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Covid-19 Crisis, Pandemic Resilience and Linkages to Land: An Exposition

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Abstract

For a COVID-19 like pandemic, the Achilles heel is an unsuspecting villain – rapid and global land use changes. The way governments, businesses and communities see, relate to and use land, not only influences the outbreak but also determines their impact on humanity and development. Drawing upon empirical evidences from epidemiology and land governance, this article argues why the current situation implores the need to focus on the interaction between land use and global diseases. Apart from dwelling on causal links, we discuss the externalities that industrial, urban and rural development in India are poised to face because of the pandemic's potential impact on land, biodiversity and wildlife habitat, property rights and housing. We also underline reform options for policy and practice, that must be discussed and acted upon.

Keywords: Pandemic resilience, Covid-19, land governance, land acquisition, housing, land tenure

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1. Land use change and Pandemics: The linkages

Several links have been established in tracing the origin of the ongoing corona virus pandemic. While most are secondary, the Achilles heel is an unsuspecting villain – the rapid and global land use changes (Qui, 2020). “With growing human populations increasingly encroaching on wildlife habitats, with unprecedented changes in land use, with wildlife and livestock transported across countries and their products around the world, and with a sharp increase in both domestic and international travel, new disease outbreaks of pandemic scale are a near mathematical certainty” (Qui, 2020). An article by Allen et al. (2017) in *Nature* goes on to say that decades of research on human infectious diseases have “found that emergence of new pathogens tend to happen in places where a dense population had been changing the landscape—by building roads and mines, cutting down forests and intensifying agriculture.” The article is based on an analysis of nearly all recent pandemics (e.g., Ebola, MERS), constituting the majority of the high-impact Emerging Infectious Diseases (EIDs). Moreover, these global hotspots do not only include China, but also countries like India, Brazil and Nigeria.

The economic and demographic upheaval that COVID19 backlash has already triggered, would also have significant consequences on the way land will be seen, tenured and used in future. Increasingly it is becoming clear that the way governments, businesses and communities perceive, relate to and use land, not only triggers such unprecedented outbreaks but also determine their impact on humanities and development.

Historically, pandemics have redrawn tenure boundaries; a classical case being the red line drawn by German colonizers in Namibia to control rinderpest pandemic in 1896ⁱ, which divides the freehold and communal tenure (Chlouba and He, 2019). Outbreak of the second plague pandemic in Europe, the Black Death, had dramatic effects on transforming and “rewilding” the landscape of the countrysideⁱⁱ (Ersgård, 2016). Land-people relations, particularly the way land tenures and land uses have been redrawn and transformed, have been connecting the causes and effects of such pandemics. This fact must be acknowledged and acted upon, particularly when such incidences are increasingly likely to become frequent and ferocious. There are five new human diseases that emerge every year and, of these, three are of animal origin (OIE, 2019).

In the contemporary world, along with climate change and disasters, pandemics are the new normal that must be internalized into development discourses. The coronavirus outbreak serves to highlight that health security is not just about implementing crisis management measures for public health threats, but it is also a question of developing planning and responses that are about addressing the ‘causes of the causes’ of infections (Conolly, 2020).

2. Land lessons for India: Dealing with post-Pandemic economic opportunities

How does this new crisis inform India’s development decisions? Many, including top economic advisorsⁱⁱⁱ to investment bankers^{iv}, at least in early phases of the coronavirus outbreak in China, saw of this as not only a good opportunity for India to expand trade and export, but also to position itself as a competitive destination for multi-national companies (MNCs) and global value chains. While it remains to be seen as to how the contours of global businesses shape-up in the new normal, it is possible that India might emerge as a competitive manufacturing destination.

Pandemic studies and forecasts show comparatively higher damage to the manufacturing sector^v, global awakening to physically disjointed activities^{vi}, and reshuffling/restructuring (e.g. ring-fencing risks and localizing/shifting) of global supply chains^{vii}. These changes may favor India. MNCs long settled in pandemic hotspots, will be looking to diversify their manufacturing base, viz. as part of the China's de-risk plans of many businesses. Land, along with labor (young and skilled) availability and widening infrastructure, will be seen as giving India the competitive edge, it deserves. While India has improved in the ease of doing business environment, faster land reforms will be at the core of strategic decisions^{viii} that India must quickly implement to cover larger grounds.

But one must not forget the pandemic risks that this trajectory might inevitably encounter and hence a systemic approach is called for. Land use change decisions required for this development agenda, must follow the precautionary principles and cause least harm to wildlife habitats and associated biodiversity. Environmental Impact Assessments of new and expanding manufacturing and infrastructure projects, henceforth must include epidemiological assessments, while also being more diligent. Traditional ecological knowledge systems and customary forest tenure regimes of tribal communities that has ensured harmonious coexistence with wildlife and biodiversity must be drawn upon. These are now regarded as critical components for designing effective conservation programs (Poe et al., 2013), and are embodied in the strategic plan for Convention on Biological Diversity (CBD, 2016). Pandemic avoidance must be embedded into the land acquisition frameworks and capacities around that need to be worked upon.

While dwelling on this attractive economic bonanza, in the post-pandemic rehabilitation phase, India Inc. must also factor in the economic and social cost of the land conflicts that it has already been struggling to deal with. Delay in land acquisitions (INR 1 trillion) has been recognized as one of the major reasons behind increasing stalling of investments, reaching an all-time high of INR 13 trillion in June, 2019 (CMIE)^{ix}. Land conflicts in India over the past three years, as per Land Conflict Watch^x, involves INR 1370 billion of investments, or 7.2 per cent of the country's GDP in 2018-2019. Along with environmental imperatives of minimizing the land acquisition footprints to minimize pandemic risks, economic and social implications of changing land relations, are required to be embedded into corporate governance decisions to minimize the investment risks.

Global best practices and instruments viz. United Nations Guiding Principles on Business and Human Rights, UNGPs) (UN, 2011) and FAO's Voluntary Guidelines, VGGT) (FAO, 2012) along with India's own responsible and inclusive business frameworks like National Voluntary Guidelines 2011 (GOI,2011), Companies Act 2013^{xi}, National Guidelines on Responsible Business Conduct, 2018 (GOI, 2018) and more recent Draft NAP on Business and Human Rights^{xii}, provide ample intent and guidance, the way India Inc should address the triple bottom line - social, environmental and economic concerns. Tested measures around non-negotiable free and prior informed consent (FPIC), fair compensation, just resettlement and rehabilitation and local livelihood concerns are required to be diligently addressed following these guidelines. An empathy-based democratized execution of RFCTLARR, 2013 through multi-stakeholder platforms and participation of local community institution can be a way forward in post-pandemic revival phase. Such actions would demonstrate the business responsibility of India Inc to sustainability, human rights and pandemic avoidance.

3. Repopulating urban informalities: Inevitable actions to revive the economy

COVID19 lockdown has witnessed one of the biggest migrations^{xiii} in India's modern history. Millions of vulnerable urban migrants — mainly unsalaried informal workers, used to jostle in urban informal spaces with adverse property rights and rental conditions— have embarked on a desperate demographic shift towards rural India, fearing the catastrophic loss of income, housing and food security. Around 5-10 per cent of the population of 1.5 million of Dharavi, allegedly biggest slum in Asia, have already gone back to Uttar Pradesh and Bihar after the lockdown^{xiv}.

While different estimates put India's informal workforce to be about 90 percent of the total, they contribute almost half of the national income (Khan, 2019). Informal economic activities prevail especially among social and economically disadvantaged society. Informalization in India majorly owes to the socio-economic fabric of society comprising of a large number of either poorly trained workers or unskilled labour. Informality of labour in rural (agriculture sector) and urban India is intricately linked to land tenure informalities. With COVID19 triggering demographic and economic shifts through labour mass migration, post pandemic labour adjustments, critical to revive India's economy, would be incumbent upon strategic land reform.

Informal economy in non-agricultural sector is about 40 percent. About 33 percent of total workforce in 2011-12 (Shrija and Srinivas, 2014) is dominated by migrants, who are illiterate, unskilled and do not have enough land or property (Singh, 2000). They mostly work in manufacturing, construction and trade including hotels and restaurants. About 110 million of such workers are employed to work in 63 million unregistered MSMEs, as per NSSO (2010), while another 55 million daily wage workers are in construction sector alone. They work in urban areas with no written job contract (71 percent), without paid leave (54 percent), absence of social security benefit (50 percent) and often with very poor housing and property rights.

Metro cities are migration hubs. For instance, the informal sector accounts for 67 percent of total employment in Delhi while the corresponding figure for Mumbai is 68 percent and 61 percent for Chennai (Srivastava, 2005). One in every six urban Indian lives in slums. More than 65 million people, almost all working in informal sector, cram these unhealthy inhabitable places, often with unsecured land and property rights. The organized sector keeps land and housing prices up and out of the reach of these populations. In India, rural to urban migrants are at great disadvantage with regard to housing and access to basic services. The low-income migrants' issue tends to get subsumed under the discussion on shelter security for the urban poor in policy discussions (Mahadevia et al 2012)

About 25 per cent of India's housing stock comprises informal rentals (National Sample Survey Organisation, 2010). Informality in India's cities is a 'key feature' of its urbanization which Roy (2009) describes as a 'state of deregulation' in which the laws on the ownership and usage of land are 'open-ended and subject to multiple interpretations and interests'. States often use informality 'as an instrument of both accumulation and authority' by the wilful change of land use often in contravention to the state's own laws. Failure of urban planning, in accommodating these migrants, is evidenced by the poor infrastructure and inadequate quality of life where they live in crowded, poorly lit and unventilated rooms (Naik, 2015), making them more vulnerable to such pandemics. For

example, for Mumbai municipal corporation, any effort to step up cleanliness in Dharavi with its narrow by lanes, lack of hygiene, and large families squeezed into small spaces — some of them near open gutters — make the area a veritable nightmare. Urbanisation and urban change have significant implications for the risks of infectious diseases (Conolly, 2020). Particularly, poor sanitation, overcrowding and poor infrastructure affect the epidemiology of emerging infectious diseases (Neiderud, 2015). The realities of the informal sector and the resultant poor tenure security makes this informal population more invisible and vulnerable to pandemic like shocks. As in the current corona crisis, recognition of this informal rental connection, had led Government of India and that of Delhi^{xv} to advise landlords for temporary rent waivers, which however has been difficult to execute and monitor, given its nature.

The post-pandemic, revival of Indian economy, hinges upon return of these labor migrants for kick starting India's growth engines viz. the MSME, construction and services sector. Given the way these cities extrude them during the crisis, the trauma of the mass migration and the harsh experiences of pandemic-susceptible living conditions in the slums, their return requires a convincing and enabling slum land, housing and rental reform. Lessons from land and property rights reforms around slums from Central schemes viz. Basic Services to the Urban Poor (BSUP) program under the erstwhile Jawaharlal Nehru National Urban Renewal Mission (JNNURM) providing security of tenure and housing; Rajiv Awas Yojana'(RAY), or 'Slum-free India' prescribing legal title to slum dwellers/urban poor over their dwelling space through suitable legislation for property rights and more recent new Mission for Housing for All by 2020, must be distilled to swiftly develop right strategies. Experiences from recent innovative initiatives viz. Slum dwellers' land rights Act^{xvi} and regularization of informal settlements in Delhi, also offer exemplary insights, for addressing urban tenure informalities of the informal labour. Such land and property rights formalization in slums must also consider flexible tenure regimes to allow natural mobility of the workers (Mahadevia et al, 2012).

Mobility and tenure (Dutta et al 2020) are interlinked and decisions to own or rent often connected to the nature of migrant and migration. Rental housing, therefore, also offers an important option, particularly in informal (squatter and quasi-legal) settlements (Naik 2015). In comparison to ownership, leasing or renting seem to benefit large households more and to the new migrants (Shirgaokar and Rumbach, 2018). Ignoring rental housing in policy has simply deepened the inadequate quality of housing and basic services for urban poor tenants, making them more vulnerable. Policies that appropriately support the rental housing sector could address these issues (Desai et al 2012). While accelerating the easily available secured and low cost rentals, adapting to the social networks and migration strategies (Naik, 2011) must be factored in. Urban housing and land tenure reforms for the migrants and informal workforce must also be accompanied with living conditions improvement measures (as being attempted by Livable Habitat Mission^{xvii} of Odisha) and factoring new concern of pandemic resilience. This is critical to bring back this important labour force to repopulate urban economic environments.

4. Accommodating the returnee to rural economy: Time to expedite land leasing reform

One of the key triggers of growth of informal sector is rural land tenure informalities embedded in rural landlessness and all-pervasive agricultural tenancy and sharecropping. Most of the urban informal labourers are migrant labour from rural India. Majority of them are landless or small and marginal farmers and tenants from rainfed farming areas, migrating seasonally. Rural to urban migration in 2011-12, as per NSSO is 60 million. They form most of the construction labour workforce.

This brings our attention to tenancy reforms. While many of the migrants may return to the cities, the corona trauma most likely may compel many other to reconsider this urban migration, at least for some time to come, while possibly also redefining the seasonal migrations. Typically, in such situations, workers wait out a crisis before setting out again in search of work and this period may be much longer this time. Tracking the same households between 2004–05 and 2011–12, based on the India Human Development Survey, 2011^{xviii} highlights several socioeconomic factors associated with the migration decision: household income, the availability of information, as well as community networks in source and destination areas (Nayyar and Kim, 2018). Many of these triggers may now change or might favour a reverse shift. With people realizing and anticipating more such pandemics, (thanks to enhanced access to information networks and communication channels), many of them may not like to leave their homes. As per a population expert^{xix} there could be a significant reduction in long-distance migration, while a number of migrant workers who fled the big cities may never return, preferring to eke out a living on their marginal farms or find work in nearby towns.

The rural India and more so farm sector, therefore, must get ready to absorb these additional labour more productively. Though Indian farms are dominated by small farmers (86 percent), they operate only less than half of the total operational holdings as per Agriculture Census, 2015-16. Operational efficiency of small farms in terms of input use, cropping intensity and production have been very well documented. Small holders continue to have a productivity advantage over larger holders when we consider yield as well as net returns per hectare (Gaurav and Mishra, 2019)^{xx}. In contrast to the scale neutrality, Indian farms exhibit the existence of an inverse relationship. Larger farms and holders yield either lower returns, have a general disadvantage in terms of labour used per unit of land and are found to fallow their land more.

With 43 percent of landless farmers, as per SECC, 2011, added to small and marginal farmers, tenancy has been on rise over last few decades, in spite of land reforms post-independent banning the same. Nearly 21 million households in the country cultivate about 10 to 11 million hectares of land on informal lease basis as per 70th Round of NSSO. About 90 percent of tenant farmers own less than one hectare of land as per NITI Aayog. Land distributive reforms, globally, more so in East Asia, including China and Korea, have demonstrated the potential of small farms in improving agricultural productivity, enhancing farmer's income and propelling national economies (Sharma & Jha, 2018). Therefore, most of these additional labours can be productively engaged in farming through small farms, given additional tenure security to trigger farm investments to aid right agricultural transformation.

Realizing tenancy as a contemporary farming reality and economic necessity, NITI Aayog has come up with Model Agricultural Land Leasing Act in 2016^{xxi}. Based on extensive analysis of land policies of

states and multi-stakeholder dialogue and deliberation it encourages states to legalize land tenancy, benefitting both, tenants and landlords. Ensuring rehabilitation and productive engagement of these willing reverse migrants in farming is incumbent upon states' launching such land leasing reforms (land being a state subject). Some states have already demonstrated political willingness in acting on these reforms and harvesting early dividends, others can leverage to kick-start and expedite post-pandemic tenancy reforms.

Leasing reforms will also expand the safety net of PM Kisan and other such agriculture DBT schemes along with enhanced access to MSP. In the absence of documentation of tenancy, benefits of such schemes, immediately declared as pandemic-relief, will not reach most of these farmers. While targeting 125 million small and marginal farmers, PM Kisan, has reached out to 96 million of them so far. Leasing reform and documentation are critical to secure and better delivery of public services entitlements to these vulnerable tenants, to trigger rural revival and reverse agrarian crisis.

5. The tribal and forest links to informality: Reviving forest rights reform

It is a fact that a substantial percentage of the migrant labours are tribal and forest dwellers. Their share is on rise over last decades, largely due to their deprivation and displacements from primary production sectors as a result of increasing industrialization in their homelands and lack of recognition of their land and forest rights. About 3.5 million tribal people have left agriculture and agriculture-related activities to enter the informal labour market during 2001-11^{xxii}. Forest Rights Act (FRA), 2005, brought as an act to undo historical injustice, has the potential to become world's largest land reforms, with scope of recognition of individual and community tribal rights of about 150 million tribal populations over 40 million ha of forest land. The implementation of FRA, 2005, has however been patchy, except for some states and has been often attributed as *raison de etre* for tribal unrest, poverty, migration and exclusion.

Post-pandemic, states lagging behind, must proactively, expedite implementation of FRA, learning from good implementing states to arrest further tribal deprivation by recognizing their forest rights and extending them opportunities to better use their labour for their local livelihoods while also contributing to national income. It may be noted that recognition of forest rights, doesn't contribute to significant change in land use. Evidences from India, and outside, demonstrate increased forest cover and biodiversity, often improving the wildlife habitats, which can work towards reducing pandemic incidences. Recognition of forest rights also allows better compensation and rehabilitation of project affected tribal people, in line with India's commitment to inclusive business frameworks.

6. Conclusion

The ongoing novel corona virus crisis has awakened us to a better understanding of how land use changes are central to both, global ecological as well as global health, balance. Land being a finite and a valuable resource, usually has competitive utilization and often conflicting ones. Even a slight change in land use has significant impacts, at times leading to catastrophic consequences like corona crisis. Therefore, an integrated and systemic approach to land is warranted. Like the emerging global consensus around 'one health'^{xxiii} approach (Destoumieux-Garzón, 2018) it is high time to rationalize a 'one land' narrative. As we highlight in this paper and as empirical evidences show, the siloes around urban, rural, industrial and forest land uses are artificial and permeable. A ripple in one of the silo, has

a resonating effect on the other. The sectoral boundaries and administrative divergence have only worsened the situation, as is evident from the current pandemic, other recurring disasters and climate change. The fragmented legal frameworks around land are unsuccessful and inadequate to govern land. This is amply demonstrated in terms of co-existence of formal and informal tenure regimes across land use landscapes. Informality as an inevitable reality, manifest the need of tenurial diversity and legal plurality in adaptations to the local contexts while challenging the rigidity and inadequacy of the contemporary land governance set up. Corona-crisis provides an opportunity to define a new normal with a multidimensional approach (Sud, 2019) to land governance with multi-stakeholder partnerships, connecting land uses and land tenures in a more integrated and systemic fashion. This will help in better adaptation to existing contexts, and also in augmenting Pandemic resilience.

Integrating natural habitat conservation and livelihoods concerns in land use change frameworks and accelerating adaptive land reforms in appreciation of pluralistic tenure contexts, thus, are vital to a new world where pandemic resilience will be key to sustained and safe economic growth. Embedded with informalities of land and labour, the pandemic crisis poses a colossal risk to the nation's social and economic well-being; also a great opportunity to trigger land reform. While flattening the pandemic infestation curve and inflecting the economy trajectory, the state must not close its eyes to these ominous land-pandemic links, and the enormous threat it impounds on the informal labour and landscapes in both rural and urban India. We must act on inclusive land reform, at least for the sake of this Pandemic now.

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- ⁱ The origins of the veterinary border which divides Namibia in two parts date back to the 1896- 1897 rinderpest cordon, which was intended to stop the spreading of the rinderpest pandemic into areas farmed and inhabited by European settlers.
- ⁱⁱ As villages were depopulated and fields were abandoned, landscapes were transformed. Less anthropo- genic pressure resulted in the “rewilding” of the landscape and a widespread process of secondary ecological succession of un- cultivated species into former fields or pastures. This environ- mental effect of the Black Death, and the late medieval crisis more generally, has been convincingly demonstrated for several regions, such as the southern Swedish uplands (Mordechai et al 2019)
- ⁱⁱⁱ <https://www.indiatoday.in/business/story/will-coronavirus-shift-global-investment-from-china-to-india-1646024-2020-02-13>
- ^{iv} https://economictimes.indiatimes.com/news/economy/foreign-trade/coronavirus-mncs-china-de-risk-plan-a-shot-in-the-arm-for-india/articleshow/74470982.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
- ^v <https://www.oecd.org/fr/gouvernance/risques/Pandemics.pdf>
- ^{vi} <https://www.brookings.edu/blog/future-development/2020/03/27/awakening-in-the-post-pandemic-world/>
- ^{vii} <https://www.cnbc.com/2020/03/20/coronavirus-shocks-will-lead-to-massive-global-supply-chain-shuffle.html>
- ^{viii} <https://www.news18.com/news/opinion/why-india-has-a-chance-to-replace-china-as-global-economic-leader-post-coronavirus-crisis-2555057.html>
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- ^{xvi} <https://govtpress.odisha.gov.in/pdf/2017/1652.pdf>
- ^{xvii} <http://www.jagamission.org/>
- ^{xviii} The India Human Development Survey (IHDS) is a nationally representative, multi-topic panel survey of 41,554 households in 1503 villages and 971 urban neighborhoods across India. The first round of interviews were completed in 2004-5; data are publicly available through ICPSR.
- ^{xix} https://economictimes.indiatimes.com/news/economy/policy/coronavirus-would-reset-distances-labour-market-experts/articleshow/74965143.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst
- ^{xx} Based on a study looking at the relationship between yield and land possessed for three major crops: paddy, wheat, and cotton using unit level data from SAS of Agricultural Households in the 70th Round NSS, 2012-13.
- ^{xxii} <https://www.downtoearth.org.in/news/health/more-than-50-of-india-s-tribal-population-has-moved-out-of-traditional-habitats-62208>
- ^{xxiii} www.oneworldonehealth.org.