's current Covid-19 epicenter, many hospitals focused more strongly on mental health support for health workers. They increased psychological services at hospitals, and at a provincial level rolled out strategies for mental health support to hospitals.	Building the resilience of the health care system to increase pressure of hospitalizations. Increasing capacity in mental health support for health care workers is focused on managing the feedback of increased hospitalizations leading to increased stress on health works leading to worsening health care mental health --> diminished health care working capacity --> even more pressure on remaining staff -	Positives: seems to be at least partially successful in managing the feedback described above (see Daily Maverick article shared in the link section). Negative: Requires increased government resources to support extra mental health capacity and increasing pressure on mental health professionals. Implementing a mental health strategy may require resources that are not widely available during times of crises.	Western Cape, South Africa (mostly Cape Town)
Daily press briefings by the state governor, usually with other officials such as the state chief medical officer or experts from the University of Nebraska Medical Center, to inform the public about the pandemic, safety measures, and the state's ongoing response.	I would frame it as building the resilience of the public confidence in the state's coronavirus response through transparency and continues updates as things change. The idea is to avoid surprises, resentment, and loss of public confidence that could lead to citizens ignoring health recommendations.	The approach relies on citizens staying informed, and the government to trust the public to follow health guidelines that are not mandatory. Too much information can confuse people or incite panic but there has been no panic and little confusion so far, though as time has gone on the number of people following some of the voluntary health recommendations seems to be dropping. One strength the state government has worked with University of Nebraska Medical Center (UNMC) for health guidance on safety procedures and communication. There is a high degree of public trust and pride in UNMC since they treated Ebola patients brought to the U.S. during the 2014 outbreak. Nebraskans listen to UNMC health experts.	Nebraska (statewide)
On the 27th of March 2020, South Africa entered into a "level 5" national "lockdown", a period of strict restriction of movement and interaction. Only essential services were allowed to operate, including health services, food production/distribution and retail, utility services, and security services. Alcohol sales, cigarette sales and all events were prohibited. The homeless were gathered up and housed in temporary shelters. A driving permit was required for driving and that could be checked by police at roadblocks. The national defense force (army) was deployed to help the police enforce these regulations. All borders to neighboring countries were closed, and all	The national lockdown's main purpose, as I understand it, was to build resilience within the health care system to the inevitable increases in COVID-19 patients. South Africa, and especially the Western Cape (which has been a hotspot since the beginning as international tourists brought the virus mainly to Cape Town and surrounding areas), spent the time that was "bought" by the lockdown to build field hospitals, increase treatment capacity at existing hospitals, source ventilators and	At least in the Western Cape, the primary aim to increase the resilience of the health care system seems to have been achieved. The strength of this response is the ability to focus all attention and resources on one aim, which is deemed the priority at the time. However, as you may imagine, the limitation of this laser-focused response is the wide-ranging fall-out in other areas of society. Huge numbers of people suddenly unemployed led to sharp and devastating increases in food insecurity and poverty, as	South Africa

<p>flights into South Africa were prohibited, except repatriation flights for tourists stuck in South Africa. A national "solidarity fund" was created to accept donations to be used in the fight against the virus. After 5 weeks of level 5 lockdown, on 01 May, we entered into level 4, which saw the easing of some restrictions. People were allowed to go outside between 6-9am to exercise or walk your dogs, within a 5km radius of your home. Group activities were still restricted, as was the sale of alcohol and cigarettes. The government introduced a curfew between 8pm and 5am. Public transport in mini-bus taxis was restricted to a small number of passengers. The government started to roll-out additional grants and increases to existing grants (e.g., child grants) for the poor and vulnerable to access additional funds. On 01 June, we entered level 3. All South Africans are required to wear masks at all times while out among other people, and practice social distancing. Most people could now return to work, and exercise times were extended from 6am to 6pm. Alcohol sales are allowed, but cigarette sales are still prohibited. Restaurants, shops, and cinemas can operate, providing they adhere to social distancing and hygiene guidelines. In Cape Town, beaches and national parks (e.g., Table Mountain National Park) are still closed. Non-contact sports are allowed. Travel between provinces within South Africa is still prohibited for leisure but is allowed for business. Social gatherings are still not allowed, except for work purposes and for funerals. A general point: The national government, and our president specifically, has put an emphasis on deliberative stakeholder engagement throughout this process. He has continually engaged with business, unions, industry, and other stakeholders to understand the implications of lockdown for the economy and society. He has also surrounded himself with a scientific advisory committee and has taken on board the advice of medical experts. There has been a continued process of learning and adjusting, as new information has become available, and the government has received feedback from the people.</p>	<p>oxygen, and increase the morgue capacity at hospitals. It was understood from the very beginning that South Africa's context (e.g., high density informal housing, high percentage of co-morbidities like HIV and TB) would not allow for a complete eradication of the disease as was attempted in other countries. Instead, we played for time, and hoped to avoid the devastating spikes in cases that have overwhelmed health care systems in other places.</p>	<p>well as increased rates of domestic and gender-based violence. Existing inequalities were thrown into even sharper relief. In addition, the use of the army to enforce lockdown rules was highly problematic, and there have been instances of police/army brutality and even deaths of South Africans at the hands of the armed forces. The authoritarian response has caused citizen groups and human rights advocates to issue dire warnings about state overreach and totalitarian power grabs that will be difficult to reverse. In general, the government has attempted to deal with issues as they emerge (e.g., they started distributing new grants for the poor and unemployed and set up domestic violence support centers), but it seemed like they were often surprised by consequences that emerged. In other words, the response initially seemed very proactive (implementing a strict lockdown before South Africa had its first COVID-19 casualty), but then it seems like the government still ended up playing catch-up with all the developments that were hard to foresee.</p>	
<p>Investments to support Indigenous remote communities in going through the crisis; part of this funding, hopefully, goes into improving basic services and health facilities.</p>	<p>Resilience of Indigenous communities to COVID19 and other future crises.</p>	<p>Strengths: Can improve basic services that were lacking and severely affecting many communities' capacity to cope with COVID19 if some community members were to get infected. Massive investments are needed to improve basic services in several Indigenous and remote communities (e.g., clean running water, basic health services, accessibility to good</p>	<p>Canada</p>

		and affordable food). Limitations: Massive funding is required, and that announced by the government is not, according to many experts, sufficient to meet the needs of these communities. Also, it's important to keep track of how the funds are used, and if they are really building long-term resilience or rather used for short term solutions	
Social distancing, wearing a face mask, avoiding crowds and indoor public places	Resilience to avoid catching the virus	-	Lincoln, Nebraska
Global data sharing and open access of academic work related to the pandemic	One could argue it's coming a bit late (in this specific case), but it's helping the global community move faster and be more responsive by sharing data and findings almost real time. It's building resilience of our knowledge base in the face of unknowns.	The strength is to increase our knowledge as fast as possible, building on a truly global and collaborative expertise. The open access allows anyone to access this information, independently of their financial resources. The limitation is that this happened in reaction rather than in anticipation, and that knowledge building takes time and will not necessarily solve anything in the short term.	Global with some nodes (e.g., scientific journals, institutions) concentrating the information and acting as disseminating platforms (e.g., John Hopkins University, USA)
Solidarity networks	Communities to socio-economic vulnerability	Strengths: bottom-up; limitations: not institutionalized enough	Barcelona
Support for getting food and essential to elderly and vulnerable people in our island	Protecting the vulnerable, by building the resilience of Stockholm region's healthcare to deal COVID-19	Haphazardly organized, perhaps not everyone who need it is reaching out for help. Small scale.	Tranholmen island, Stockholm, Sweden
Sweden bans on visits to elderly care homes, considered the most "at risk".	Supposedly building the resilience of elderly care homes to the pandemic by limiting the risk of contagion and pro-actively isolating them (increasing modularity in the network).	The main limitation is that this isolation was neither followed with massive testing nor personal protective equipment for health care staff operating in these elderly homes. As a result, the disease spread unnoticed and ravaged the elderly care homes.	Sweden
Liberate public space for people and not motorized vehicles	Of the city's public management to coronavirus	Strengths: it was timely, there was an opportunity: the traffic reduced significantly, and physical space at the same hours of the day was required (due to Spanish COVID special restrictions, walking and practitioners sports was allowed only from 6 to 10 am or from 8 to 11 pm). Temporality is good but... Limitations: temporality of these measures is also bad, given the positive benefits of this type of interventions on the environment and health.	Bilbao, Barcelona, Madrid.... I would say that most of the big cities in Spain have applied these measures.
Masks	Manufacturing masks independently	-	Igualada
In Ottawa, the National Capital Commission turned streets they were responsible for into bike lanes.	People were able to practice physical distancing and get outside into public spaces.	This got people out but kept people safe in dense downtown cores. This City of Ottawa was very slow to innovate, so it was great the NCC could do so.	Ottawa, but see other cities that have been innovative.

<p>Due to COVID-19, social distancing, and lockdown requirements currently in South Africa, our project has come up with different ways to stay connected. I have tried to send out an email with news snippets, my own personal reflections on the lockdown and the impacts on my work, my feelings about being at home and not in the office. This email helps to keep our team focused and reminded about the work we are doing together even though we are no longer able to meet in person. The responses I receive from colleagues is encouraging, it helps them feel like pushing through the difficult times of working alone at home.</p>	<p>It maintains the diversity in the team, it encourages learning new skills and sharing those with each other and also strengthens the participants relationships to each other.</p>	<p>By opening myself to engage with our team members I am building the trust already there and allowing a space for communication, sharing and learning. The limitation may only be felt when we return to our 'normal' office day to day lives and the interactions that are quite personal now may not continue.</p>	<p>Grahamstown, South Africa</p>
<p>Decision by researchers working on COVID-19 treatments and vaccines to engage in unprecedented sharing of data, samples, sequence information, etc.</p>	<p>Resilience of drug discovery pipeline to crisis</p>	<p>The unprecedented sharing of data, samples, etc has enabled work on over 200 vaccines within months of the start of the pandemic, among other things by the coronavirus being rapidly sequenced and the sequence data openly shared. Subsequent partnerships and collaborative efforts are unprecedented in their scale and in regard to the associated timelines (see JAMA reference above)</p>	<p>Globally - the WHO maintains a list of COVID19 vaccines that are in development, along with information about lab locations.</p>
<p>Helping people less fortunate than yourself - seeing THEIR resilience - how they cope with so little, and yet can smile and rejoice at any help given them gives you strength and makes you aware of your privilege, and makes you want to continue giving. Then there's no room for fear.</p>	<p>Resilience of the people working to provide sustenance, as well as the resilience of those who receive it. There is an exchange of resilience, of the human sharing of an unavoidable set of circumstances and a determination to continue - not to give up.</p>	<p>Strengths - it is boundless (although fatigue is real); it feeds on the strength of others. Limitations - not everyone experiences it, and in situations where there is a critical mass of despair, it is difficult to 'light a candle' sometimes.</p>	<p>Grahamstown/Makhand a, Eastern Cape, South Africa</p>
<p>Leadership that reinforces and builds trust in institutions seems to be key to effective response, if not an 'intervention' per se. This leadership has a number of characteristics but essential are: transparency in communications across diverse populations, multi-level (Federal-State-local) government coordination and collaboration; bipartisanship (ability to 'reach across the aisle'); and reframing/questioning the very fundamental structural origins of the pandemic and imagining alternatives to returning to 'normal.' This leadership does not need to be solely in government, it can also be (and sometimes more importantly) in civil society, private sector etc. And this isn't usually achieved with a single intervention because that trust must be sustained.</p>	<p>Social-ecological systems at all scales TO the full suite of disturbances (pandemics, disasters, etc)</p>	<p>Better (equitable) outcomes for people everywhere and the planet. Limitations: It could be very difficult and slow to implement or may only be partial. And it needs to be constantly revisited and adapted.</p>	<p>Conversations are happening (i.e the articles above) in various English media around the world (US, UK, Australia, India...)</p>
<p>Deliveries of food to people in lockdown in public housing estates</p>	<p>Community networks being used to enable individuals to cope with restrictions, I'm not quite sure how to frame that in relation to resilience of what to what? resilience of the community being built to withstand external shocks? maybe, but the community is rallying around individuals who have no</p>	<p>Strengths: community sector stepped in to provide services that were not being provided by government agencies; food provisions were culturally appropriate which the gov't ones apparently were not; gave food to those who needed it, gave an opportunity to help to those who felt helpless</p>	<p>Melbourne, Australia</p>

	capacity to respond to the shock themselves.	Limitations: volunteerism can provide excuse for continued gov't inaction	
Collaboration between local food producers to supply local food.	Resilience of local food system to guarantee the resilience of food supply in an agroecological way.	Strengths: Guarantee food supply, promote alternative food networks, promote short supply chains, fosters food sovereignty, fosters agroecological transitions. Weaknesses: Lack of previous collaboration, time to build trust, problems with the agro-industrial food system.	Catalonia
In order to lift the spirit of the population, John Krasinski started a YouTube show called 'Some good news' in order to bring good and hopeful news in a time which was dominated in the news by illness, economic loss, and death.	Resilience in the community and people to live through the time and create a hopeful feeling, see alternatives and options	It was very powerful and uplifting in the beginning, however it was not sustainable for the long run. Since it was successful, an economic interest took over and, the show was sold.	Internet
Investing in active transportation infrastructure (e.g. closing streets off to cars, subsidies for micro-EVs)	The resilience of communities to respond to the shock to public transportation in the short-term and to the coming shocks from climate change in the medium-to-long term.	Strengths: promotes health, social solidarity, relatively cheap. Limitations: must carefully consider the needs of persons with disabilities.	Many cities in Europe and Asia. Very few cities in North America.
Assisting others with food aide	Our community to the lockdown and concomitant loss of work, salaries, school feeding schemes and even soup kitchens	Strengths - unification of multiple cliques in our community, quick response to a crisis situation, made many aware of their privilege by contrast; Limitations - logistics were extremely challenging especially under lockdown, only a limited number (around 2000) homes received support; doesn't build the dignity of the recipient.	Makhanda a city in the Eastern Cape in South Africa
Social distancing - avoidance of crowded spaces maintaining at least six feet from the next person, maintaining contact only with people within your household	Resilience of the health care system / residents to COVID-19	Strengths: keeps the COVID curve down; makes taking care of patients manageable Weakness: slowdowns certain sectors of the economy	Puerto Rico
I don't think there are many interventions that increase resilience to COVID-19. By COVID-19, here I mean the corona virus, not its repercussions on the world economy or the food system. There have been some drug trials (for treating symptoms, not causes) and a vaccine is not on the sight. Institutions (rules of behavior) such as social distancing or mask wearing can and do reduce the transmission rate ($R_{eff} > 1$ is the threshold above which you have a regime shift), making the crises more manageable from the medical system perspective -- not necessarily the economic or political systems as seen in the US--; but in itself it does not increase the resilience of patients exposed to the virus e.g. it does not reduce recovery time neither the net mortality rate. In other words, it delays the hit, but it does not avoid it. Another intervention but with contested results is plasma transfusion (blood) from recovered patients to sick ones.	My answer was "it does not build resilience" when formally speaking about COVID-19. If your question is about the ripples of the pandemic (COVID19) on other systems such as the economy or food systems, then there have been some interventions that can be mentioned. But they generally address symptoms of the crises (e.g., food shortages) not their causes (e.g., inequality).	I mentioned three interventions: i) drug (randomized control) trials, ii) behavioral norms, and iii) blood transfusions. In that order, the strengths are: i) allows to discard negative treatments and focus efforts on potential treatments for treating symptoms or deactivating the virus (vaccine route); ii) are cheap and produce fast results; iii) transfer the knowledge of one system (the immune system) to another. The disadvantages are: i) it seems to contradict the principle of polycentricity, many RCT have been stopped or delayed because the health system is not unified and centrally managed (US) or has problems to "speak across nations" (EU); ii) requires full compliance to be useful, opening up too early or a few people not following the rules can hamper the efforts of many (e.g. Florida); iii) I don't think the intervention has	RCTs all over the world, but the larger ones in UK, Europe, China, and USA. Behavioral norms, all countries in a way or another (there is also a database of rules and when they were put in place). Blood donations in the US as far as I know.

		been part of a RCT so it's hard to know if it really works + blood types distributions or who is able to donate or receive is asymmetrical across the world.	
Virtual social gatherings	People's mental health to periods of isolation	Connects people directly, but not everyone has access or ability, level of connection not as good as in-person contact.	Everywhere
<p>1) Rapid mobilization- very quickly a call went out through various networks in Cape Town asking people if they were willing to help during the unfolding covid-19. These people were then grouped into neighborhoods to develop "community action networks" CANs. Quickly these CANs then paired with other CANs- normally matching low income areas with high income areas to build networks of solidarity- activities were then developed to match the needs arising in the different neighborhoods</p> <p>2) Community mapping- rapidly working to identify vulnerabilities within the community- e.g. disabled, sick, food insecure households, and also identifying people and resources that could be used to help e.g. who is available to do shopping for others, who can take food to the homes of people that can't leave their houses etc.</p> <p>3) Food solidarity (rapid relief)- Based on the mapping we were able to identify people that were more food insecure than before- lockdown meant informal work stopped and therefore people had no income to buy food, we started with food vouchers for local stores through fundraising both locally and abroad, but the vouchers did not go that far, so we then started sourcing and buying food (fresh veg and dry goods) in bulk so the money could stretch further, and providing weekly boxes of food. Demand far outstripped supply and funds so we can to pivot and move to developing community kitchens which could serve daily meals</p> <p>4) Leveraging networks and knowledge- we formed working groups to build on particular skills of the volunteers- e.g. food security, health care support, communications, emotional well-being etc this was critical in making sure we could address the multiple needs surfacing. We also leveraged all our networks both in terms of fundraising- locally and internationally, and also building new relationships with existing grassroots and NGOs in order to support those groups who had been working in areas on issues for a while and could provide advice grounded in local realities e.g. U-Turn working with homeless communities, Amava Oluntu- working with youth etc</p> <p>5) Broadening participation- decision making in the beginning was rapid, decentralized and ad hoc, made by those people who put their hands up to get involved but we realized</p>	I think many of our activities tried to build resilience of communities to be able to respond to emerging challenges- diversifying networks and knowledge. We focused on a number of resilience building activities e.g., developing new food flows, community kitchens as nodes of activities, food gardens, healthcare support etc	The strengths of this response have been greater community cohesion for those people involved in activities, and obviously immediate support and relief. Many of the activities are more in response to the socio-economic impacts of the lockdown than the disease itself. The crises that have been emerging have not been brought about covid-19, they are existing challenges in a deeply unequal society- food insecurity, poverty, gender-based violence, poor education, homelessness have all been exacerbated by rolling lockdowns (we are still in a state of lockdown day 119). Some of the activities might be creating less resilience- e.g., reliance on single flows of food from community kitchens- what happens when donations run out? IT is also very hard to build and broaden participation when gathering is illegal and most people do not have internet access, so communication is hard and often impossible- but there has been innovative responses using WhatsApp. Add to these low levels of literacy and understanding of the virus, and also inability of people in informal settlements to isolate safely. While there have been phenomenal efforts from bottom-up initiatives- there have been less successful engagement at higher governance levels with a totally ineffective and paralyzed state to supply basic support (although we are much luckier in the Western Cape than other provinces with better health care facilities). The limitation is also staying power/fatigue- people need to work and earn money and so many volunteers have dropped away- too many people are doing the work of governments for free with no support.	Cape Town

that we needed to broaden participation both in terms of diversity in our neighborhood, and also the neighborhood we are supporting- We (Muizenberg) is relatively more resourced than our partner neighborhood Vrygrond which is a mix of low and informal settlements with high poverty and crime- the same decisions were not appropriate for both areas/ issues.			
Doing things for other people - it stops you worrying about yourself - things like packing and delivering food parcels.	Building psychological resilience; feeding people who are desperate, giving hope.	The strengths: delivering hope, respite, food; Limitations: reliance on local donations and not sure how long those will last. Govt response has been hopeless - and still is.	Eastern Cape
Staged responses by government, with the opportunity to learn	Resilience of the system to the uncertainty in both the virus (and how it affects people) and how people respond to the restrictions	Enables proportionate response and tailoring as more information becomes available. Enables learning and action at the same time. Limitations are that learning is lagged 14 -28 days and may not carry over from between waves.	Australia and New Zealand, but presumably everywhere where there is decent institutional capacity to learn. E.g., ie not USA and UK???
While tourism revenues have been helping to deliver biodiversity conservation and local livelihoods, the pandemic has dramatically altered many local economies. There are numerous initiatives to raise grants and loans for well-known wildlife areas and their associated safari tour operators, but there is much less focus on supporting marginalized rural community stakeholders. The Luc Hoffmann Institute aims to incubate a new Collaborative Platform that can address this shortcoming while helping to amplify existing fundraising efforts. An African community with one united voice stands a greater chance of pushing this issue globally, is currently competing with other impacts.	Is building the resilience of the biodiversity conservation and livelihoods who are dependent on nature-based tourism, which is a notoriously unreliable industry, and vulnerable to perceptions of risk linked to disease outbreaks (sometimes far away on the same continent), economic and political instability, as well as the potential for local saturation of the market	Strengths: Stakeholder engagement on a large scale that enables the co-design of the initiative, the buy-in and support Limitations: Many unknowns and the need to fill these gaps at a considerable speed to act timely	Africa
Entry restrictions into Australia, plus more recent caps on entry	Of the Australian population to the virus circulating abroad	Intends to reduce transmission of the virus into Australia. But impedes on the ability of Australians to return, plus makes the population vulnerable to the virus if it does come through	Australia
Adoption of/ seeking of the use of local butchers to process meat instead of relying on the few large meat processing plants	This builds the resilience of the food supply system to the consumer. This also shows how non-resilient our current food supply system is to large disturbances, but how it is trying to adapt.	Strengths are that it is allowing for food/ meat to be processed to help keep the supply up while large processing plants are closed due to illness and outbreak but is limited because the local butchers are not used to such demand and are not set up to process as many requests that are being submitted which is causing major losses to the local producers who are now faced with continuing to feed the animals and incur more expense or just cull (remove from	Rural America, especially in ranching and farming regions

		herd either by selling or eradication) them with a loss of profit. Also there is a big issue with restaurants being closed which drove the demand for a lot of products and now there isn't the demand so some producers are left trying to find new markets for their products.	
City closing stores and restaurants build resilience; Additional item stocking such as food, necessary household items like toilet paper. This will prevent you from interacting with people who may possibly carry the disease; Limit travel outside the country and states; Wearing facemask	By preventing the population reaching its threshold and changing to a different alternative stable state. This prevents any further spread and the spread of infection. The stable state we are	Strengths are preventing any further spread Limitations: Not enough research for this specific strain of virus and that includes know edge gaps. We don't know if it prefers cold or warmer temperatures.	Lincoln, Nebraska USA
Delivery and takeout food availability	Resilience of the economic system and small businesses to the economic collapse and lack of customers (in-person) due to Covid-19. It also provides a degree of resilience in terms of human happiness; preserving some of the norms and culture of pre-social distancing.	Strengths: keeping people employed, options for those still working long hours as essential employees, general human happiness and normalcy. Weaknesses: poor social safety nets in the USA require people to keep working somehow or risk losing their homes, health insurance, security, etc. requiring the businesses remain open even if there is a risk to employees and the work is technically non-essential	Across the USA (presumably elsewhere); large and small restaurants/chains
Frequent, science-based communication from (some) political leaders	Building the emotional and social resilience of the Canadian population. This means they are more resilient to the economic and social challenges in the face of the uncertainty and anxiety associated with an evolving pandemic situation.	Strength - single source of information tied to economic action; limitation - potential for conflicting messages at sub-national geographic units.	Canada-wide
Travel less and buy less stuff	Of individuals and families to economic pressures	It is self-organized but is constrained by personal needs	everywhere
Temporary relief grant for economic distress in South Africa	Building resilience of impoverished households to food insecurity, lowered employment opportunities	Strengths: provides immediate hunger relief to unemployed and families and allows for them to also support local traders who can then continue to operate in communities. Limitations: temporary measure and small amount that does not facilitate the ability to save capital.	South Africa
Turning streets into pedestrian walkways	Society's ability to function normally outside the home to risk of infection	Provides multiple benefits, places to interact safely, allows access to businesses. Not in all places, many people still don't feel comfortable there (marginalized members of society, elderly people), only works in dense neighborhoods (not suburbs)	Montreal and elsewhere
Restaurants doing curbside	From going into complete chaotic state where more than half the human population decreases	Prevents any human contact	Lincoln Nebraska

Online scientific conferences	Resilience of the international scientific community to disease and therefore the world to the novel disease (scientists travel so frequently, and conferences are massive social events where individuals are in close proximity)	Strengths: the science continues, preserving the importance of conferences on resumes, etc. for students, still able to learn what others are doing, reduced cost for travel, more accessible, more equitable, quick response time. Limitations: lack of ability to network and begin collaborations, uncertainty	Globally, within scientific communities everywhere
Effective risk communication	Individuals have accurate and frequent information about the risks of the virus and what people can do to protect themselves and what they cannot control. Build institutional resilience as they need to maintain their legitimacy and credibility of their policies in order for people to cooperate. This is NOT happening in the US, and its eroding institutional resilience.	Related to the answer above, it's a mechanism that maintains the social contract between government and society for both to protect themselves	New Zealand, Iceland, Germany
Diversifying income for conservation areas in Africa. Across Africa, Covid-19 travel restrictions has decimated the tourism industry, which supports livelihoods and conservation initiatives across the country. African conservation's reliance on ecotourism has long been unsustainable, and the current crises has prompted many operators and agencies to look to diversifying their income streams. In Namibia, for example domestic tourism was widely promoted at discounted rates whilst international travel bans were still in place, and domestic and inter-regional tourism has also been promoted elsewhere. Other strategies include potential carbon credit trading, diversifying the kind of tourism experiences on offer, and more integration with sustainable agriculture approaches.	Building the resilience of wildlife conservation systems to the loss of biodiversity and livelihood benefits	Many of options for diversification still rely on tourism, albeit it is different types of tourism and tourism from local people. The benefit of focusing on domestic tourism is that it represents an investment in nature-people relations at a local level, which may prove important to of societal support, and for scale-appropriate protected area management in the future. However, even domestic tourism is prone to the impacts of local lockdowns and other stressors, so just diversifying to other tourism streams isn't enough. Other diversification approaches (e.g., carbon credits) are not feasible everywhere.	Several places in Africa (e.g., Namibia, Ol Pejeta (Kenya), South Africa, Gambia)
Retooling industry production for essential health products. In this case, the ethanol industry in Nebraska partnered up with UNL to produce hand sanitizer for hospitals, hand sanitizer, and other healthcare service providers.	Building the resilience of sanitizer supply for essential healthcare services to the shock of unprecedented demand of the product by the public at large.	It is a clever way to boost production and availability of hand sanitizer, but it is uncertain how long production will be able to continue. The project relies on donated supplies from companies and relaxed regulations by the FDA due to the crisis. These two factors, especially the supply uncertainty, may become an issue if we are in the same spot a year from now and still dealing with sanitizer shortages. On the other hand, sanitizer companies likely will have ramped up production by then.	Lincoln, Nebraska
Closing some communities, prohibiting outsiders from coming in (or if they do, obligation for a two weeks quarantine before)	Building resilience of remote communities to COVID19	Strength: provides a very strong protection to risks of the virus spreading in these remote communities that are not equipped to face the virus. Might foster capacity building at the local level. Limitation: Potentially not viable on the long	Northern Canada

		term, as these communities do depend on some level of connection to the outside, for example to receive some foods and goods by plane and ships, or to see some relatives, etc.	
Distributing stories, and literacy and numeracy activities to parents of young children through newspaper, WhatsApp and radio	Our community to a situation where normal education structures are unavailable	Strengths are that parents feel more empowered, literacy material usually unavailable in poor families is accessible, it's cheap compared to book distribution, newspapers and WhatsApp have different audiences. Catches parents when they WANT to know about participating in their child's education; not all families are reached, not sure how many families use the material, many families can't afford WhatsApp; cost involved in producing a Newspaper, radio failed; at some points the newspapers were unable to publish	Makhanda which is a small 'city' in the Eastern Cape, South Africa
use of online meeting platforms - provide a virtual space for meetings/gatherings/conferences that cannot take place in-person	resilience of K-12 schools /higher education / education NGOS / government/ some businesses to decreed shutdowns and mandated curfews and social distancing	does not allow for hands-on learning processes that need to occur, co-production of knowledge that results from in-person dynamics not as effective; virtual spaces are not equality accessible to all	Puerto Rico/most countries
Zoom (video call) social interactions/parties	Building the resilience of the community and the individual to psychological distress, mental illness, and loneliness more generally while maintaining social distancing and therefore building up the resilience of the community to disease	Strengths: inexpensive, equitable (where laptops and Wi-Fi are common and affordable, this is not universally true within the USA), maintains social distancing, maintain social ties, promotes creativity, increases mental health. Weaknesses: only replaces human interaction for so long; finite	Globally