



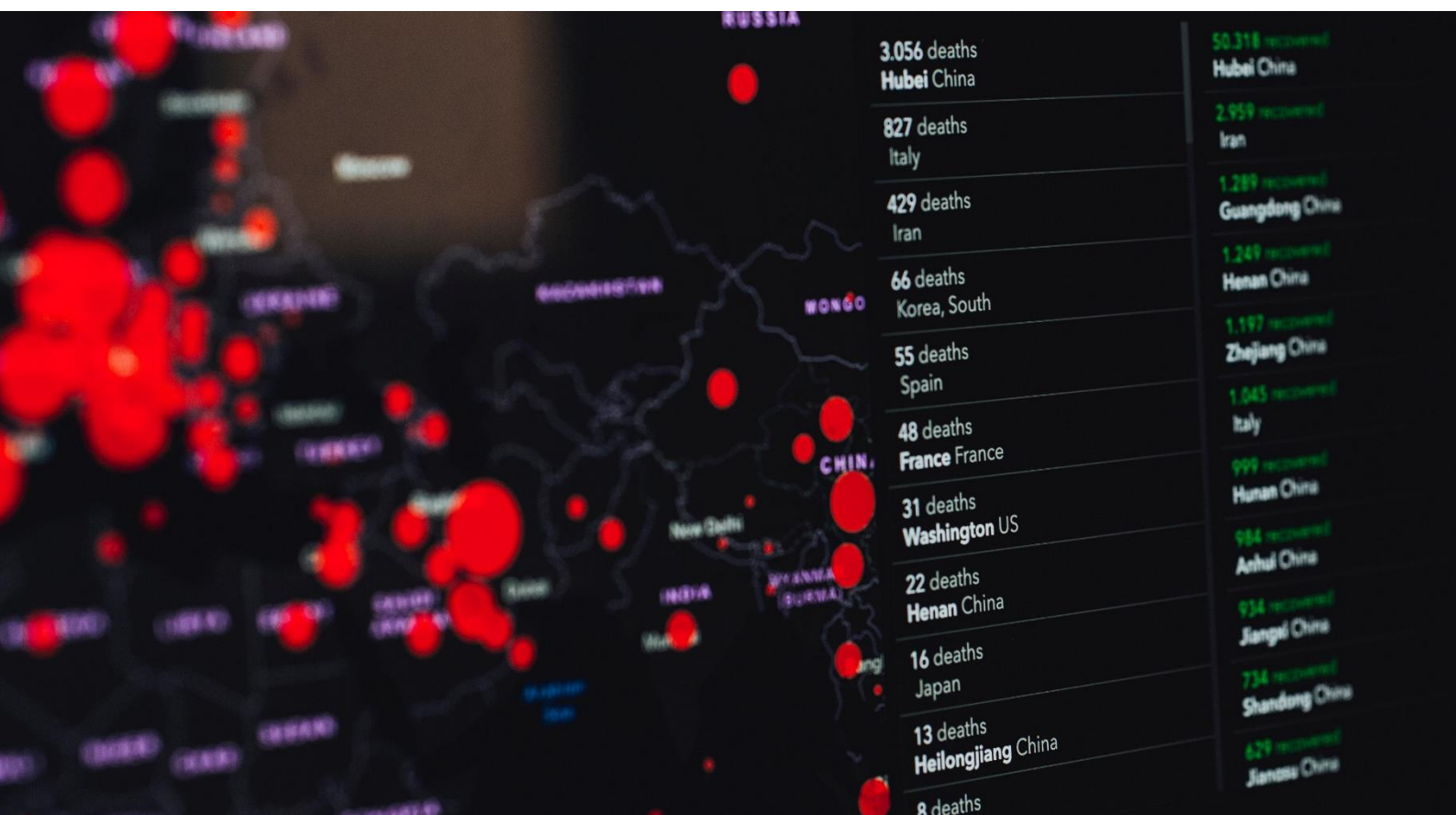
TAKSHASHILA  
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## Takshashila Policy Advisory

# Covid-19: Towards a National Reopening Strategy for India

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By Takshashila Working Group



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## Executive Summary

This document proposes “calibrated reopenings” as a means of restoring economic activities in India under the shadow of a Covid-19 outbreak. We suggest continuous ongoing testing in order to gauge the extent of an outbreak in a district. This can then be used to dynamically classify districts into one of 6 possible threat levels. For each of these, we recommend lockdowns of increasing strictness. As the extent of an outbreak reduces, lockdowns can be “staggered down”, allowing for more and more mobility of people and restoring economic activity to normal levels.

## Introduction

Many countries have implemented a lockdown to help healthcare systems manage the spread of Covid-19<sup>1</sup>. At the same time, India’s lockdown has almost completely frozen economic activity, with millions being pushed closer to poverty and deprivation and potentially endangering years of economic growth<sup>2</sup>. The sectors which currently employ most of India’s informal workforce, such as construction and hospitality, have been severely hit<sup>3</sup>. IT/ITES and industrial activity have also come to a near-standstill.

As per a Ministry of Home Affairs order dated April 15th<sup>4</sup>, the Union government has relaxed some lockdown guidelines to allow businesses to resume limited operations in the coming weeks. Many states have also announced “hotspots” which will be subject to more severe restrictions on the movement of people, while activity can be restored in other areas as per a “red-yellow-green” risk classification<sup>5</sup>.

Both these are ultimately short-term measures, meant to restore a measure of normalcy to economic activity and reduce the burden on fragile healthcare systems. In the coming months, there may be multiple such cycles of lockdown and unlockdown. As this becomes the new norm, policymakers and business leaders will repeatedly confront the tradeoff between the resumption of economic activity and the risk of an outbreak<sup>6</sup>. We propose a framework to do this in an organised, minimally-disruptive manner focused on high-density urban areas.

This document is based on discussions of an informal group comprising Kiran Mazumdar Shaw, (Chairperson, Biocon), Kris Gopalakrishnan (Chairman, Axilor Ventures), Prashanth Prakash (Partner, Accel), Revathy Ashok (CEO, B.PAC), Nitin Pai (Director, Takshashila Institution), RK Misra (Carnegie India), Bhavish Aggarwal (CEO, Ola), Hari Menon (Founder, BigBasket) and Anil Shetty, Social Entrepreneur.

## Objectives

The primary objective of reopening is the calibrated resumption of economic activity under the shadow of recurrent outbreaks. We hold that any reopening plan should fulfil the following objectives, in decreasing order of importance.

**1. Managing the risk of outbreak:** In urban Indian contexts, risks of an outbreak are high both for Covid-19 and future pandemics. In order to limit the impact on public health and healthcare systems, managing an outbreak is of the utmost priority. Pooled testing is one solution for disease surveillance in large populations<sup>7,8</sup>. Once an outbreak is detected, lockdowns can be an effective way to flatten the infection curve.

**2. Protecting economically vulnerable segments of society:** Lockdowns impose disproportionate costs on the economically vulnerable<sup>9</sup>, such as daily wage workers. These citizens live in highly cramped conditions, making them vulnerable to infectious disease, and are often not fully within the ambit of welfare systems, making them vulnerable to job loss. Ensuring that their lives and livelihoods are not unduly impacted is a key priority in the imposition and lifting of lockdowns.

**3. Producing essential goods and services:** In some parts of the country, lockdown implementation has disrupted supply chains for essential goods and services<sup>10</sup>. Though this has been addressed in the MHA's new guidelines, such disruptions must be avoided at all costs in future. This will ensure that citizens can comfortably adhere to lockdown guidelines and cooperate with authorities in reducing the spread of a pandemic.

**4. Resuming productive economic activities:** Once the risk of an outbreak is contained, economic activities must be restored to normalcy at the earliest. Sectors that provide the maximum employment and contributions to GDP should be able to scale back operations rapidly without increasing the risk of outbreak.

**5. Maintaining social harmony:** A pandemic can create an environment of fear that erodes trust between social groups<sup>11</sup> – economic, religious, ethnic, and linguistic. This is exacerbated by confusion and miscommunication between authorities. This can be managed by a transparent, step-by-step mechanism that keeps the public regularly informed as lockdowns are imposed, and provides a clear roadmap to the restoration of normal social and economic activities.

Though reopening plans are now being developed to address the current Covid-19 crisis, we suggest that this plan be folded into a State Epidemic Control Strategy for continuous ongoing implementation. State Epidemic Control Strategies should be able to rapidly respond to any fresh outbreaks while meeting the objectives outlined above.

Many ancillary factors also increase the risk of outbreaks. Governments should use the reopening period to address related problems like road traffic, urban congestion and public hygiene. These not only reduce the risk of future outbreaks but also stimulate economic activity and improve living and working conditions for Indian citizens.

## How to Calibrate Reopenings

The basis of our reopening strategy is calibration. Calibrated reopening is a data-based flexible response to an emerging situation. It allows the government assess the risk of pandemic outbreak, declare a threat level, and tighten or relax restrictions proportionately. By dynamically managing restrictions in response to local conditions, this minimises disruptions due to top-heavy responses.

The basis of the imposition or lifting of lockdowns must be continuous, ongoing testing of at least 1% of the population of each district. As the threat of an outbreak increases, the rate of sampling must be stepped up, and random sampling of high-risk clusters must be implemented.

### *Threat Levels*

Threat Level	Meaning	Action
<b>RED 3</b>	Massive Community Spread	Maximum Lockdown
<b>RED 2</b>	Significant Local Spread	Lockdown
<b>RED 1</b>	Limited Local Spread & Traceable Imported Cases	Limited Lockdown
<b>ORANGE</b>	Limited Number of Cases/Imported Cases	Restricted Activity
<b>YELLOW</b>	Few New Cases/Limited Spread	Public Caution
<b>GREEN</b>	No New Cases	Monitoring

*Table 1. Levels of risk of disease outbreak in decreasing order of severity, and corresponding actions that governments should take.*

- **Red 3:** Community transmission is well under way in a dense population cluster. At this threat level, the focus is on isolation and treatment of all at-risk citizens. The pandemic must be dealt with on a war footing and all potential means of spread stopped in their tracks. All non-essential movement of goods, people, and services must be prohibited, inter and intra-state travel stopped, and even essential goods and services restricted.

- **Red 2:** Significant spread is detected in a geographic locality. At this threat level, the focus is on reducing the rate of infection so that the healthcare system is not overwhelmed. This is the current state of the pandemic in India as per official numbers on April 18th, 2020. All non-essential movement of goods, people and services must be restricted, though commercial activity can still continue through home delivery and the transport of goods across state borders (with appropriate testing and safeguards). Working from home is mandated.

- **Red 1:** Moderate spread is detected, but imported cases and their contacts can be traced and isolated. At this threat level, the focus is on reducing the spread of the disease while avoiding a complete shutdown of economic activity. Office activities and public transport are permitted but limited, with a proportion of the workforce being mandated to work from home. Commercial activities are permitted only if social distancing is enforced.

- **Orange:** A limited number of cases (imported or otherwise) are detected, without evidence of spread. The focus is on continuing most economic activities while taking measures to ensure that there is no further spread. All activities that do not involve sustained public gatherings of more than 10 people are permitted. Social distancing and working from home are advised for most establishments. See Appendix A for details.

- **Yellow:** A few new cases are detected, without evidence of spread. Most activities can continue as normal, though public gatherings are discouraged and advisories issued to citizens and businesses.

- **Green:** No new cases are detected. Economic and social activities continue as normal with continuous ongoing testing and monitoring of the situation.

## Proposed Indicators for Calibration

Monitoring the following indicators can give policymakers and business leaders a sense of the disease spread and the threat levels that will/should be imposed. In general, imposing restrictions proactively better meets the objectives of our national reopening strategy than lifting them early and risking a new wave of infections.

T1 Total number of positive cases	T2 Absolute number of new cases/day	T3 Rate of growth of new cases as a percentage of testing	T4 Detection of new clusters	T5 Community Transmission
<p>For every 10% of ICU capacity, raise threat level</p> <p>Lower threat level for every 20% reduction under ICU capacity</p>	<p>Raise threat level if there is consistent increase over 4 days</p> <p>Lower threat level if there is consistent decrease over 14 days</p>	<p>Raise threat level if there is consistent increase over 4 days</p> <p>Lower threat level if there is consistent decrease over 14 days</p>	<p>Raise threat level if there are significant new clusters (&gt; 5 cases)</p>	<p>Immediately raise threat level to Red/higher Red</p>

Figure 1. Proposed indicators for calibration, with criteria for raising or lowering the threat level.

### •T1: Total Number of Positive Cases

This is the total number of individuals who have tested positive for an epidemic disease. Policymakers should look at this in conjunction with an indicator of healthcare capacity, such as ICU beds. This provides a rough estimate of the threat posed to healthcare systems. As the system's capacity is used up – for example, a 10% occupation of ICU beds – the threat level should be raised.

A higher standard should be used to assess whether the system has managed to contain the outbreak. For example, a 20% reduction in ICU bed occupation is a sign that the threat level should be reduced.

The suggestion of using ICU beds is made on the assumption that ICU beds will be a bottleneck in delivering positive health outcomes. However, if other services in the healthcare system get overwhelmed, the parameter should be shifted to that service in an evidence-based manner.

### • T2: Absolute Number of New Cases per Day

This is the number of new cases revealed by random sampling per day. Assuming that that sampling is sufficiently representative, a consistent increase in this indicator is a sign of rapid disease spread.

As with T1, a higher standard should be used to reduce threat levels than to increase it. For example, threat levels should be raised if the absolute number of new cases per day increases for 4 days. They should be reduced if the absolute number of new cases per day decreases for 14 days.

- **T3: Rate of Growth of New Cases as a percentage of testing**

In conjunction with T2, this is a sign of rapid disease spread. As threat levels are ramped up, testing must also increase. If increased testing uncovers a disproportionate increase in the growth of new cases, it means that the threat of an outbreak has increased. As with previous indicators, higher standards are needed to reduce threat levels than to increase them: an increase in T3 over 4 days should lead to an increase in threat level, whereas a decrease over 14 days should lead to a decrease in threat level.

- **T4: Detection of New Clusters**

If testing uncovers a new geographic cluster of infections (more than 5 cases), identified either through contact tracing or random sampling, threat levels should immediately be increased.

- **T5: Community transmission**

Detection of community transmission should immediately prompt a raising of threat levels to one of the Red levels. Which specific level depends on the other indicators.

## Summary of Indicators and Threat Levels

Monitoring of the above threat indicators leads to a threat level classification. Each threat level requires a response of varying degrees of strictness in order to meet the objectives discussed above. These are summarised below.

Level	Red 3	Red 2	Red 1	Orange	Yellow	Green
<i>Indications</i>	Massive community spread	Significant local spread	Limited Local spread/ Traceable imported cases	Limited imported cases	Limited new cases; very little spread	No new cases; no new spread in a 45-day period
<i>Metric</i>	Change in all indicators	Changes in all indicators	Changes in all indicators	Changes in some indicators	New cases detected	All 5 indicators are zero
<i>Response</i>	Maximum Lockdown	Lockdown	Limited Lockdown	Restricted Activity	Public caution	Monitoring
<i>Example</i>	Only emergency services, utilities and telecom services permitted	Emergency, utilities, telecom and essential business services	Limited commercial activities with mandatory social distancing	All activities that do not involve sustained public gatherings (>10 people)	All activities permitted; public gatherings discouraged and monitored	All activities permitted
	All transport banned	Limited local transport allowed	Local transport allowed	Intra-state transport allowed	Long-distance transport allowed	

Table 2. Summary of threat levels with corresponding indicators and responses needed.

## Calibrated Reopenings in Urban Areas

We categorised economic sectors, socio-economic activities, and transport activities into the following framework. The key takeaway is that most activity should be allowed (provided risk of transmission is minimised) in most threat levels. Essential services and the movement of goods are the only exception, being allowed in Red 2. However, even these should be restricted as necessary in Red 3.

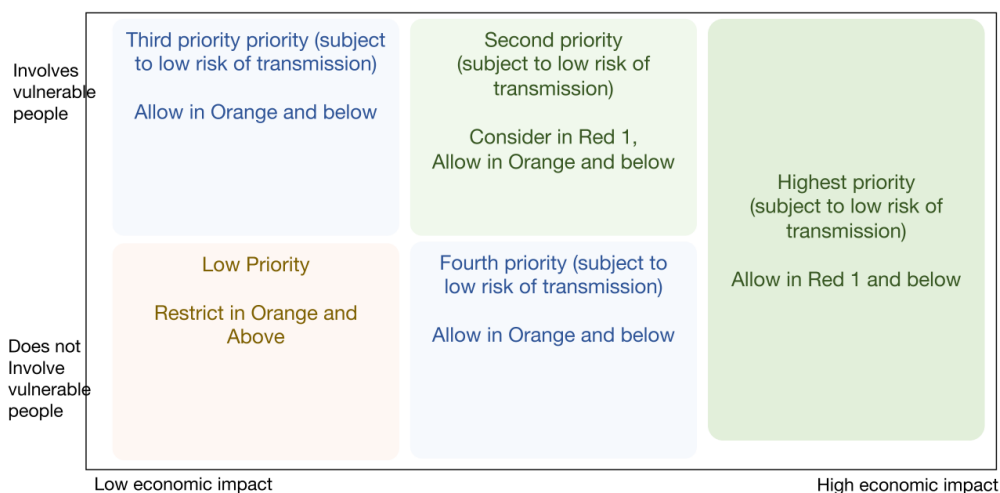


Figure 2. Analytical framework for economic activities. On one axis, we examine how the activity involves vulnerable people. On the other, we analyse its overall economic impact.

- **Highest Priority:** Sectors or activities that employ or impact a large number of people and have high economic impact, such as IT/ITES and retail services. These activities are allowed with minimal restrictions for Orange, Yellow and Green threat levels.
- **Second Priority:** Sectors or activities that employ vulnerable people and have medium economic impact, such as taxis and domestic services. These activities are allowed with minimal restrictions for Orange, Yellow and Green threat levels. They can be allowed, with restrictions, for the Red-1 alert level as well.
- **Third Priority:** Sectors or activities that impact vulnerable people and have low economic impact. These activities are allowed with minimal restrictions for Orange, Yellow and Green threat levels.
- **Fourth Priority:** Sectors or activities that do not impact vulnerable people and have medium economic impact, such as private educational



establishments. These activities are allowed with minimal restrictions for Orange, Yellow and Green threat levels.

- **Low Priority:** Sectors or activities that do not impact vulnerable people and have low economic impact, such as luxury retail. These activities are allowed with minimal restrictions for Yellow and Green threat levels.

## Summary of Calibrated Reopenings by Sector

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Level	Red 3	Red 2	Red 1	Orange	Yellow	Green
Essential Services	Restricted	Allowed	Allowed	Allowed	Allowed	Allowed
Government offices	WFH Mandated	WFH Mandated	WFH+Office	WFH Advised	Cautioned	Allowed
Industrial operations	WFH Mandated	WFH Mandated	WFH+Office	WFH Advised	Cautioned	Allowed
Services and Offices	WFH Mandated	WFH Mandated	WFH+Office	WFH Advised	Cautioned	Allowed
Commercial & Retail	Not Allowed	Home Delivery	SD Enforced	SD Advised	Cautioned	Allowed
Schools & Colleges	WFH /Closed	WFH/Closed	WFH/Closed	WFH/Closed	Cautioned	Allowed
Domestic Services	Not Allowed	Not Allowed	SD Enforced	SD Advised	Cautioned	Allowed
Public spaces	Not Allowed	Not Allowed	Not Allowed	Restricted	Restricted	Allowed
Public gatherings	Not Allowed	Not Allowed	Not Allowed	Not allowed	Restricted	Allowed
Local transport	Highly Restricted	Goods only	Limited Operations	SD Advised	Cautioned	Allowed
Intra-state transport	Highly Restricted	Goods only	Limited Operations	SD Advised	Cautioned	Allowed
Inter-state transport	Not Allowed	Goods only	Goods only	SD Advised	Cautioned	Allowed

Table 3. Calibrated Reopenings by Sector. Most economic sectors should continue to function with appropriate public health measures provided that the threat level is not Red. Short of Red-3, we suggest that some goods traffic can continue.

## Summary of Calibrated Reopenings by Activity

Level	Red 3	Red 2	Red 1	Orange	Yellow	Green
Home Delivery	Restricted	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Precautions recommended	Allowed
Small Retail Shop	Restricted	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Precautions recommended	Allowed
Supermarket/Counter services	Restricted	Restricted	Restricted	Mask, SD, Sanitisation	Precautions recommended	Allowed
Restaurants/Cafeterias	Restricted	Restricted	Restricted	Mask, SD, Sanitisation	Precautions recommended	Allowed
Office workspace	Restricted	Restricted	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Precautions recommended	Allowed
Office – Meeting Room	Restricted	Restricted	Restricted	Restricted	Mask, SD, Sanitisation	Allowed
Factories	Restricted	Restricted	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Precautions recommended	Allowed

Table 4. Calibrated Reopenings by Activity. Precautions should be taken for any non-Green threat level. At the Red-3 level, all activities are restricted.

## Summary of Calibrated Reopenings by Transport

Level	Red 3	Red 2	Red 1	Orange	Yellow	Green
Public Bus*	Restricted	Restricted	Mask, SD, Sanitisation **	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Allowed
Auto rickshaw	Restricted	Restricted	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Precautions recommended	Allowed
Taxi	Restricted	Restricted	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Precautions recommended	Allowed
Private bus	Restricted	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Precautions recommended	Allowed
Private car/pool	Restricted	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Precautions recommended	Allowed
Two wheeler	Restricted	Restricted	Mask, SD, No pillion	Mask, SD, No pillion	Precautions recommended	Allowed
Pedestrian movement	Restricted	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Precautions recommended	Allowed
Cargo/Goods vehicles	Restricted	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Mask, SD, Sanitisation	Precautions Recommended	Allowed
Tractors	Restricted	Restricted	Restricted	Restricted	Precautions recommended	Allowed
Local Bus Stands	Restricted	Restricted	Only if SD feasible	Mask, SD, Sanitisation	Precautions recommended	Allowed
Outstation Bus/Railway Station	Restricted	Restricted	Only if SD feasible	Mask, SD, Sanitisation	Precautions recommended	Allowed
Airport	Restricted	Only if SD feasible	Only if SD feasible	Mask, SD, Sanitisation	Precautions recommended	Allowed

Table 5. Calibrated Reopenings by Transport. As the threat level increases, traffic needs to be reduced, and public transport should operate at lower capacity. At Red-3, all transport is restricted.

## Recommendations for a national reopening strategy

1. The Union government should devolve decisions on lockdowns to State governments, since most healthcare delivery is done by them. However, the Government of India should retain the powers to impose a decision in the broader national interest.
2. State governments should implement lockdowns at the district level or lower, based on their risk assessment. In cities, municipal wards should be the smallest units of control.
3. The Union government and State government should determine inter-state and intra-state travel restrictions respectively, as per their Constitutional remit. The Government of India should decide on the closing and opening of airports and railway stations, and air and rail services, ideally in consultation with state governments.
4. The Union government should facilitate information sharing and coordinate responses among the states.
5. The relaxation of the lockdown must be carefully planned and implemented prudently. Overall, social distancing measures, wearing of masks, hand hygiene and public hygiene should be mandatory until September 2020, and renewed for as long as necessary. See Appendices A&B for details.

## ***State Level Implementation Details***

1. State governments should declare threat levels on a district-by-district basis, based on the five indicators (T1 to T5) of the outbreak. The government can change threat levels at short notice if so required.
2. The Government should also declare a state-wide threat level, which will supersede those of the districts, if it is higher. In other words, where the state and district threat levels are different, the higher one will apply.
3. Threat levels for each district must be reviewed on a daily basis at the State Epidemic Command Centre. The State Epidemic Command Centre bears the sole authority to change the threat level for any district and for the state.
4. If the overall threat level is not green, disease surveillance mechanisms for COVID-19 and other infectious diseases must remain on the highest alert.

## Appendix A: Social Distancing Measures

1. 100% implementation of mask-wearing, handwashing, physical distancing and sanitisation. Employers should be obliged to provide masks, and customers/employees obliged to wear masks. A washing area with water and soap should also be mandated, and hand sanitisers provided at entry/exit points.
2. Underpasses, lifts, escalators, walls, floors, ceilings – any spaces or surfaces where there is a continuous movement of and contact with people – must be constantly sanitised.
3. The number of people at airports, railway stations, bus stands, supermarkets etc. should be minimised. A minimum of 1.5 metre distance should be kept at shops/counters; a minimum of 2.5 metre distance within workplaces; and a two- seat distance in buses.
4. Queues at bus stops, metro stations and platforms should be marked and strictly enforced.
5. Public buses & metro rail services are to sell only 20% of tickets to ensure adequate distancing.
6. The majority of office workers should Work From Home (WFH). Staggered timing should be implemented for those who have to be at the office.
7. Factories should create operating pods, reduce people per shift and create physical separation.

## Appendix B: Additional control measures to improve public health

1. Strongly advise the universal use of handwashing and face masks in public places and workplaces. Education on proper use of masks and handwashing is necessary.
2. Advise work-from-home across industries to the extent possible.
3. Traffic must be smoothed by staggering the opening hours of offices, schools and business establishments.
4. Control personal car usage through colour-coded passes valid for certain days of the week.
5. Implement paid parking in congested/busy areas.
6. Strict enforcement against triple riding on two-wheelers and over-crowding of passengers in goods vehicles.
7. Strict enforcement against public urination, spitting and littering – accompanied by the complete sanitisation and hygiene management of public toilets and dustbins.
8. Governments should prioritise solid-waste management and strictly enforce rules against dumping.

## References

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- <sup>1</sup> Gilbert, Dominic. "Which countries are under lockdown – and is it working?" *The Telegraph*. 16 April 2020. Retrieved 16 April 2020. <https://www.telegraph.co.uk/news/2020/04/16/countries-in-lockdown-denmark-germany/>
- <sup>2</sup> International Labour Organisation. *ILO Monitor: COVID-19 and the world of work. Second Edition. Updated estimates and analysis*. 7 April 2020. Retrieved 15 April 2020. [https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms\\_740877.pdf](https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_740877.pdf)
- <sup>3</sup> KPMG. *Potential Impact of COVID-19 on the Indian Economy*. April 2020. Retrieved 15 April 2020. <https://home.kpmg/content/dam/kpmg/in/pdf/2020/04/potential-impact-of-covid-19-on-the-Indian-economy.pdf>
- <sup>4</sup> Ministry of Home Affairs, Government of India. *Consolidated Revised Guidelines on the measures to be taken by Ministries/Departments of Government of India, State/UT Governments and State/UT authorities for containment of COVID-19 in the country*. As per MHA Order No. 40-3/2020-DM-I(A) dated April 15 2020. Retrieved April 16 2020. [https://www.mha.gov.in/sites/default/files/MHA%20order%20dt%2015.04.2020%2C%20with%20Revised%20Consolidated%20Guidelines\\_compressed%20%283%29.pdf](https://www.mha.gov.in/sites/default/files/MHA%20order%20dt%2015.04.2020%2C%20with%20Revised%20Consolidated%20Guidelines_compressed%20%283%29.pdf)
- <sup>5</sup> Vishnoi, Anubhuti. "Centre begins district-wise mapping of Covid-19 curve." *Economic Times*. April 12, 2020. Retrieved 15 April 2020. <https://economictimes.indiatimes.com/news/politics-and-nation/centre-begins-district-wise-mapping-of-covid-19-curve/articleshow/75112904.cms>
- <sup>6</sup> Cadena, Child, et al. *How to restart national economies during the coronavirus crisis*. McKinsey & Co. April 2020. Retrieved April 08 2020. <https://www.mckinsey.com/industries/public-sector/our-insights/how-to-restart-national-economies-during-the-coronavirus-crisis>
- <sup>7</sup> Conger, Krista. "Testing pooled samples for COVID-19 helps Stanford researchers track early viral spread in Bay Area". *Stanford Medicine News Centre*. 7 April 2020. Retrieved 16 April 2020. <https://med.stanford.edu/news/all-news/2020/04/testing-pooled-samples-to-track-early-spread-of-virus.html>
- <sup>8</sup> Perappadan, Bindu Shajan. "ICMR suggests using pooled samples for molecular testing". *The Hindu*. 14 April 2020. Retrieved 16 April 2020. <https://www.thehindu.com/sci-tech/health/covid-19-icmr-suggests-using-pooled-samples-for-molecular-testing/article31337482.ece>
- <sup>9</sup> Human Rights Watch. "India: COVID-19 Lockdown Puts Poor at Risk". 27 March 2020. Retrieved April 15 2020. <https://www.hrw.org/news/2020/03/27/india-covid-19-lockdown-puts-poor-risk>
- <sup>10</sup> Ranade, Ajit. "Grain Mountain Amidst Food Insecurity". *The Navhind Times*. April 15 2020. Retrieved April 16 2020. <http://www.navhindtimes.in/grain-mountain-amidst-food-insecurity/>
- <sup>11</sup> The Economist. "Covid-19 presents stark choices between life, death and the economy". April 02 2020. Retrieved April 16 2020. <https://www.economist.com/leaders/2020/04/02/covid-19-presents-stark-choices-between-life-death-and-the-economy>