

Where & When to Lift a Lockdown,
What to Do to enable a Transition
to normalcy?

Aromar Revi, Director, IIHS | 8 April 2020

Section I: How to Decide on Where & When to lift a Lockdown?

There are two significant questions to address in a transition from national-wide lockdown:

- Which locations to maintain/start lifting the lockdown from and under what conditions? (see below)
- Within these locations, what priority activities can ease the lockdown and restore normalcy in a phased manner? (see Sections II to IV)

Effective emergency and disaster risk reduction programmes from India and internationally indicate that an evidence-based risk management approach is the best way to help decide which locations to start lifting a lockdown from. It could also assist in a decision to potentially reimpose a lockdown - as the epidemic may well reappear in locations from which it appears to have been contained.

Composite COVID-19 Risk Index

There are no perfect and proven means of doing this for this form of epidemic, but the construction and daily update of a simple GIS-based normalized unweighted **Composite COVID-19 Risk Index** maybe a useful way forward. This can initially be estimated using projected Census 2011 data and be improved as better data becomes available. A first order approximation of this Index could use the following proxy indicators, to build two sub-indices of potential Exposure and Vulnerability, based on known risk factors:

1. Exposure Index

- a. Population density (*person¹/sq.km*)
- b. Urbanisation (*% urban population⁴*)
- c. Prospective COVID-19 cases in isolation or quarantine (*estimated cases/million population⁴*)
- d. Confirmed COVID-19 +ve cases (*reported cases/million population⁴*)
- e. COVID-19-related deaths (*reported deaths/million population⁴*)

2. Vulnerability Index

- a. % of population above 60 years (*% of population⁴*)
- b. Infant mortality rate (*deaths/1000 live births from latest SRS estimates*)
- c. % of BPL population (*% of population⁴*)
- d. % of migrants of total workers (*% of population⁴*)

Classification of Districts/Locations & Transition Strategies

Districts/locations can then be classified by three Vulnerability and Exposure levels each (low, medium and high) into nine risk categories that would help determine a potential lockdown transition strategy as shown in Table 3, which is only illustrative. **Each level will need to be defined based on analysis of available data and consultation between the Govt. of India and State governments on the definition of each category and appropriate transition strategies, based on experiences from districts and ULBs.**

¹ projected from Census 2011

Table I: Indicative Classification of Districts/ Locations by Composite COVID-19 Risk Index & Transition Strategies				
Vulnerability Index	High	Consider staged Slowdown with enhanced surveillance	Maintain Lockdown	Maintain Lockdown
	Medium	Consider Slowdown with enhanced surveillance	Consider staged Slowdown with enhanced surveillance	Maintain Lockdown
	Low	Consider Restoration with enhanced surveillance	Consider Slowdown with enhanced surveillance	Consider staged Slowdown with enhanced surveillance
		Low	Medium	High
		Exposure Index		

In the short-run vulnerability reduction to address COVID-19 risks have limited potential, except interventions to address the needs of migrants, reduce poverty, increase livelihood security and health and nutrition status. Hence, reduction of exposure and transmission of COVID-19 can be expected to be the most effective immediate interventions. In the medium-run, socio-economic factors especially determinants of vulnerability are expected to drive risk. **Hence, medium-term State and district recovery strategies will be essential to build a national recovery and Reconstruction Plan & financing package.**

Monitoring Exposure & Vulnerability

Daily monitoring by the government of exposure and vulnerability should start immediately in (~725) districts and for all (~500) urban centres of over 1 lakh population. Within a week this should be available at block/urban ward level across the country and constructed into a dashboard that could be shared with relevant public agencies. In a second week, advanced surveillance data from States and districts should be available for (nearly all 6.5 lakh) villages and neighborhoods (in 8,000 urban centres) of the country.

Response Capacity

The reduction of exposure and vulnerability is critically determined by how rapidly India can expand and strengthen its response capacity to address both economic and health risks. This can also be tracked by constructing an indicative multidimensional **Index of Response Capacity** to track and plan pre-emptive responses to the expanding economic and health crisis, as presented below. An improvement of action around this Index could lead to a lagged reduction in the Exposure Index, over time.

Response Capacity Index

- Availability of Healthcare professionals (*doctors/million population⁴*)
- Available Public+ Private Hospital beds (*beds/million population⁴*)
- COVID-19 Tests conducted (*reported tests/million population⁴*)
- Ventilators in Public+ Private Hospital (*reported ventilators/million population⁴*)
- Per capita Release of PDS supplies (*calorie equivalent per capita*)
- Per capita Direct cash-transfer delivered (*Rs./population⁴*)

Section II: Essential Things to Do in a Transition out of a Lockdown during a Health Emergency

Priority to all activities in three critical clusters (Finance & Banking, Health systems and Basic services **in red**) and **10 additional priority activities (in red)** across eight other clusters. *Geographic concentration, sequencing, and speed of implementation of activities to be planned based on a mix of Govt. of India-led and State government-led policies that will define the transition from lockdown to slow down to restoration to strengthening and expansion of services*, as shown in Table 1. Detailed description of these activities are given in Section III, with a focus on non-health system interventions.

- I. Administration & Coordination**
 - a. Strengthen Law & Order**
 - b. Strengthen State & District Emergency management systems**
 - c. Restore functioning of State & District Administration & Development activities**
 - d. Strengthen Emergency Communication and Citizen outreach
 - e. Restore functioning of Courts & Justice system
- II. Finance & Banking**
 - a. Restore & Expand Banking, Post Office, ATM & Treasury services
 - b. Deliver & expand special Fiscal & Financial Package to State Governments
 - c. Deliver & Expand Debt support & Credit package for enterprises & farmers
- III. Health Systems**
 - a. Strengthen & Expand Health Surveillance esp. COVID-19 screening, testing & quarantining
 - b. Strengthen and Expand Health services and critical care for COVID-19
 - c. Protect frontline health and other workers exposed to COVID-19
 - d. Restore Health system functioning to address Other Infectious Diseases, NCDs and vulnerable populations
 - e. Restore & Expand Pharmaceutical & Medical Equipment supply chains
- IV. Basic Services**
 - a. Maintain stable Power supply
 - b. Maintain stable Fuel supply
 - c. Strengthen and Augment ICT services
 - d. Maintain stable Water supply services
 - e. Restore stable Sanitation and Solid waste services
- V. Hunger, Food security, Agriculture, Forestry & Allied Activities**
 - a. Strengthen and Expand PDS & delivery of in-kind support**
 - b. Restore the production & supply chains for milk, eggs, meat, fish, fruits & vegetables
 - c. Support farm-based activity esp. the Rabi harvest**
 - d. Enable the safe movement of farm labour and workers
 - e. Restore irrigation and agricultural services
 - f. Restore the production & supply chain for NTFPs and forest-based products
- VI. Poverty, Livelihoods & Social Protection**
 - a. Expand & enhance Direct Cash transfers, Enhanced Pensions and Income support**
 - b. Expand & enhance Livelihood Guarantee Programmes in rural & urban areas
 - c. Protect Workers and their livelihoods esp. in the informal sector**
 - d. Protect and address the needs of migrant workers and migrant families
 - e. Protect and address the needs of vulnerable groups
- VII. Transportation Systems**
 - a. Restore & expand goods transport by rail, truck, air and ship**
 - b. Restore Interstate and Intrastate Passenger transport by rail, bus and boat**
 - c. Restore & Expand Intracity public transport (rail, metro & bus)
 - d. Restore Intracity private transport
 - e. Restore Domestic & International Passenger air transport
- VIII. Restoring and Enhancing Supply Chains**
 - a. Restore & expand supply chains for essential services**
 - b. Restore warehouses and cold chain services
 - c. Expand the production of essential materials and products
- IX. Construction & Housing**
 - a. Restore & Expand Construction & Housing activity
- X. Education Systems**
 - a. Restore School & University functioning

Summary Table I: Forty Essential Things to Do in a Transition out of a Lockdown during a Health Emergency: Indicative Current status & potential Transition Scenarios

S.No	PRIORITY ACTIONS	Indicative Current Status		Indicative Transition Scenarios							
		ALL INDIA	STATES	Govt. of India-led				State Govt-led			
				I	II	III	IV	V	VI	VII	
ADMINISTRATION & COORDINATION											
1	Strengthen Law & Order	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
2	Strengthen State & District Emergency management systems	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗
3	Restore functioning of National, State & District Administration & Development activities	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
4	Establish Stakeholder & Civil Society coordination		↘					↘	↘	↘	↘
5	Strengthen Emergency Communication and Citizen outreach	↗	→	↗	↗	↗	↗	↗	↗	↗	↗
6	Restore functioning of Courts & Justice system	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
FINANCE & BANKING											
7	Restore & Expand Banking, Post Office, ATM & Treasury services	↘	↘	→	↗	↗	↗	↗	↗	↗	↗
8	Deliver & expand special Fiscal & Financial Package to State Governments	↘		↗	↗	↗	↗	↗	↗	↗	↗
9	Deliver & Expand Credit & Debt support package for enterprises & farmers	↘		↗	↗	↗	↗	↗	↗	↗	↗
HEALTH SYSTEMS											
10	Strengthen & Expand Health Surveillance esp. COVID-19 screening, testing, isolation & quarantine services	↗	→	↗	↗	↗	↗	↗	↗	↗	↗
11	Strengthen and Expand Health services and critical care for COVID-19		→					→	→	→	→
12	Protect frontline health and other workers exposed to COVID-19		→					→	→	→	→
13	Restore function of Health systems to address Other infectious Diseases, NCDs and other vulnerable populations	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
14	Restore & Expand Pharma & Medical Equipment supply chains	↘	↘	→	→	→	→	→	→	→	→
BASIC SERVICES											
23	Maintain stable Power supply	↗	→	→	→	→	→	→	→	→	→
24	Maintain stable Fuel supply	↗	→	→	→	→	→	→	→	→	→
25	Strengthen and Augment ICT services	↗	↗	↗	↗	↗	↗	↗	↗	↗	↗
26	Maintain stable Water supply services		→					→	→	→	→
27	Restore stable Sanitation and Solid waste services		↘					↘	↘	↘	↘
HUNGER, FOOD SECURITY, AGRICULTURE, FORESTRY & ALLIED ACTIVITIES											
15	Strengthen and Expand PDS & delivery of in-kind support	→	→	↗	↗	↗	↗	↗	↗	↗	↗
16	Restore the production & supply chain for milk, meat, fish, fruits & vegetables	↘	↘	→	↗	↗	↗	↗	↗	↗	↗
17	Support farm-based activity esp. the Rabi harvest	→	→	↗	↗	↗	↗	↗	↗	↗	↗
18	Enable the safe movement of farm labour and workers	→	→	↗	↗	↗	↗	↗	↗	↗	↗
19	Restore irrigation and agricultural services	→	→	→	→	→	→	→	→	→	→
20	Restore the production & supply chain for NTFPS and timber-based products	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
POVERTY, LIVELIHOODS & SOCIAL PROTECTION											
18	Expand & enhance Direct Cash transfers, Enhanced Pensions, Income support	→	→	↗	↗	↗	↗	↗	↗	↗	↗
19	Expand & enhance Livelihood Guarantee Programmes in rural & urban areas	→	→	↗	↗	↗	↗	↗	↗	↗	↗
20	Protect Workers and their livelihoods esp. in the informal sector	↓	↓	→	→	→	→	→	→	→	→
21	Protect and address the needs of migrant workers and migrant families	↓	↓	→	→	→	→	→	→	→	→
22	Protect and address the needs of vulnerable groups	↓	↓	→	→	→	→	→	→	→	→
TRANSPORTATION SYSTEMS											
28	Restore & expand goods transport by rail, truck, air and ship	↘	↘	→	→	→	→	→	→	→	→
29	Restore Inrstate & Interstate Passenger transport by rail, bus and boat	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
30	Restore & Expand Intracity public transport (rail, metro & bus)		↓	↓	↓	↓	↓	↓	↓	↓	↓
31	Restore Intracity private transport		↓	↓	↓	↓	↓	↓	↓	↓	↓
32	Restore Domestic & International Passenger air transport	↓		↓	↓	↓	↓	↓	↓	↓	↓
SUPPLY CHAINS											
34	Restore & expand supply chains for essential services		↘					→	→	→	→
33	Restore warehouses and cold chain services		↘					↘	↘	↘	↘
35	Expand the production of essential materials and products	→	↘	↗	↗	↗	↗	↗	↗	↗	↗
CONSTRUCTION & HOUSING											
39	Restore & Expand Construction & Housing activity	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
EDUCATION SYSTEMS											
40	Restore School & University functioning	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

LEGEND: TRANSITION SCENARIOS		Transition Legend
I	Continuation of National Lockdown for an extended period of time (with expansion of exceptions to economic activity)	Strengthen & Expand ↑
II	Partial Lockdown of Interstate Movement of Passenger & Goods traffic (with expansion of exceptions to economic activity)	Restore ↗
III	Nationwide Resumption of all Interstate Passenger & Goods traffic	Maintain & Protect →
IV	Phased Resumption of Domestic & International air travel	Slowdown ↘
V	Continuing Lockdown of particular State/Districts for an extended period of time (with expansion of exceptions to economic activity)	Lockdown ↓
VI	Partial Lockdown of particular State/Districts of Passenger & Goods traffic (with expansion of exceptions to economic activity)	
VII	State-wide resumption of Passenger & Goods traffic	

Priority Checklist: Actions to support Transition out of a Lockdown during a Health Emergency

This is a broad checklist of key issues to consider at state, district and national level during a partial or complete transition from a national lockdown to full functioning of the economy, infrastructure and administration during a continuing health emergency. This will involve a complex set of state and local decisions to choose an appropriate combination of options, their geographical coverage, sequencing, and speed of implementation. This could change from location to location, within a district and between districts in a state in a dynamic manner.

This transition needs decentralised and delegated response planning, tracking and implementation which are best handled by state and district administrations, within constraints imposed by the expansion of the COVID-19 outbreak and the Govt. of India' guidance, interventions and financial and development support packages.

Turning a national crisis into a Development opportunity for all Indians

This crisis is an opportunity not only to innovate around new universal in-kind and cash entitlements and support, but to rationalise and consolidate existing national and state development programmes and schemes. This can help India's economy, infrastructure and development systems to be built-back better, more effectively, cleaner and greener to reduce vulnerability and enhance system resilience. A special focus on the poor, the malnourished and hungry, the elderly, vulnerable and those whose livelihoods have been lost or risk disrupted is central – as this is potentially the largest economic, social and health disruption the country has experienced since Partition.

Indicative & Illustrative set of Actions: to be recalibrated regularly by each State & District

The following set of actions are only indicative and will need to be calibrated at district and state level, on a daily and weekly basis based on evidence and appropriate information. This builds on an earlier IHS advisory circulated on 29th March 2020 at the request of multiple state governments and district administrators. It does not seek to be comprehensive, but clusters interventions into ten cluster to assist implementation, and within that into three critical clusters (Finance & Banking, Health systems and Basic services **in red**) and 10 priority activities (**in red**) across eight other clusters of activities. This does not pre-empt specialised epidemiological or health systems-related advisories by appropriate authorities. A set of supplementary questions that examine a range of processes that may need to be put into place to prepare for the transition is listed in Section III.

Summary Table I attempts to present a synoptic picture of the current state that country is, at national and state level - in the middle of the lockdown. It then presents a framework to be able to analyse and prioritise a coordinated set of actions necessary to enable a phased transition out of the current nationwide lockdown. Five transitions from the current status of nationwide lockdown (and symbols used in Table 1 are shown in Box1 below)

Box 1: Five Transitions from nationwide Lockdown to restoration of normalcy post-COVID-19

- | | |
|---|---|
| 1. Lockdown [of services] | ↓ |
| 2. Slowdown [of services] | ↘ |
| 3. Maintain and protect [pre-lockdown service status] | → |
| 4. Restore [services] | ↗ |
| 5. Strengthen and expand [services] | ↑ |

How to Read the Summary Table

The summary table lists 40 potential actions across ten clusters of activity. Within them three clusters (Finance & Banking, Health systems and Basic services **in red**) will typically need priority action on all activities. States and district authorities should consider a minimum additional 10 priority activities (**in red**) for immediate prioritisation, after which other less critical activities e.g. opening schools and educational institutions or resuming construction activity could be considered, based on the situation on the ground.

A set of seven indicative transition scenarios have been created to explore a range of implementation options at state and district level, post-15th April 2020. These transition scenarios present a continuum of options (from continuation of the lockdown to opening up of all movement and economic activities) within which the geographical application (neighbourhood, village, ward, Block, district or the entire state), sequencing and speed of transition can be calibrated.

Box 2: Seven Scenarios of Changes in Govt of India and State government Policy

Four potential scenarios of changes in Govt. of India & three of changes in State government policies, are shown below.

Changes in Government of India-led Policies and interventions

- I. Continuation of National Lockdown for an extended period of time:** with expansion of exceptions to economic activity²
- II. Partial Lockdown of Interstate Movement of Passenger & Goods traffic³** with expansion of exceptions to economic activity
- III. Nationwide Resumption of all Interstate Passenger & Goods traffic**
- IV. Phased Resumption of International travel⁴**

Changes in State Government-led Policies and interventions

- V. Continuing Lockdown of particular State/Districts for an extended period of time:** with expansion of exceptions to economic activity
- VI. Partial Lockdown of particular State/Districts of Passenger & Goods traffic:** with expansion of exceptions to economic activity
- VII. Statewide resumption of Passenger & Goods traffic**

Based on the best available information on health impact and risks and economic and livelihood risk, the Govt of India in consultation with the states and other key stakeholders (e.g. railways, airlines and ports) would take a considered policy decision on the roll-out of indicative Scenarios I to IV. *It may be noted, that it is not implausible that a roll-back to selective or nationwide lockdown is possible, if the COVID-19 situation deteriorates alarmingly.*

Each individual State government in consultation with district administration, key stakeholders and citizens should lead on Scenarios V to VII, which would respond to the operational situation in relevant blocks/urban areas and districts and the best available information on health, economic and livelihood risks. It is anticipated that the 21-day lockdown would enable near real time data and surveillance systems in place, that would continually improve over the next few months.

Each of the forty priority actions is qualitatively assessed on its current status for both state governments and based on jurisdiction (e.g. civil aviation with sits with the Centre) the Govt. of India. In principle, with an appropriately chosen set of indicators the same set could largely be constructed for each district or state.

A set of priority actions, their sequencing, timing and speed of execution can be defined, planned for, implemented and monitored to track the full transition to a more resilient and safer post-lockdown situation.

² especially essential economic activities (e.g. agriculture, fisheries)

³ by rail and/or road and/or air and/or boat/ship

⁴ from designated ports, airports and potentially land borders

Section III: Forty Essential Things to Do in a Transition out of a Lockdown

I. Administration & Coordination

1. **Strengthen Law & Order:** to ensure effectiveness of lockdown and transition measures, along with the safety and security of health workers, the ill, elderly, poor, vulnerable, migrants and displaced; along with logistics and supply chains. Preparation for a post-transition surge in demand for area quarantine and isolation support; to address crime, congregations, traffic and congestion management.
2. **Strengthen State & District Emergency management systems:** staff them with key personnel from line departments to keep essential services functional and enable rapid restoration. Establish GIS and analytical capacity to track hot spots and bottlenecks. Establish emergency communication capacity for social, print and broadcast media. Enable information flows from support hotlines and call centres to respond to citizen, stakeholder and frontline staff queries and identify bottlenecks.
3. **Restore functioning of State & District Administration & development activities:** phased restoration of normal functioning of district and state administration, starting with priority departments and functions. Leave rotation of frontline staff active during lockdown to be considered, to prepare for a surge in post-transition work load.
4. **Establish Stakeholder & Civil Society coordination:** through a systematic process of registration and accreditation and weekly review meetings to enable effective coordination of civil society and key stakeholder activities to address COVID-19 and post-lockdown local economic and livelihood recovery.
5. **Strengthen Emergency Communication and Citizen outreach:** by establishing a volunteer team of professionals to assist in daily/weekly emergency communication via social, print, broadcast and electronic media, based on information from emergency management systems. Establish a citizen outreach mechanism with call centre, internet and social media support and analytics to track performance of responds to complaints and suggestions and clearing bottlenecks.
6. **Restore functioning of Courts & Justice system:** phased restoration of local, district and High court functioning and of the justice system, with appropriate distancing to reduce the risk of transmission.

II. Finance & Banking

7. **Restore & Expand Banking, Post Office, ATM & Treasury services:** required for the delivery of direct cash transfers, enhanced pensions etc. and keeping essential services and government functioning moving. If local cash supply is reported to be low, consider replenishment as it is the lifeline of the informal economy. Establish cross-functional task force to enable expansion of digital /extended financial inclusion and access to all eligible citizens resident in the district/state. Establish systems to track the functioning of direct cash transfers and delivery and plug expected leaks.
8. **Deliver & expand special Financial Package to State Governments:** Creation of an appropriate macro-monetary and fiscal package by the Govt. of India to support State governments, in addition to existing transfers, central schemes and assistance. Translation and enhancement by state governments into a simple set of development and regulatory interventions that address key emerging challenges: e.g. hunger, livelihood losses and enhanced poverty and vulnerability, deepening debt and credit access, enterprise bankruptcies, speculation and hoarding. District wise planning, implementation and monitoring mechanisms with monthly review and recalibration.
9. **Deliver & Expand Debt support & Credit package for enterprises & farmers:** Creation of appropriate debt support and credit enhancement package by the Govt. of India, to be enhanced and customized by State governments to address critically stressed sectors and groups including farmers, migrants, own-account, micro and small & medium enterprises, trade, transport, hospitality, commercial and personal services. Link this with an expansion of digital/extended financial inclusion.

III. Health Systems

10. **Strengthen & Expand Health Surveillance esp. COVID-19 screening, testing, isolation & quarantine support services:** to rapidly expand surveillance, isolation and quarantining of individual cases, communities, neighbourhoods and towns/villages to enable the effective implementation of isolation and quarantine strategies, using both public and private facilities, to limit the outbreak and reduce the burden on hospitals, health facilities and health workers during a surge in critical cases.
11. **Strengthen and Expand Health services and critical care for COVID-19:** to strengthen current infrastructure and services and prepare for the expected surge of critical cases, especially those with underlying medical conditions. Plan for and target potential service coverage based on the changing intensity and distribution of the outbreak.
12. **Protect frontline health and other workers exposed to COVID-19:** to ensure continuity of surveillance and critical care and the delivery of essential medical and other services like sanitation.
13. **Restore function of Health systems to address Other infectious Diseases, Non-Communicable Diseases (NCDs) and other vulnerable populations:** prepare health systems to return to address key non-communicable (e.g. heart disease) and infectious diseases (e.g. malaria and TB) that constitute the largest causes of death and illness in India.
14. **Restore & Expand Pharmaceutical & Medical Equipment supply chains:** to address the requirements for personal protective equipment (PPE), testing, medical equipment for critical care, appropriate vaccines and medication for COVID-19 when they become available over the next 12-18 months according to WHO. Also medication and supplies for other infectious diseases and NCDs.

IV. Basic Services

15. **Maintain stable Power supply:** focusing on distribution infrastructure to ensure uninterrupted residential and agricultural power, and rapid post-lockdown restoration of supply to industries and commercial establishments.
16. **Maintain stable Fuel supply:** and appropriate stocks (of diesel, petrol, LPG and CNG) to maintain goods transportation, emergency services vehicles; backup or captive power supply to critical infrastructure (e.g. mobile towers, telecom systems and data centers, hospitals); critical manufacturing facilities, warehouses and cold chains, agriculture and allied activity, and prepare for the surge in public and private passenger demand post-lockdown.
17. **Strengthen and Augment ICT services:** phone, mobile phone, internet, TV, print and electronic media to enable connectivity for all citizens, and an open and transparent interface with state and local administration. Establish helplines to respond to citizens in distress, highly vulnerable and special groups (e.g. migrants) with private sector support. Enable digital access educational, small-scale service and civil society institutions to enable online learning, skill and business development where appropriate.
18. **Maintain stable Water supply services:** to limit the risk of water-related diseases, especially with large populations living in dense conditions in urban and rural areas. Regular pipeline-based or tanker supply to water-scarce areas. Stable power supply where supply depends on pumping groundwater.
19. **Restore stable Sanitation and Solid waste services:** to maintain and improve sanitary conditions, in preparation for a post-lockdown surge. Utilise the lockdown to enhance solid waste segregation at source and its recycling. Enhanced protection of frontline sanitation and solid waste workers exposed to COVID-19.

V. Hunger, Food security, Agriculture, Forestry & Allied Activities

20. **Strengthen and Expand PDS & delivery of in-kind support:** required for the delivery of in-kind support (e.g. food, civil supplies, kerosene and LPG) including tracking stocks, enabling daily movement, and protecting and supporting the informal sector workers, who keep these systems running. Special care to maintain supplies to Aanganwadi and mid- day meal programmes, hospitals and critical care facilities and to elderly, vulnerable and remote populations. Expansion of universal access to PDS

supplies and channels, including emergency registration of all households who have applied and wish to apply for PDS access.

21. **Restore the production & supply chains for milk, eggs, meat, fish, fruits & vegetables:** to stabilise the production and supply chains for vegetables and fruit, milk, eggs, meat and fish, their markets, distribution, cold and retail chains to enable nutrition security esp. of vulnerable and malnourished groups; mid-day meal and emergency feeding programmes, along with adequate incomes of producing groups and enterprises.
22. **Support farm-based activity esp. the Rabi harvest:** to support the expected bumper rabi harvest starting in April 2020, including appropriate MSP interventions, normalization and expansion of primary and secondary agricultural markets and safe movement of workers and agricultural produce.
23. **Enable the safe movement of farm labour and workers:** across and within states to enable harvest and agricultural operations. Safe movement of large numbers of workers by both rail and bus, involving appropriate education, screening, surveillance, testing, and isolation if infected with COVID-19. Excessive constraints to this could have impacts on regional and national food security, hunger and malnutrition and drive millions of landless labour and migrant workers into poverty.
24. **Restore irrigation and agricultural services:** both surface and groundwater-based irrigation and agricultural services, including enhanced credit, to enable the continuing production of summer and fodder crops, fruits and vegetables and preparation for the kharif sowing.
25. **Restore the production & supply chain for NTFPs and forest-based products:** to enable livelihood and energy security of forest-dwelling and forest-dependent populations dependent on non-timber forest products and forest-based products, to protect them from falling into poverty and destitution.

VI. Poverty, Livelihoods & Social Protection

26. **Expand & enhance Direct Cash transfers, Enhanced Pensions and Income support:** based on the Govt. of India monetary and fiscal support policy and State government resources and priorities to expand and enhance direct-cash transfers, pensions and income support schemes to become near universal and include all poor, elderly and vulnerable households.
27. **Expand & enhance Livelihood Guarantee Programmes in rural & urban areas:** expand the coverage of livelihood support and guarantee programmes to address short to medium-term disruptions in rural and urban areas, based on altered norms and expansion of Govt. of India assistance supplemented by State government resources.
28. **Protect Workers and their livelihoods esp. in the informal sector:** especially migrants and those in the informal sector, including income and livelihood support, rent and debt moratoria. Special support package for labour intensive informal livelihoods, micro and SMEs and preferential procurement of public and formal supply chains from them. Personal Protective Equipment (PPE) to all frontline health and sanitation workers. Appropriate protection and training measures to other near-frontline workers maintaining law and order, administrative, lifeline infrastructure and essential supply functions.
29. **Protect and address the needs of migrant workers and migrant families:** including safety, health care, livelihood security, income and credit support in both destination and source areas (during their transit or return to their homes)
30. **Protect and address the needs of vulnerable groups:** e.g. the homeless, elderly, prisoners, mentally challenged and persons with disability via direct-cash transfers and enhanced pensions, possible home delivery, emergency feeding, in-kind assistance, preferential health support and medical screening.

VII. Transportation Systems

31. **Restore & expand goods transport by rail, truck, air and ship:** to first restore and then expand maintain intrastate and interstate movement of food and essential supplies, continuous process and strategic production units, and then all commercial activity. This may be an opportunity to facilitate a modal shift to more efficient, low-carbon modes like rail or ro-ro rail services.

32. **Restore Intrastate and Interstate Passenger transport by rail, bus and boat:** phased restoration of inter-state and inter-district passenger transport based on a daily tracking of transmission patterns, risks and case load. An emphasis on only necessary trips, proper disinfection, distancing, and surveillance till the COVID-19 outbreak is contained. Strong and effective measures to ensure improvement and safety in public transport could encourage a modal shift.
33. **Restore & Expand Intracity public transport (rail, metro & bus):** phased restoration of public transport within urban, peri-urban and rural areas with an emphasis on proper disinfection, distancing, surveillance and only necessary trips till the COVID-19 outbreak is contained. Strong and effective measures to ensure improvement and safety in public transport could encourage a modal shift.
34. **Restore Intracity private transport:** phased restoration of private transportation to attempt to ramp up economic activity but also maintain some of the air pollution and traffic accident mortality gains of the lockdown period, by encouraging a shift to public or active transport. Preference on active transport, like bicycles through which distancing norms can be maintained. Adequate preparation for post-lockdown surge in traffic and congestion.
35. **Restore Domestic & International Passenger air transport:** based on the Govt. of India' reading of the risks of: restoration as the COVID-19 outbreak that was brought to India by international air passengers and multiple wave of future infections. Effective screening, testing, tracing and isolation procedures for international traffic, along with proper disinfection and distancing practices in domestic flights.

VIII. Restoring and Enhancing Supply Chains

36. **Restore & expand supply chains for essential services:** by addressing bottlenecks in underlying lifeline services and informal-formal sector arrangements across distribution and retail chains. Opening a dialogue with key stakeholders and enabling a staged relaxation of lockdown conditions and removing bottlenecks to rapid recovery of pre-lockdown logistics chains. This may be an opportunity to incentivize and regulate the conditions under which the 'gig economy' supply chains operate and provide enhanced security of employment, in advance of the expected expansion of the sector.
37. **Restore warehouses and cold chain services:** to support the PDS, essential services and economic recovery, by tracking and ensuring adequate stocks of supplies and functioning, protection of public, private and informal supply chains. This may be an opportunity to rationalize and improved the supply chain for key public (e.g. PDS services) and other essential services.
38. **Expand the production of essential materials and products:** e.g. drugs, medical supplies, food, cooked food, household supplies, and other products that have emerged to be essential during the lockdown. This could be the basis for concerted local or state production to generate local economic activity and employment and increase system resilience. Facilitation via directed investment flows and incentives, improved basic infrastructure and services and skilled workers in each district, linked local economic development, and skill and enterprise development.

IX. Construction & Housing

39. **Restore & Expand Construction & Housing activity:** phased restoration and expansion of housing and construction activity undertaken by public agencies, employment guarantee works, communities and artisans, private agencies and real estate firms as part of a nationwide structured employment and growth stimulus. A freeze on all evictions, tenure security, rent and EMI moratoria and rent support to low-income and migrant households.

X. Education Systems

Restore School & University functioning: phased restoration of the full functioning of academic institutions (schools, colleges and universities) run by the Central and State governments and the private sector, including holding of examinations and completing entrance formalities.

Section IV: Twenty Key Process Questions to be Addressed to Prepare for the Transition

1. **Is there a phased Plan for a State lockdown transition that takes into account COVID-19 transmission and Govt. of India policy guidance?** How is this operationalised at district level and across sectors? Is the delegation of authority, responsibility and financial powers adequate?
2. **Has the process for initiating a medium-term (12-18 month) recovery plan been initiated?**
3. **Is there a State Financial, Debt support and Credit package in place?** Does it converge the Central special assistance, transfers and schemes with State schemes and priorities?
4. **Are the Lockdown Transition and Financing plans in alignment with the emergent need of health systems to address COVID-19 and return other health functions to deliver core services?**
5. **Is there adequate planning to ensure support to agricultural activity and services, the rabi harvest and agricultural and allied supply chains?** Is the safe movement of enough farm workers ensured?
6. **Are the mechanisms to expand the coverage of the PDS in-kind and direct cash transfer systems in place?** Can they be expanded to deliver near universal coverage?
7. **Are all basic services functioning or can they be ramped up rapidly?** Are these being monitored?
8. **Is there a plan to expand goods transportation and passenger transportation in a phased manner?** Is this in consonance with contingency plans to contain transmission?
9. **Is there a Plan in place to restore key supply chains along with key stakeholders?**
10. **What are the regular/emergency regulations or administrative orders required to execute these actions?** Who is responsible for issuing them? Who is responsible for oversight?
11. **Is information on each of these questions flowing to each district control room and being physically or digitally mapped each day?** Is aggregated information flowing to the State Situation room?
12. **Is there a contingency plan to address scarcity of resource flows?** Does this prioritise the poor and vulnerable and remote locations? Who is responsible for oversight?
13. **Is there an emergency communication plan in place and channels of emergency communication, in place from: citizens, stakeholders, local functionaries to district and state situation rooms?**
14. **Is there a Citizen and Stakeholder outreach mechanism in place?** Is it prepared to assist in the post-lockdown transition and assist the administration to address local and sectoral bottlenecks?
15. **Is the production of food, civil supplies and essential commodities continuing?** If not, how can these units be restarted and augmented, or cross-border logistics arrangements made?
16. **Where is the expected need/demand for commodities/services going to come from?** At what frequency will it require replenishment? Who is the nodal institution/person responsible?
17. **Where are key stocks of supplies located?** How can they be replenished? Who controls them? How can they be requisitioned? How can large stocks be secured?
18. **Where are the financial resources required to pay for supplies, personnel & transport?** Who will release them? At what frequency? Under whose authority?
19. **Are there mechanisms in place to regulate and enforce prices of essential commodities** and widely available information on what these prices are set at?
20. **Is there a contingency plan to maintain law and order and maintain essential services and supplies** with Army and paramilitary force assistance, if the civil administration needs to call upon them?

IIHS

The [Indian Institute for Human Settlements \(IIHS\)](#) is a national education institution committed to the equitable, sustainable and efficient transformation of Indian settlements. IIHS also provides advisory services to the national and state governments, public, parastatal and municipal agencies, international development agencies and non-profits at the interface of human settlements and urbanisation.

A core of IIHS mission is to contribute towards India's sustainable urban transformation and enable large scale impact. Over the decade, the IIHS has worked extensively on innovation and problem solving at scale in sectors like sanitation, disaster risk and resilience, housing, energy, land governance and planning, climate adaptation and mitigation.

Aromar Revi

[Aromar Revi](#) is the founding Director of [IIHS](#). He is an alumnus of IIT-Delhi and the Law and Management schools of the University of Delhi. He is a global practice and thought leader, and educator with 35 years of interdisciplinary experience in sustainable development, risk and emergency management, climate change, governance, public policy and finance, and urbanisation.

He is one of South Asia's most experienced risk and disaster management professionals having led teams to plan & execute rehabilitation programmes for ten major earthquake, cyclone and flood events affecting over 5 million people and has been a member of the Advisory Board of UNDRR' Scientific & Technical Advisory Group and its bi-annual Global Assessment of Risk, since 2008.

Aromar helped lead the design of the Coalition for Disaster Resilient Infrastructure ([CDRI](#)) a global partnership to promote the resilience of infrastructure systems to climate and disaster risk, launched by the Prime Minister of India, at the Climate Action Summit 2019 at the United Nations in New York.



IIHS Bengaluru City Campus

197/36, 2nd Main Road, Sadashivanagar, Bengaluru 560 080. India.
T: +91 80 6760 6666 | F: +91 80 2361 6814

IIHS Chennai

Floor 7A, Chaitanya Exotica, 24/51 Venkatnarayana Road, T Nagar Chennai
600 017. India. T: +91 44 6630 5500/6555

IIHS Delhi

803 Surya Kiran, 19 Kasturba Gandhi Marg, New Delhi 110 001. India.
T: +91 11 4360 2798 | F: +91 11 2332 0477

IIHS Mumbai

Flat No.2, Purnima Building, Patel Compound, 20-C, Napean Sea Road,
Mumbai 400 006. India. T: +91 22 6525 3874

www.iihs.co.in