

Coronavirus Policy Response Needs and Options for Myanmar

N.b. most published analyses and commentaries on coronavirus are based on data and projections for developed countries, which differ from Myanmar in a variety of significant ways. And, even for developed countries, our state of knowledge about this new virus is currently low and changing rapidly. This document has also been written very quickly. As such, this document involves a lot of speculation, and some of it will almost certainly turn out to be incorrect. Nevertheless, we feel it is important to start trying to think about the relevant issues for Myanmar immediately and will work to update this document as more information becomes available.

1. Overview

Coronavirus is now confirmed to be present in Myanmar, and the actual number of infections is likely to be considerably higher than just the small number of cases (five as of March 27th, 2020) confirmed so far. Within hours of the presence of coronavirus being confirmed in Myanmar, some residents in Yangon were engaging in panic-buying, a small indication of some of the significant social and economic problems that could result from the spread of coronavirus. There is a need for continued and regular public messaging from the Government of Myanmar (GoM) to try and calm the population and convince people not to panic. The high degree of respect and moral authority that Daw Aung San Suu Kyi has makes her the ideal person to convey such a message and convince people to remain calm. Further, the GoM needs to make a quick decision, based on the best available evidence, on what its overall strategy should be in response to coronavirus, and then to clearly communicate this to the public. The strategy will need to be iteratively adapted, and the clear public communication of these changes is also vital.

Several countries around the world – mainly developed countries – are following a strict suppression approach to coronavirus, that tries to stop the spread of the virus. Such an approach requires one or both of the following: i) aggressive testing and tracing of contacts; ii) very strong social distancing regulations being implemented for at least 3 weeks, probably for multiple months. It should be noted that the comprehensive testing and tracing of contacts is extremely difficult to do properly – only Singapore, Taiwan, South Korea, Hong Kong and China have managed to do this so far. Meanwhile, very strong social distancing regulations have quite extreme economic and social consequences, that require high levels of complex government intervention in the economy to ensure that citizens are still able to afford food, housing, basic utilities and that many businesses do not go bankrupt.

The alternative to a strict suppression approach is a mitigation approach. It only tries to limit the spread of the virus, and particularly targets resources on trying to protect the most vulnerable groups in society (e.g. old people and people with certain underlying health conditions). This strategy accepts that there will probably be more deaths directly caused by coronavirus than would be the case under strict suppression approaches. However, it is much less expensive and difficult to carry out, and in some cases may possibly lead to fewer deaths overall – e.g. though reduced economic and social damage, and reduced overload on the healthcare system. Which mitigation measures will be pursued will vary by country and should be based on the estimate of the costs and benefits of each potential measure. This strategy may be optimal in countries with significant governance challenges, high levels of poverty, and/or existing high levels of deaths from treatable diseases.

In choosing a strategy for Myanmar, the potential severity of the disease's impact (the rates of being exposed, infection, fatality) on Myanmar and trade-offs involved must be carefully considered. Myanmar has quite large numbers of deaths that could be avoided with an increased/improved health spending, e.g. from tuberculosis, malaria, rabies, hepatitis, HIV/AIDS and more. Further, if severe economic disruption arises from measures targeted at coronavirus, this will cause additional deaths, as well as exacerbate poverty and indebtedness, and lower overall standards of living. Thus, it does not make sense to pursue a strategy that would save 100s or even 1000s of deaths from coronavirus if this i) diverts very large sums of government money that could be spent on other health priorities; and/or ii) causes major economic disruption. Whereas if coronavirus has the potential to kill 10,000s or 100,000s in Myanmar then a much stronger response is justified.

There are currently some serious gaps in our knowledge required to decide which strategy to pursue. The most important priority in this regard is estimating how many deaths could be expected in Myanmar under various possible response strategies. Most modelling and analyses being published internationally are based on developed countries, which are very different to Myanmar on almost all key variables, particularly those on clinical dynamics. And, even for developed countries, there is considerable disagreement among epidemiologists for the number of deaths that can be expected under various strategies.

Since the rural population living in Myanmar is significantly larger than urban population, the health care facility admissions are lower in those regions. This makes it extremely difficult to estimate the actual figures of people who will/do have possible Covid-19 symptoms and get tested for novel coronavirus. The strategies mentioned above will also have different impacts in rural and urban areas.

The rest of this document covers: the threat coronavirus poses to Myanmar; the international response to coronavirus; Myanmar's current response to coronavirus, and constraints and opportunities shaping Myanmar's response; how to prioritise Myanmar's response to coronavirus; how an Incidents Management System (IMS) could help Myanmar's response; international economic threats and opportunities; key GoM entities for coronavirus response; and organisations available to work with GoM on its coronavirus response.

2. The Health Threats of Coronavirus to Myanmar

On 23rd March 2020, Myanmar officially confirmed the first two COVID-19 cases,¹ and had announced a total of five cases by 27th March. This is one of the lowest figures regionally and globally.

Several factors may possibly have helped to limit the spread of COVID-19 in Myanmar so far:

- **The climate is hot** (especially at the moment), which possibly limits the spread of coronavirus.²
 - However, the evidence of the impact of climate on coronavirus is still unclear. Even if it is the case that coronavirus prefers cool and dry conditions to hot and humid ones, a hot and humid climate is far from being a complete defence – e.g. Malaysia already has more than 1,000 confirmed cases, Thailand has 599, and Indonesia and Singapore

¹ <https://www.facebook.com/MinistryOfHealthAndSportsMyanmar>.

² https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3556998 [Accessed 23rd March 2020]

both have close to 500.³ Further, coronavirus is mutating rapidly and may in the future adapt to spread more quickly in hotter and/or more humid conditions.

- **The low level of urbanisation** in Myanmar may be an advantage, as the virus seems to be spreading quickest in densely populated areas.
 - However, if the disease does take hold in rural areas, the effects may be worse due to a weaker infrastructure and a worse access to government services, including healthcare.
- **The comparatively low number of international flights** entering and leaving Myanmar is likely to be an advantage.

However, the very low number of reported cases so far is almost certainly a considerable underestimate, for several reasons:

- **Under-detection:** Despite recent increases in public health spending in Myanmar, the decades of disinvestment has left the healthcare system with severe constraints for a robust surveillance system. As of 24th March, Myanmar has tested just over 200 individuals for COVID 19.⁴ Whereas, for example, Thailand had already tested over 7,000 people by 17th March⁵ and has rapidly expanded testing since then. According to the World Health Organization, testing is critically important in tackling the disease outbreak.⁶
- **Slow response:** the GoM has been quite slow to introduce measures that could stop the spread of the disease.
- **Porous borders:** Myanmar has a porous border with Thailand, where confirmed infection rates are already quite high. In the past recent weeks, many Myanmar workers in Thailand have been crossing the border to come back home. Despite the GoM's effort to screen them, it may be inadequate. This risks the disease spreading to the different parts of the country, as workers travel back home. Bordering China may also be a problem, although it should be pointed out that Yunnan province has only had a small number of cases, and despite an initially slow response, China introduced quite strict restrictions on the movement of people. However, if unconfirmed reports that large numbers of Myanmar migrant workers in China came back across the border in January as China began to respond aggressively to the crisis are correct, then this is a considerable risk factor.
- **A highly infectious disease:** Coronavirus appears to be a highly infectious disease and is spreading rapidly around the world. It is unlikely that Myanmar has just been 'lucky' and happened to be an exception to the global trend.

Myanmar has several demographic advantages relative to developed countries for the impact of coronavirus:

- **Fewer elderly:** Old people are a much smaller percentage of the population. They are much more likely to have serious health issues as a result of contracting coronavirus. People aged 65 and over are only 5.8% of the population in Myanmar, but 23% in Italy⁷ and 18% in the UK.⁸

³ <https://www.worldometers.info/coronavirus/> [Accessed 22nd Mar 2020].

⁴ <http://mohs.gov.mm/Main/content/publication/2019-ncov>

⁵ <https://ourworldindata.org/covid-testing> [Accessed 24th March 2020]

⁶ <https://www.weforum.org/agenda/2020/03/coronavirus-covid-19-testing-disease/>

⁷ <https://www.ft.com/content/a9b2eea2-6791-11ea-800d-da70cff6e4d3> [Accessed 25th Mar 2020].

⁸ <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/ageing/articles/livinglongerhowourpopulationischangingandwhyitmatters/2018-08-13> [Accessed 25th Mar 2020].

- N.b. People age quicker in low-income countries. A report from the London School of Hygiene and Tropical Medicine suggested in the context of coronavirus that a 60-year-old in a low-income country should be seen as equivalent to a 70 year old in a developed country (i.e. high risk).⁹ However, Myanmar's life expectancy and income per capita is higher than average for low-income countries. Thus, it is perhaps reasonable to use 65 as a cut-off point here.
- **Less prevalence of co-morbidities found in developed countries:** There are probably fewer adults with serious underlying issues identified in developed countries as being particularly likely to result in critical conditions if the person contracts coronavirus. These underlying conditions include organ transplants, cancer treatment, blood or bone marrow cancer, severe lung conditions, and patients on immune-suppressant medication.¹⁰
- **Less prevalence of obesity:** A smaller proportion of the population are obese – obesity has been suggested as a risk factor for coronavirus.¹¹

However, Myanmar also has several demographic disadvantages relative to developed countries for the impact of coronavirus:

- **Higher prevalence of malnutrition:** Large numbers of people are underweight and/or have poor nutrition generally, which is likely to make contracting coronavirus a greater threat to health.¹²
- **Higher risk of exposure to the elderly:** Old people overwhelmingly live in family units, often in crowded dwellings. It is thus difficult to isolate and protect more vulnerable people (primarily the elderly) from the rest of the population.
- **Overcrowding in urban slums:** Urban slums can become hotbeds of infection. (N.b. Although this probably affects a smaller percentage of the Myanmar population than many other countries at a similar income level, due to the low level of urbanisation in Myanmar).
- **Higher prevalence of certain co-morbidities:** Myanmar has high rates of diabetes (?),¹³ and hypertension, which are risk factors for coronavirus. In addition, it also has large numbers of people with TB and AIDS, which are significant risk factors.¹⁴

A recent academic paper on coronavirus control in low-income countries and displaced populations states that, although these populations may enjoy certain advantages (e.g. younger populations and hotter temperatures) they also face significant disadvantages, and so, "...on balance we believe that, given current evidence and plausible reasoning, drastic action is required immediately to protect the world's most fragile populations from this unfolding threat."¹⁵

⁹ <https://www.lshtm.ac.uk/newsevents/news/2020/covid-19-control-low-income-settings-and-displaced-populations-what-can> [Accessed 25th March 2020]

¹⁰ <https://www.nhs.uk/conditions/coronavirus-covid-19/> [Accessed 22nd March 2020].

¹¹ <https://www.manchestereveningnews.co.uk/news/greater-manchester-news/new-guidance-lists-overweight-people-17936652> [Accessed 22nd March 2020].

¹² <https://www.lshtm.ac.uk/newsevents/news/2020/covid-19-control-low-income-settings-and-displaced-populations-what-can> [Accessed 25th March 2020]

¹³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6407671/> [Accessed 22nd March 2020].

¹⁴ <https://www.lshtm.ac.uk/newsevents/news/2020/covid-19-control-low-income-settings-and-displaced-populations-what-can> [Accessed 25th March 2020]

¹⁵ Ibid

The death rate from coronavirus is still a matter of much debate, partly because in many (developed and developing) countries there has been insufficient testing. Thus, many actual cases are not recorded. The death rate also depends significantly on access to health services and demographic factors, with old people and people with underlying health conditions being much more likely to develop critical conditions as a result of contracting the virus. Nevertheless, it can be remarked here that it appears to have a considerably lower death rate than Ebola. Therefore, the extremely strong measures that were adopted in response to the Ebola outbreak in Western Africa 2014-16 may not necessarily be optimal in this case.

It is expected that an effective vaccine for coronavirus will probably be able to be mass produced in around 18 months from now. Scientists do not currently know of any highly effective treatments for coronavirus patients, although trials are currently underway for possible use of drugs such as chloroquine¹⁶ and remdesivir for treating people with coronavirus.¹⁷ Efforts are also proceeding to introduce testing for the presence of antibodies/immunity.

3. The Economic, Social and Political Threats of Coronavirus to Myanmar

In a widely shared TV interview, Singapore's Foreign Minister stated that the coronavirus epidemic, "... is an acid test of every single country's quality of healthcare, standard of governance and social capital. And if any one of these tripod [sic] is weak it will be exposed quite unmercifully."¹⁸ Unfortunately, Myanmar is weak on all three legs of this tripod, threatening not only its ability to respond to the health emergency and cushion economic shocks, but bringing the spectre of possible social unrest and violence.

There is a fairly widespread absence of trust in public institutions in Myanmar (see section 6 below for more details). Among other things, it can make it harder to communicate new regulations on social behaviours and get people to follow instructions. Further, it makes it more likely that potential problems such as panic buying spiral into severe food shortages, inter-personal and/or inter-communal conflict and other forms of social breakdown. If such a spiral is entered, Myanmar's experience with two major banking collapses in the last 30 years makes runs on the banks relatively likely despite better institutional provisions now being in place (i.e. the Central Bank acting as lender of last resort to retail banks, which was not the case in the 1990s-2000s).

Historical weaknesses in the standard of governance, the public health system, and the general lack of trust in institutions means that many people do not look to the Ministry of Health and Sports (MoHS), or other government ministries, as their main source of health advice. Instead, they rely on friends, social media, or various public figures. This creates a climate where fake information about what and what does not help to prevent the spread of coronavirus is widespread. Although there are encouraging signs that at least in the urban areas, many people are embracing the information on coronavirus shared by the MoHS, it is not clear if this is also happening among the rural population.

¹⁶ Note: Chloroquine is very dangerous if used without medical supervision. A couple of pills have been known to kill small children and people in US have died self medicating with chloroquine for Covid 19

¹⁷ <https://www.nature.com/articles/s41422-020-0282-0> [Accessed 22nd March].

¹⁸ <https://www.facebook.com/gmoasl/videos/205653917189835/> [Accessed 22nd March 2020]

The capacity constraints in the government especially at the local level may be weakened by the disease outbreak. Frontline service delivery stations, particularly at the township level, have limited physical infrastructure and personnel. The disease outbreak is very likely to stretch the existing capacity through multiple channels—for instance, having to provide additional services, and frontline personnel themselves being infected with the disease.

The reach of public service delivery may be limited in certain geographical areas due to ongoing conflicts. There are pockets of areas throughout Myanmar where conflict is still going on (especially in Rakhine State, Paletwa Township, and northern Shan State) and where the government's authority is contested by the Ethnic Armed Organizations (EAOs). These areas present both political and humanitarian challenges to the GoM's response to coronavirus.

However, alternative methods of service delivery and communication already exist in Myanmar. Within the GoM, certain departments such as the Department of Rural Development have been implementing special projects for years (for instance, the National Community Driven Development Project, Mya Sein Yaung agricultural loans scheme). As parts of these projects, they have put in place systems of local planning, implementation, and service delivery. Additionally, the country has a robust civil society with civil society organizations with ability and networks for local implementation, including in conflict areas. These are existing systems of planning, implementation, and service delivery that the GoM may leverage on in its response to coronavirus especially at the local level.

There are already signs of coronavirus' impact on the economy and the business sector. A few factories in Myanmar, particularly in the garment sector, have already been forced to close as they are no longer able to source necessary inputs from China.¹⁹ Tourism has grounded to a halt, as it has globally, and is unlikely to resume soon. Anecdotally, we have already heard of the impact on small- and medium-enterprises (SMEs) sector. People in Yangon working for Chinese-run small businesses are being laid off, as their Chinese boss returned home. It is difficult to know the scale of this but is likely to be the most significant in Mandalay, Shan and Kachin. Given the credit constraints on SMEs in Myanmar, they are likely to become quickly cash-strapped, as business transactions fall. Many of them will be forced to downsize and layoff workers in coming weeks and months. We are yet to observe the economic impact of coronavirus on the agriculture sector. As the largest employer, the impact on the agriculture sector will have severe consequences for employment as well as for the food security, nutrition, and income of farming households.

A fall in economic activities will also shrink the revenue base of the GoM to take remedial actions. For instance, natural gas prices have fallen sharply since October 2019, affecting a key source of the GoM's revenue, depending on how tightly the gas revenues are coupled to short-term price fluctuations.

There is currently some debate about what impact coronavirus will have on Myanmar's GDP, and it may well be that GDP growth continues to be positive, albeit at a lower level than previously expected. While GDP can be a useful measure, the key focus of analyses of the economic impact of coronavirus in Myanmar should be on employment and household incomes, as these have a much more direct impact on citizens' welfare, and ability to comply with any restrictions being introduced by GoM. It seems likely that this year underemployment and unemployment will rise overall, and that household

¹⁹ <https://frontiermyanmar.net/en/melons-rot-factories-shutter-myanmars-covid-19-fallout>

incomes will decrease for a significant number of households, including for households that are already poor.

The potential employment impact will depend upon each sector's susceptibility to the economic fallout from coronavirus. The 2014 census data indicates that employment for certain key sectors are as follows:

- Agriculture = 52% of the labour force
- Wholesale and retail trade = 9%
- Manufacturing = 7% (n.b. this has probably risen since 2014, particularly in the garment sector)
- Accommodation and food service activities = 5%
- Construction = 5%
- Transportation and storage = 4%
- Public administration = 3%
- Education = 2%
- Mining and quarrying = 1% (n.b. this is probably an underestimate)

In addition to the Myanmar labour force, there are an estimated 4.25 million workers from Myanmar working abroad²⁰. This figure is almost 20% of the size of the Myanmar labour force²¹. Remittances from international migrant workers are a major source of incomes for migrant households. Their ability to work, earn, and remit may well be curtailed in the coming months. As noted above, some are already returning to Myanmar, which will reduce remittances, as well as carry virus-spreading risks.

Under a best-case scenario for Myanmar – e.g. coronavirus does not cause major health problems within the country, strong disease prevention measures (such as restrictions on movement on the general population) do not need to be introduced, and cross-border trade is not too badly affected, the most vulnerable sectors of employment are likely to be:

- Manufacturing – due to disruption in global supply chains; (possibly) falling global demand for key export goods such as garments; a potential decrease in foreign investment in this sector (especially from China)
- Accommodation and food service activities – foreign tourism has collapsed and is unlikely to recover soon.

Under a best-case scenario for Myanmar, construction may also suffer somewhat due to likely falling foreign investment as investors from countries such as Singapore, Hong Kong, Thailand and China look to reduce their exposure to risk. The coronavirus epidemic is also likely to cause severe disruptions to global supply chains of illicit narcotics, as countries around the world tighten border security. If this leads to a fall in income for Myanmar narcotics producers, this may also affect the amount of money going into construction, as well as other sectors of the economy.

If instead of the best-case scenario, Myanmar experiences a severe health impact and strict measures are adopted by the government to deal with it, then all sectors of the economy are likely to be seriously affected. This will result in a fall in business income/profit, personal income, employment, living

²⁰ Government of Myanmar - Department of Population, *The 2014 Myanmar Population and Housing Census: Thematic Report on Migration and Urbanization* (Nay Pyi Taw, December 2016), p.11n.

²¹ The 2014 census estimated the labour force to be 23.5 million. See, Government of Myanmar - Department of Population, *The 2014 Myanmar Population and Housing Census: Thematic Report on the Labour Force* (Nay Pyi Taw, June 2017), p.9.

standards, and food security. The brunt of the economic and social burden will be on poor and vulnerable households, such as street and mobile vendors and various day-rate workers in urban areas, and the landless and day-rate workers in rural areas.

Overall, there is a high chance of a considerable rise in unemployment resulting in declining income for many households. If the spread/health impacts of coronavirus in Myanmar is large, such economic problems will be much worse. As well as directly impacting on citizens' welfare and survival, widespread falls in incomes/living standards also make it more likely that there will be social unrest, and a potentially dangerous downward political, economic and social spiral. As well as carefully considering the impact health interventions on employment and incomes, GoM should also implement policies to protect employment and incomes, e.g. significantly increase per acre loans through the Myanmar Agricultural Development Bank, and expand labour-intensive public works in urban and peri-urban areas (such as road-building).

4. International response to Coronavirus

Among developed countries, Anglosphere countries (e.g. UK, USA, Australia) were generally slower to adopt dramatic measures than many EU countries, and even more so compared to developed East and South-East Asian countries such as Singapore, Taiwan, and South Korea. However, the publication of a report by a team at Imperial College London on 14th March, has led to Anglosphere countries increasingly copying countries such as Spain, Italy, France etc. in adopting dramatic social distancing measures which are having a huge impact on economic and social life.

In the region, certain countries have also undertaken moderate to aggressive measures. Thailand and Philippines have both introduced quite strong measures to limit unnecessary movements and interactions. India has just announced even stronger measures, with a three week long national shut down – Prime Minister Modi saying that, '...There will be a total ban on venturing out of your homes'.²² It is currently not clear if people will be allowed to leave the house to purchase food or medicine, or if the ban will truly be total.²³ Although India has some serious social and economic problems – particularly very high levels of poverty and inequality, and also high levels of corruption, compared to most other countries at similar income per capita levels, its government also has quite a high level of technical capacity in general, and more specifically extensive institutional experience and infrastructure to support the widespread delivery of large-scale social welfare programs,.

5. Myanmar's Current Response to Coronavirus

The GoM has begun slowly in its response to COVID 19. However, in the last few days, it has steadily increased its attention and initiatives. The State Counsellor, Daw Aung San Suu Kyi, recently gave two public speeches on the national response to the disease.²⁴ The GoM has formed a multi-ministerial, national-level central committee to tackle the disease, chaired by the State Counsellor herself, thus signalling an increased attention from the highest levels of government.²⁵ So far, the Ministry of Health

²² <https://www.bbc.co.uk/news/world-asia-india-52024239> [Accessed 25th March].

²³ <https://www.bbc.co.uk/news/world-asia-india-52024239> [Accessed 25th March].

²⁴ <https://www.statecounsellor.gov.mm/en/node/2848>

²⁵ <https://www.statecounsellor.gov.mm/en/node/2846>

and Sport seems to have taken a lead position in the operational management of the GoM's response. It now has a LIVE, online dashboard, sharing information on the disease, as well as daily updates on its Facebook pages. The GoM has cancelled public events and banned public gatherings. It is now putting in place a public fund to tackle the disease. It has just announced that half of its civil servants are being asked to work at home at any one time, with this being operated on a rotational basis.²⁶

So far, curtailment on business activities has been limited except in a few locations. Restaurants, teashops, beer stations, wet-markets, and public transportation are still operating normally in most parts of the country. However, the authorities in Mandalay city have ordered shops to close and restaurants to serve only takeaways.²⁷ In Lashio, the GAD has ordered, 'restaurants, beer stations, tea shops, and KTVs to close and only serve takeaway.'²⁸

Essential protective measures are not being put in place in key public spaces. Crowded public transportation and wet-markets particularly in urban areas can use protective measures such as daily deep cleaning, more wash facilities, and some social distancing measures. In contrast, higher-end private businesses such as supermarkets have voluntarily put in place protective measures.

We have heard anecdotal reports of quite sophisticated measures being introduced at village level by local leaders in some places. A village in Ayeyarwady has disinfected its market, introduced restrictions on all citizens travelling outside the home unnecessarily, allocated several buildings to be used for 14-day quarantine facility for any village members that have recently returned from elsewhere. Similarly, spearheaded by an MP, a township in Mandalay Region, has set up a collaborative working team involving township departments, local CSOs, and volunteers; a centralized surveillance and communication structure throughout all its wards/villages; 14-day quarantine facilities for overseas returnees; wash facilities in wet markets; and an information campaign engaging local community leaders including monks. It is great that such initiatives are being introduced by communities, but such initiatives will not be found everywhere.

In the past few days, the country has seen tens of thousands of Myanmar students and workers return home via air and land, including many from Thailand.²⁹ The GoM is attempting to screen them upon entry, but it is not clear if this screening is fully comprehensive or effective. Further, the GoM has admitted that its physical infrastructure for isolation is already overwhelmed and is now advising on-land returnees to self-isolate in their homes. Unfortunately, its ability to monitor and enforce self-isolation is questionable, given the prevalence of crowded, often multi-generational households. In addition, there are unconfirmed reports of returnees crossing the border informally. Inadequate testing and isolation of returnees risk spreading the disease throughout the country, especially in migrant-concentrated communities such as Kayin, Kayah, Mon and Shan States and Ayeyarwady and Tanintharyi Regions. Myanmar is currently quarantining any arrivals by air that have come from countries with high levels of reported coronavirus for 14 days. However, the government's capacity to do this is already extremely stretched.

²⁶ <https://www.mmtimes.com/news/half-myanmar-govt-employees-told-stay-home.html> [Accessed 26th March 2020].

²⁷ <https://www.rfa.org/english/news/myanmar/travel-restrictions-03242020181853.html>

²⁸ Frontier Daily Briefing, 26th March 2020.

²⁹ <https://www.irrawaddy.com/news/burma/thai-border-closures-covid-19-spark-myanmar-migrants-return-health-concerns.html>

The GoM has already announced that a 70 million USD emergency fund will be set up at the Myanmar economic bank to assist with the economic impact of coronavirus. Planned activities include ‘...providing one-year loans at 1 percent interest to affected companies in the garments and tourism sectors, and small and medium-sized companies. Companies in these sectors will also have their deadline extended for tax payments due in March and June, to the end of September.’³⁰ It is good that some kind of targeted response has begun, and such activities will need to be expanded, while trying to limit waste and corruption in how they are administered.

Myanmar’s Ethnic Armed Organizations (EAOs) are also mobilising to try and introduce measures to stop the spread of coronavirus in the areas in which they operate. For example, the Restoration Council of Shan State (RCSS) are attempting to implement some form of ‘lockdown’,³¹ and Karen National Union (KNU) 2nd brigade has announced that only local people will be allowed to remain in their area. N.b. in the reports we have heard, it is not clear if ‘local’ people includes people originally from the area that have subsequently migrated elsewhere (including to Thailand) and are only now returning to their home villages – if this is the case, such a policy may not be effective in preventing coronavirus spread.

6. Constraints and Opportunities for How Myanmar Can Respond to Coronavirus

A recent paper on coronavirus control in low-income countries and displaced populations in general is highly sceptical of low-income countries’ ability to implement a strict suppression approach to coronavirus,

“...where inadequate surveillance and less-than-sufficient testing may initially obfuscate the true extent of locally driven transmission. Moreover, extreme population-wide social distancing and travel restrictions, if sustained over a long period, could be very harmful for fragile, export-dependent economies and stretch livelihoods beyond people’s coping ability, in turn dis-incentivising adherence to control measures.”³²

Both the existing institutional arrangement and policies may not be adequate in handling a potential, full-blown outbreak of COVID 19 in Myanmar. During an outbreak, the ability of MoHS and GoM more broadly to operate efficiently and effectively and stay ahead of the outbreak will be severely challenged. An institutional structure for greater coordination and resource pooling is urgently necessary. Section 8 of this paper describes how an Incidents Management System (IMS) can be used as a possible means to address this issue.

Myanmar has one of the weakest public health systems in the world, and so it does not seem at all probable that the MoHS (and the GoM more broadly) has the capacity to carry out the kind of strict testing and contact tracing system that has been successfully utilised in South Korea and Singapore. The GoM is reportedly stockpiling testing kits.³³ However, for a testing and contact tracing system to work effectively, it needs a robust implementation structure as well as physical resources. Indeed, it is

³⁰ Frontier Daily Briefing, 19th March 2020.

³¹ <http://www.mizzimaburmese.com/article/68331> [Accessed 26th March 2020]

³² <https://www.lshtm.ac.uk/newsevents/news/2020/covid-19-control-low-income-settings-and-displaced-populations-what-can> [Accessed 26th March 2020]

³³ <https://www.channelnewsasia.com/news/asia/myanmar-moves-to-increase-covid-19-test-kit-stockpile-amid-12579532>

not clear if/when many countries with generally quite advanced health systems (such as the UK) will be able to successfully implement such an approach.

The GoM's ministries are highly siloed not just at central levels, but also all subnational levels. This makes the sophisticated coordinated inter-ministerial operation needed to respond effectively to a pandemic extremely challenging to execute.

Italy's experience already shows that advanced developed country health systems can be overwhelmed by coronavirus, and concerns about Intensive Care Units (ICUs) being overwhelmed are driving the aggressive response to the virus by developed country governments. However, it is not clear how this translates to Myanmar's situation. Hospitals in Myanmar generally do not have advanced ICU equipment anyway, with a 2018 survey indicating there are only 95 ICU beds in the country, with these all being located in Yangon, Mandalay and Naypyidaw.³⁴ In Myanmar if people develop critical symptoms as a result of contracting coronavirus, they will probably die whether there is a small or a large number of people that could in theory be saved with the help of advanced ICU facilities. Intensive Care Units should have a ventilator and other advanced life-saving medical equipment for each bed. There should also be other ventilators available in the hospital. Although there are no confirmed figures, according to a medical professional with years of experience in Myanmar, there are probably only the same number of ventilators as ICU beds and these are all based in the major cities. DELETE and Replace with. There will just not be the access available for all but the privileged to have access to intensive care.

It is positive that the Tatmadaw have just announced that they will cooperate with the government in utilising military health facilities for general use in response to coronavirus.³⁵ It is unclear what relevant specialist equipment these facilities possess, but senior military families have just donated six ventilators and 20,000 test kits to Waibargi Hospital.³⁶ If private hospitals have ICU facilities, it may also be possible for the GoM to requisition the use of these in an emergency situation, as has already been done in some other countries. According to our correspondence with some private sector individuals, private-sector philanthropy is assisting the GoM in procuring some medical equipment including PPEs and potentially ventilators. The Tatmadaw has additional healthcare resources that could be useful for the coronavirus response, but are not currently being utilised – one example is virus testing facilities. It is important that the government mobilises all medical resources that are available to it, not just those under MoHS.

Survey evidence from 2015 indicates that people in Myanmar are less likely to trust each other than most other countries in the region. This applies to trust in strangers, relatives, neighbours and acquaintances.³⁷ More recent surveys by PACE have found that although reported levels of trust rose quite strongly immediately after the 2015 elections, they have since declined again.³⁸ Citizens in Myanmar also have low levels of trust in key government institutions, this is particularly marked in the

³⁴ [https://www.researchgate.net/publication/328216197 Mapping the Provision of Intensive Care in Myanmar](https://www.researchgate.net/publication/328216197_Mapping_the_Provision_of_Intensive_Care_in_Myanmar) [Accessed 25th March 2020].

³⁵ Frontier Media Monitor, 23rd March 2020.

³⁶ Frontier Daily Briefing, 24th March 2020.

³⁷ Bridget Welsh and Kai-Ping Huang, *Myanmar's Political Aspirations & Perceptions 2015: Asian Barometer Survey Report* (Selangor: Strategic Information and Research Development Centre, March 2016), pp.20-21.

³⁸ People's Alliance for Credible Elections, *Citizens' Political Preferences for 2020* (Yangon: People's Alliance for Credible Elections, July 2019), p.36.

case of the police.³⁹ Although Myanmar citizens are more likely to say that they trust the military than most other key institutions, trust in the military is also considerably lower in Myanmar than in other ASEAN countries.⁴⁰ The big exception to the general lack of trust in institutions shown in surveys is the high levels of trust in current civilian government leaders. A 2019 survey found that 70% of the population had confidence in the State Counsellor and 69% in the President.⁴¹ Further, at very local levels (e.g. wards/villages), there are often high levels of trust, cooperation and social capital. Myanmar is a very religious country, and religious leaders also enjoy a high level of trust and influence over people's behaviour.

It is very important that the GoM strategically uses the most trusted channels available to it to communicate important information and mobilise public efforts, e.g.:

- **The State Counsellor (and to a lesser extent the President) making very regular addresses to the nation** via television, radio and Facebook.
- **Working closely with existing community networks at ward and village levels** – particularly relevant here are local level CBOs and ward/village elders. N.b. it is important to remember that levels of trust and social capital are highly variable between different wards and villages, and while some wards and villages have a high level of capacity to mobilise citizens and introduce new measures, there are many other wards and villages where this is not the case.
- **Working closely with religious leaders** to communicate desired behavioural changes, based on scientific evidence of what can stop the spread of coronavirus, to their followers.

As with many public services in Myanmar, the GoM is far from the only major provider of health services – with the private sector, CSOs, Community-based Organizations (CBOs), EAO healthcare providers, and families themselves all having important roles. This diversity of healthcare providers (as well as the capacity challenges that they all face) makes it harder to deliver a coordinated response to a health crisis. However, it is important that the GoM takes advantage of the service-delivery capabilities of these organisations. One possible advantage of this multiplicity of providers is that CSOs and CBOs are often more trusted than the GoM for providing information and services. An additional advantage is that they may have extensive reach to local levels, including conflict and contested areas. If GoM can be flexible and work together with CSO, CBO and EAO health networks, this can help them reduce the trust deficit with citizens. Working with religious leaders that are interested in spreading evidence-based recommendations on how to limit the spread of coronavirus is also a key communication opportunity. Further, Myanmar has shown in the past (e.g. in the aftermath of cyclone Nargis) that citizens are willing to mobilise and participate in large numbers in civil society response. Given the nature of the coronavirus crisis, government leaders have a responsibility to clearly communicate to and listen to civil society on which activities are beneficial and which are inadvertently harmful, and which beneficial activities are most cost and time effective.

Business elites can also have a role not only in terms of providing funding for the emergency response, but also in demonstrating leadership in instituting mitigation policies. For example, it is positive that as early as 12th March, City Mart had already announced that it will introduce measures to prevent

³⁹ Welsh and Huang, *Myanmar's Political Aspirations & Perceptions 2015*, pp.56-59.

⁴⁰ Welsh and Huang, *Myanmar's Political Aspirations & Perceptions 2015*, p.60.

⁴¹ People's Alliance for Credible Elections, *Citizens' Political Preferences for 2020*, pp.37-38.

stockpiling and panic buying.⁴² Similarly, traders' associations have announced that they are trying to prevent suspicious purchases by possible stockpilers.

Official data suggests that 40% of households in Myanmar are below or close to the poverty line.⁴³ Many of these households cannot afford for all working members to forego work for much more than a week, let alone the multiple months that would be required under the kind of social distancing model currently being pursued in many western countries and in India, and that was followed in much of China from January to March 2020. Working from home is a valid option for only a small proportion of Myanmar workers. Such workers are typically wealthier members of society and are most able to weather income shocks.

Meanwhile, the GoM does not have the capacity to follow the kind of sophisticated market-based interventions targeted to labour and/or businesses being pursued in many developed countries to try and limit the shock to employment, business survival rates, GDP, and ultimately citizens' ability to meet their basic needs (e.g. food, water, housing, electricity, telecommunications) that social distancing measures are resulting in. These measures are challenging to implement even for developed countries. In any case, these measures are likely to work better for formal sector workers, but around 84% of the Myanmar workforce are employed in the informal sector.⁴⁴ If the GoM were to adopt strict social distancing rules, to meet its people's basic needs it will be unable to pursue labour- and/or business-based interventions on any significant scale, and instead should probably focus on directly distributing basic food supplies and promoting access to drinkable water (as well as maintaining the functioning of telecoms, and perhaps to a lesser extent, electricity). However, it also seems improbable that the government/military would be able to organise large scale food relief for the whole country or even just for certain major areas, especially for an extended period.

Implementing a lockdown on citizens' movement also has significant social impacts, including a likely rise in abuse within households (such as spousal abuse and child abuse) as households are forced to spend much longer than usual confined together in their home, during a time of high stress.

Sanitary standards in Myanmar are generally poor. Novel coronavirus is transmitted by droplets. For the public, the major transmission tool is people's hands. Touching infected surfaces and patients causes the virus to be carried by individuals' hands to their mouths, noses and eyes. These surfaces include people's clothes, masks, plastic packaging, fruits and vegetables in wet markets, door handles, cutlery, handrails in buses and banknotes etc. that have been touched by anyone already infected. Any surface that has been touched or sneezed, coughed or spat upon by infected individuals may carry risk. Washing (or disinfecting – if washing is not possible) hands, not touching the face, mouth, nose or eyes frequently and after physical contact may significantly stop transmission.

In addition, very close contact with other people can also facilitate the transmission of the disease via infected droplets. The wearing of masks by infected patients can be useful to protect others from spreading the virus through sneezing or coughing.

⁴² <https://frontiermyanmar.net/en/melons-rot-factories-shutter-myanmars-covid-19-fallout> [Accessed 24th March 2020].

⁴³ Ministry of Planning and Finance and World Bank, *An Analysis of Poverty in Myanmar: Part 1 - Trends Between 2004/05 and 2015* (Nay Pyi Taw: Ministry of Planning and Finance & World Bank, August 2017), pp.21-22.

⁴⁴ The World Bank, *Myanmar Economic Monitor, June 2019: Building Reform Momentum* (Washington DC: The World Bank, June 2019), p.21.

People in Myanmar live in close together in the buses, wet markets, tea shops, etc. Due to various reasons, such as lack of access to running clean water and soap or not being educated about personal hygiene, the sanitary standards can be accepted as poor. Betel nut chewing and spitting is another pervasive habit. Poor sanitary habits and facilities are one of the biggest hindrances in controlling diseases including Covid 19.

Wet surfaces are known to facilitate the transmission of many bacteria and viruses, and this may also be the case for coronavirus. If this is the case for coronavirus, the monsoon period will bring additional transmission risks.

Armed conflict continues in Rakhine State and Paletwa in Chin State as well as in northern Myanmar. This poses a serious barrier to the government's ability to engage in disease prevention efforts in these areas. Warring parties that were too suspicious of each other to take advantage of a ceasefire are unlikely to agree to a cessation of hostilities for medical reasons, particularly in Rakhine and Paletwa. Existing ceasefires – most significantly those with KNU and RCSS – are also under strain and could conceivably break down. More likely, conflict will not resume between these groups and the Tatmadaw in the short run, but tensions between them will make it difficult to conduct coordinated efforts targeted at health and social behaviours.

IDP camps are a considerable risk, having lots of people living closely together, and physically interacting. Further, both residents and non-residents wander quite freely in and out of the camps, and some camps are located in/close to urban areas, so there is a high risk of coronavirus spreading into/out of the camps.

7. How to Prioritise and Structure Myanmar's Response to Coronavirus

The difficulties/near impossibility of Myanmar following either a strict testing and tracing regime (see previous section) or a strict social distancing model suggest that Myanmar will probably have to allow people to continue working, pursue a mitigation strategy, and accept an (unknown number of) coronavirus-caused deaths.

The isolation of vulnerable populations can be a partially good strategy. However, in Myanmar many families live with their elderly relatives in small apartments or houses. This would make it extremely difficult to isolate them properly. If another young member of the family carries the virus to the household, it would spread very quickly without implementing other prevention tools, such as washing hands, not shaking hands, sharing towels or touching each other etc. in the same household. A proper isolation of a vulnerable person requires a separate bedroom, bathroom and possibly sitting area which seem very unlikely in the vast majority of shared homes in Myanmar.

The mitigation strategies that are listed below need to be implemented together if they are to be effective, including hand hygiene and other infectious disease control education.

Hand washing, other hygiene training and basic health education sessions can also be given by religious leaders, political leaders or celebrities.

The costs and benefits of pursuing a herd immunity strategy to deal with COVID-19 is arguable all around the world. The cost of it in Myanmar must be calculated carefully. Scientific researches will

hopefully provide us with a better picture soon. In the meantime it is important that Myanmar tries to minimise COVID-19 transmission rates.

A few possible mitigation strategies are listed below as examples, but there are many more, and all should each be subject to an approximate cost-benefit analysis:

- **Shield vulnerable members of the population** – e.g. those over 60/over 65, those with AIDS or TB, and malnourished adults – from the rest of the population. Such shielding can be done either i) within households or ii) within streets or extended family units.⁴⁵
 - This approach requires a high level of mobilisation and is quite socially costly. Yet, in contrast to the kind of strict social distancing measures currently being implemented in India, UK, France etc, it would allow the majority of the population to continue to live fairly normal lives and so minimise economic and social disruptions. It should be noted that option ii) would require comprehensive testing of vulnerable members of the population that are set to be housed together, or else run the risk of one of them infecting all of the other vulnerable people they are living with – if this happens (and it almost certainly will), this could result in: i) a strong backlash against the government in general and decrease compliance with regulations and recommendations for dealing with COVID-19; ii) social tensions and unrest. Therefore, shielding within households is likely preferable, despite the cramped housing conditions of many households meaning that this method will also be impossible to implement perfectly.
- **Ban large meetings and events.** (This has already been introduced to some extent in Myanmar until end of April 2020 – for example a number of famous festivals will not go ahead. However, many events that attract hundreds of people at a time seem to be continuing largely as normal, e.g. dhamma talks for Buddhists, Sunday church services for Christians)
- **Close teashops and beer-stations.** Consider providing government subsidies to owners, so that they i) actually close rather than staying open; ii) (hopefully) do not lay off all their staff. However, such a policy may be difficult to administer and unpopular as it can be perceived as giving handouts to relatively well-off people (i.e. the tea shop and beer station owners).
- **Ban non-essential long-distance bus and train travel.**
- **Increase the provision of hand-washing stations and social distancing measures** particularly in frontline public service delivery stations, retail and wholesale markets, and bus/train stops.
- **Work closely with drinking water delivery companies** to prevent them acting as super-spreaders.
- **Work with monks and nuns** to ensure they are able to receive food donations in a way that minimises spread of coronavirus.

It is vital that GoM has a good communication strategy to communicate basic advice on how citizens reduce their exposure to coronavirus, and limit its spread, as well as informing them of new rules and regulations. As previously noted, there are several main channels that can be used for this purpose, e.g.: i) public addresses to the nation (TV and radio) by the State Counsellor and President; and ii)

⁴⁵ <https://www.lshtm.ac.uk/newsevents/news/2020/covid-19-control-low-income-settings-and-displaced-populations-what-can> [Accessed 25th March 2020] N.b. the authors of the paper suggest 60 as the cut-off point for determining high risk by age, rather than 70 as is typically the case for developed countries. However, Myanmar's life expectancy and income per capita is higher than average for low income countries, so it seems reasonable to use 65 as cut off point here.

working through governmental and non-governmental networks at ward/village/VT levels; iii) working with religious leaders. CSO networks also have great importance for the communication of information and mobilising CBOs and communities. CSO networks can take independent initiative in this regard, but their effectiveness will be multiplied if the GoM works closely with them.

Township-level departments are responsible for actually providing much of the government services, even in highly centralised ministries. Thus far, international support that has been provided for coronavirus has largely been targeted towards the central government, but there will need to be increasing focus on how to deliver this to Township level, including ensuring that sufficient funding is available for Township entities. Given the highly varying nature in local situations (e.g. spread of coronavirus, village/ward level capacity to mobilise the population, presence of CSOs and CBOs, presence of EAOs etc), and the lack of accurate data that the Union government has on many key issues, it is vital that real decision-making authority is assigned to Township level and below, so that the response can be tailored to local needs and capabilities.

As noted earlier, effective response to a pandemic requires a joined-up response from government (and other governance actors) there are three potential significant barriers to coordinating an effective response:

- **Horizontal coordination** – Epidemics require a joined-up response. Ministries and Departments are currently highly siloed and not used to working together.
- **Vertical coordination** – The policies of Naypyitaw frequently do not translate well to local levels. How the GoM bridges the gap between Naypyitaw and, township, ward and village-level responses will be critical.
- **The GoM coordination with non-GoM actors** – How will the GoM and MOHS coordinate with EAOs' healthcare systems to develop a coordinated response? This gap is potentially the biggest to bridge. Failure to do this effectively will leave many communities in contested areas even more vulnerable to epidemic. For example, given the GoM controls all testing at present, how do people in KNU-controlled areas get tested? Although tensions are not so high between the GoM and CSOs/CBOs as with EAOs, GoM also needs to be more flexible in how it interacts with CSOs/CBOs.

In summary, the GoM almost certainly does not have the capacity to implement a strict testing and contact tracing regime. The economic and social consequences of a complete lockdown (of the sort recently initiated in India) are also likely to be too extreme and difficult for the GoM to mitigate for this approach to be pursued. Therefore, it is suggested that government decision-making on which measures to introduce is guided by the following table, with interventions that can be expected to have higher impact on stopping the spread and improving treatment of coronavirus relative to economic and social cost being prioritised for implementation. Attention should also be given to enforceability – i.e. the easier it is for the GoM to enforce effectively, the more it should be prioritised. The table below can be used to guide this decision-making process – please note that: i) the table is ranked, with interventions that we think combine highest impact on stopping the spread and improving treatment of COVID-19 with relatively low economic and social costs, and easy enforceability being highest in the table – i.e. the interventions we think should be prioritised the most are highest in the table and the interventions we think should be prioritised the least are lowest in the table – however, **this ranking is quite imprecise and should only be used as a rough guide, not an**

exact order, of priorities; ii) the information in the table are rough estimates, and should be subject to further consideration and revision:

Intervention	Impact on stopping spread and improving treatment of COVID-19	Economic and social cost	Ease of effective enforceability
Public awareness campaigns using accurate, scientific data	High	Low	Easy
Close all sports facilities - indoor	High	Medium	Easy
Working with trusted community health care volunteers for prevention activities	High	Low	Medium
Work with possible super spreaders to limit risks (e.g. water delivery, monks...)	High	Low	Medium
Handwashing stations	High (with training and/or making them compulsory)	Low	Medium
Mobilise volunteers	High	Low	Medium
Providing health care workers with best level of protective equipment, psychological support	Highest	Medium	Medium
Disinfection of city buses and public spaces (weekly)	Low	Low	Easy

Disinfection of city buses and public spaces (daily)	Medium	Low	Medium
Disinfection of long distance buses and public spaces (weekly)	Low	Low	Easy
Disinfection of long distance buses and public spaces (daily)	Medium	Low	Medium
Restrictions on number of people per bus	Medium	Low	Medium
Requiring long-distance buses to stop every 2 hours and ventilate the bus	Medium	Low	Medium
Introduce restrictions on how many people allowed into markets at one time, and have spaced queuing to go in	Medium (?)	Low	Medium
Suspend non-essential medical procedures	Medium	Medium	Easy
Transparent outbreak management by MoHS	Medium	Low	Medium
Mask distribution to public (n.b. But health care workers' safety and protection must be the priority, therefore the mask access has to be ensured for them)	Masks are important (high) if they are being worn by infected people and used properly (which is very unlikely).	Low – although may be hard to purchase the number needed due to global supply shortages.	Medium
Close schools	Medium – high (To stop the transmission to older care givers)	High	Easy
Ban (non-religious) gatherings above certain size	High	Medium	Medium-Hard

Purchase additional healthcare equipment such as ventilators, ICU equipment, cardiovascular support tools etc.	High if implemented, used well in the health care facilities.	Medium	Medium
Introduce street-level shielding of elderly and people with co-morbidities	High (IF screening problem can be avoided)	High (direct initial cost is medium but risk of backlash if/when it goes wrong means this is high)	Medium
Introduce household-level shielding of elderly and people with co-morbidities	Medium (?)	Low	Hard
Close all sports facilities - outdoor	Low	Medium	Easy
Close public parks	Low	Medium	Easy
Halt long distance passenger buses	High - they have closed windows	High	Medium
Stopping big religious gatherings – especially indoors	High	High	Medium
Mass testing	High	Medium	Hard
Close tea-shops, beer stations, restaurants etc	Medium - high	High	Medium-Hard
Halt long distance passenger trains	Medium (they have open windows)	High	Medium

Ban travel home for Thingyan	Medium - Can be effective to stop carrying the virus to rural areas that have less developed health facilities	High	Medium
Sick (possibly covid-19) patients' isolation	High	High	Hard
Only allow people to leave homes for essential travel (e.g. purchasing food and medicine) - nationwide	High – if implemented properly; Medium – more realistically	High	Hard
Only allow people to leave homes for essential travel (e.g. purchasing food and medicine) – specific State(s)/Region(s)	High – if implemented properly; Medium – more realistically	High (within affected States/Regions)	Hard
Only allow people to leave homes for essential travel (e.g. purchasing food and medicine) – specific Townships	Low	High (within affected Townships)	Medium
Ban street vendors	Low	High	Hard

*** Additional comment: The 'flatten the curve' concept - entailing the implementation of strict social isolation rules - requires a huge (more than 80% per cent) commitment by the public. It helps spread the burden over longer periods in developed health care systems. Since Myanmar's health services are already so under-developed and under-resourced, such measures are very unlikely to flatten the curve enough to allow hospitals to cope.

8. Incidents Management System (IMS): A Potential Institutional Arrangement for Tackling COVID 19 Outbreak

The current institutional set-up to tackle a potential COVID 19 outbreak in Myanmar seems to involve a two-tier system. There is the multi-ministerial, national central committee, chaired by Aung San Suu Kyi. The Ministry of Health and Sport, for now, seems to be shouldering the burden of daily operation

management including surveillance and case management (i.e. treatment). The MoHS is highly centralised and all ministries are highly siloed, but an effective response requires more decision-making authority being granted to Township level and below, and an inter-ministerial and inter-departmental approach.

Previous epidemic outbreaks such as Ebola and natural disasters indicate that a more robust, collaborative structure may be necessary to stem a potential outbreak of COVID 19 in Myanmar. One such system is the Incidents Management System, pioneered first to manage the widespread wildfires in California in 1970. Since then, countries have used the IMS system, at times successfully, to manage epidemics.⁴⁶ An alternative institutional arrangement is to use the cluster system organized by various UN agencies. We are, however, advocating for the IMS for three reasons: i) it can build upon the existing institutional structure, ii) the international agencies including the WHO and the UN system are already stretched thin having to assist multiple countries, and iii) the cluster system can complement the IMS.

Schematically, the IMS is a collaborative and authoritative system that integrates the various functions of surveillance, contact tracing, testing, case management, logistics/support, and communication. Externally, it is empowered by the highest political authority such as the central committee in Myanmar's case. Internally, it is empowered by a LIVE information management system. It has clear decision-making and communication structures.

Thus, the potential institutional arrangement to manage a potential COVID 19 outbreak is as follows:

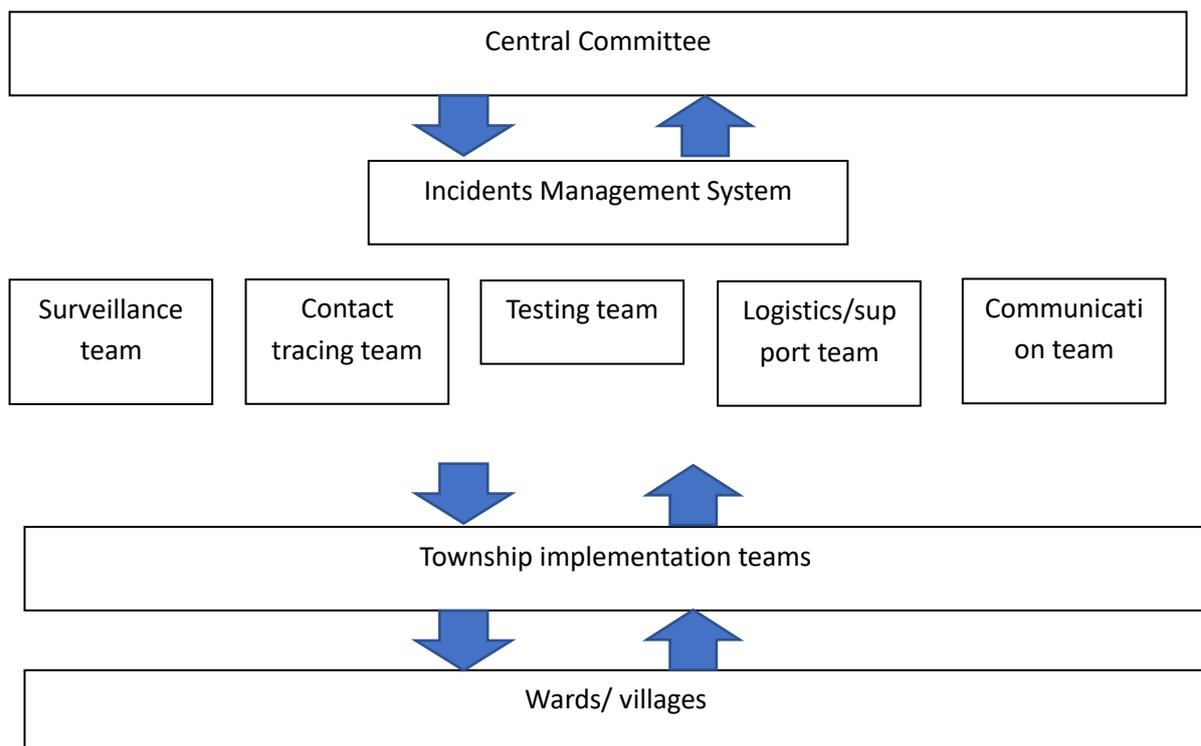
Central Committee: the ultimate decision-maker. It should oversee major policy decisions such as social distancing measures, closures of businesses, and lockdown. It must also pay attention to longer-horizon issues such as post-outbreak strengthening of the health system and the economy. It holds the IMS accountable but does not micro-manage it. Its current membership of ministries should be broadened to include key stakeholders such as the UN agencies, multilateral donors, and civil society organizations (CSOs). It is the ultimate clearing house of information and collaboration.

IMS: this is the ultimate operation management body. It focuses solely on daily management of the outbreak. Its functions involve surveillance, contact tracing, testing, case management, logistics/support, and communication. Each team should be organized around each function. For each team, conceivably there are two managers: one from the most relevant line-ministry and the other from either the relevant UN agency or civil society organization that can support the respective function. For instance, the managers from the MOHS may continue to lead surveillance, testing, and case management teams each co-lead by a representative from relevant external organizations. This collaborative leadership arrangement ensures collaboration, information sharing, and resource pooling. The IMS must have clear command and communication structure as well as clear terms of reference for each team. All the teams should be physically housed together and provided with adequate communication infrastructure. The existing LIVE dashboard used by the MOHS should be bolstered further with few clear indicators of progress in each function. It must report weekly and be accountable to the central committee.

Township implementation teams: The effectiveness of the IMS will critically depend upon its local implementation structure. The IMS will depend on the local implementation structure for certain

⁴⁶ <https://successfulsocieties.princeton.edu/focus-areas/ebola-response>

functions, specifically surveillance, contact tracing, and communication. The appropriate administrative level to organize local implementation teams in Myanmar is at the township level because this is the frontier of service delivery in Myanmar with the extensive existence of government departments. Local teams should also be composed of multi-sectoral actors, potentially involving the General Administration Department (GAD), the township health department, the township departments of social welfare and rural development, and local police. In recent years MPs have spent a lot of time doing constituency work and may also have a useful role to play, especially about public communication. Township teams are resource, support, and information hubs for wards and villages. They report daily to the IMS and are accountable to it.



9. International Economic Threats and Opportunities

Prior to the coronavirus pandemic, serious problems and sources of instability were already building in the global economy, including the US-China trade war, the oil price war between Russia and Saudi Arabia, and high levels of corporate over-indebtedness in many developed countries (and also in China). Coronavirus is now massively impacting on economic activity within and between countries, and the world is now almost certainly entering a profound economic contraction. Policy makers in key economies such as China, the EU and USA have quickly responded to the economic crisis now sweeping the world with fiscal and monetary stimulus, and high levels of market intervention to deal with over-indebtedness in the corporate sector. Such a response is positive, and much more rapidly interventionist than we saw in 2008 but can only mitigate the global slowdown/recession rather than fully prevent it.

Many countries around the world will be needing to import additional food, as their domestic and other foreign supply sources contract. If economic activity, especially food production, in Myanmar is not severely affected by coronavirus there is perhaps an opportunity to raise food exports, thereby boosting farmers' incomes. However, this will depend on mitigating new blockages to exports that may arise, and Myanmar is already unable to export much of its agricultural produce to developed countries (i.e. where demand for food imports is likely to increase the most) due to issues around phytosanitary standards. Also, ramping up food exports in the possible case of low levels of coronavirus in the next 3 to 6 months could prevent the government building up food stocks that may be needed to deal with possible problems that could arise if coronavirus expands rapidly in the country at a later time.

International demand for goods used to provide health services is rocketing (especially for goods such as masks, gowns, and ventilators). Myanmar does not currently produce such goods and is unlikely to be able produce some of them soon. However, there may be some opportunities to move into producing products for which demand is rapidly increasing, e.g. garment factories producing masks.

Much of Myanmar's border trade is unrecorded/unofficial, and as neighbouring countries impose strict restrictions on the cross-border movement of people, this trade is likely to decline significantly. The impact on official trade may not be quite so bad, and for example on 15th March Myanmar was able to resume muskmelon and watermelon exports to China, after these had earlier been suspended.⁴⁷ Rice exports to China have also recently resumed.⁴⁸ However, the Thailand and India governments have introduced quite strong measures to try and limit the spread of coronavirus in their countries, including placing restrictions on borders, which are already affecting official (as well as unofficial) trade. If the measures placed in these countries (and also Bangladesh) seriously impact exports and imports from Myanmar, this could have severe economic consequences for Myanmar. As of 25th March 2020, the situation at Myanmar's 17 land border trade post has been described as 'dynamic', with trade going through on certain days but not others, depending on discussions between government officials from both sides.

China's investment in Belt and Road Initiative (BRI) projects in Myanmar is likely to slow as their economy slows and focuses inwardly for the next 12+ months.

⁴⁷ <https://www.globalnewlightofmyanmar.com/melon-exports-resume-in-myanmar-china-border/> [Accessed 22nd March 2020].

⁴⁸ <https://elevenmyanmar.com/news/myanmar-resumes-rice-exports-to-china> [Accessed 24th March 2020].

Appendix

Relevant GoM Entities

All GoM entities may need to adapt their operations, but some particularly important entities are likely to be:

- MoHS, for obvious reasons.
- Tatmadaw, especially if the crisis spirals and results in major public disorder.
- MoHA, e.g. Police, for maintaining order
- MoUG, especially:
 - GAD – provide the backbone of Township level government and have a crucial coordination role at this level; are crucial for communicating to W/VTAs and village heads, who are critical interfaces between the GoM and local communities for communication to citizens and enforcement of any new social restrictions.
 - Possible role for coordinating ministries at national level
- MoLIP – monitoring movement of the population. Possibly providing economic relief to formal sector workers.
- MoSWRR – providing relief to populations if many households experience a big fall in income (for example as a result of strict social distancing measures) or if the food supply is seriously affected.
- Municipal authorities, e.g. managing markets and slaughterhouses, waste collection, water supply, management of human remains, and other basic local services.
- Ministry of Construction – Public works (e.g. roads, bridges) to boost employment. Note that local road and bridge construction is managed at State/Region not Union level, and budgets need to be allocated accordingly.
- Ministry of Commerce – aiding businesses in response to demand and/or supply shocks
- MoPF – Reallocating funds rapidly to where it is needed. Also, a possible role for CBM in increasing the money supply to meet increased government spending needs.
- Ministry of Investment and Foreign Economic Relations – Negotiating with foreign governments to maintain imports and exports.
- MoALI – ensuring food supply (?); possibly providing emergency loans or grants to farmers.
- MoEE – maintaining power supply
- MoCIT – maintaining communication networks
- MPs – many MPs play a highly active role in their Township as constituency MPs and can play an important role for communication with the public, as well as possibly providing leadership for Township-level inter-agency coordination.

Relevant Organisations Working with GoM

A few international organisations have been working with the GoM on disaster preparedness in recent years. This work does not seem to have included much specific preparations for dealing with pandemics, instead focusing on issues such as earthquakes, flooding, cyclone storms, droughts and

flooding.⁴⁹ Nevertheless, presumably organisations such as ADB, EU, UNDP, UNOCHA, WHO and World Bank will be involved in helping the GoM to respond to the coronavirus outbreak.

On Monday 23rd March 2020 it was announced that Norway had initiated the creation of a dedicated UN fund to try and help developing countries with weak health systems to stop the spread of coronavirus, assist in treatment of patients, and tackle the long-term consequences. Such a fund would be similar to the 2014 UN Ebola Response Fund.⁵⁰ However, the UN's ability to respond to coronavirus is likely to be more stretched than for Ebola – both financially and in terms of institutional capacity – due to the far greater geographical spread of coronavirus. On the other hand, fatality rates from coronavirus are much lower than from Ebola,⁵¹ and so such dramatic interventions may not be required.

However, the ability of international development organisations to assist the government in disaster response and the provision of basic services may be affected by the departure of many of their foreign staff.

According to our correspondence, there is interest among foreign embassies and donor offices to assist the GoM in its response to coronavirus.

As noted above, civil society engagement is likely to be very important to dealing with coronavirus.

⁴⁹ E.g. see <https://www.unocha.org/myanmar/disaster-response-preparedness> [Accessed 22nd March]; <https://www.worldbank.org/en/news/press-release/2018/02/20/millions-in-myanmar-to-benefit-from-disaster-preparedness> [Accessed 22nd March].

⁵⁰ <https://www.reuters.com/article/us-health-coronavirus-unitednations-norw/un-to-create-global-coronavirus-fund-norway-says-idUSKBN21A0Q4> [Accessed 23rd March].

⁵¹ <https://www.isglobal.org/en/ebola> [Accessed 23rd March].