Slowdown not the answer to clean air

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Green warriors have triumphantly cited the improved air quality during the lockdown as evidence that the battle against climate change can be won by slowing down economic and industrial growth. A reality check reveals that this is a chimera.

A global study of emissions published in *Nature* on May 19 estimated that daily global CO emissions in early April this year were on average 17 per cent lower than in 2019. It attributed this decline to "government policies during the COVID-19 pandemic". An article by Lauri Myllyvirta and Sunil Dahiya that appeared on the website "CarbonBrief" on May 12 announced that for the first time in four decades India's annual CO emissions declined, with a 1 per cent reduction in emissions in 2019-20. The authors attributed this to the ongoing economic slowdown, growth in the use of energy from renewable sources and, most significantly, the economic impact of COVID-19 towards the end of the fiscal year.

In India, the nationwide lockdown announced by the Prime Minister on March 24 halted productive activity across all sectors barring those providing "essential" goods and services. As the lockdown came into effect, coal-based power generation in India dropped by over 26 per cent in a just a week, between March 19 and 26. The decline in the use of productive capacity naturally resulted in the reduction in the concentration of pollutants such as NO (oxides of nitrogen) and particulate matter (PM2.5 and PM10); these are mainly caused by surface transport and construction activity. Not surprisingly, the air quality index improved in several parts of the country. This improvement in environmental indicators in India and across the world has led to a resurgence in calls to rethink the emphasis on "growth" and to reduce industrial activity. In particular, the argument being made is as follows: positive outcomes such as the reduction of emissions amidst the pandemic show that we must learn from this crisis and alter our behaviour and patterns of consumption. Further, industrial activity has not only contributed to the health crisis but has proved incapable of resolving it. Therefore, as we move out of the current crisis, we need to move towards de-growth and deindustrialisation. This is our best strategy to deal with the impending crisis of climate change and the larger question of the environment.

A variant of this is seen in calls for "green fiscal packages" or a "green recovery" in a post-COVID world. The fiscal packages refer to subsidies for economic activity and bailouts for firms being made conditional on them reducing their fossil fuel consumption and/or compliance with sustainability standards. They also include proposals that seek to make lasting behavioural changes in work activity, including reduced use of transportation and encouraging work from home practices.

But before we get to these arguments, it is necessary to provide some context for the so-called environmental “benefits” accruing from the lockdown.

Temporary decline in emissions

The global and local decline in emissions that are typically being spoken about in the context of COVID-19 are temporary declines in flows of CO to the atmosphere. Figure 1 shows the estimates for the percentage change in global emissions across different sectors between April 7, 2019, and April 7, 2020. While there is a secular decline across all sectors (except residential consumption), there is a drastic reduction in emissions emanating from the surface transport and aviation sectors.

However, this reduction cannot be sustained as economic activity will eventually pick up; indeed, serious attempts to revive production are already under way in most parts of the world. More importantly, the temporary reduction of emissions does not drastically alter the total stock of CO already present in the atmosphere, which is responsible for the increase in average global temperatures that is contributing to climate change. Figure 2 describes the relationship between emission rates, emission stock and available carbon space in the future.

The total cumulative global greenhouse gas (GHG)emissions between 1850 and 2017 (from productive activity only and not from land use change and forestry) are about 2,431 GtCOeq (gigatonnes of CO equivalent), with all countries together emitting about 46 GtCOeq annually (2017 estimates). For the global temperature rise to be restricted to below 1.5 degrees Celsius as per the consensus of the Paris Agreement, there is approximately 480 GtCOeq of carbon space left. At the current rate of emission and growth, the remaining carbon space will be exhausted in the next seven years. According to most estimates, the reduction in emissions that has accrued from the COVID-19 impact is about 5-6 per cent compared with last year. Even if we assume that global emissions actually decline by 6 per cent every year from now on, the carbon space for 1.5 degrees C will be exhausted by 2034. The numbers look less foreboding if we try to limit the temperature rise to below 2 degrees C instead of 1.5 degrees C, but the conclusion does not change materially. The reduction of emissions by curtailing economic activity will only deliver limited benefits in the long run. The challenge of restricting temperature increases in the future demands a material change in energy production systems. And, without science, that can only be a fantasy.

Behavioural change and restructuring work patterns

The first argument we address is the claim that changes in consumption behaviours enforced under a public health emergency could be the basis of a plan to deal with the upcoming climate emergency. For example, it has been suggested that the concept of work from home (WFH) is a win-win both economically and environmentally. It entails minimised commutes for employees, including air travel; reduced rental outlays for offices; reduced energy use at workplaces; and the reduction in consequent transportation emissions.

Figure 1 clearly shows that even with a dramatic halt in economic activity, as seen in the last couple of months, daily emissions reduced by a maximum of only 17 per cent compared with 2019. A whopping 83 per cent of the emissions will continue to take place because of energy generation and use across sectors other than transportation. We still need to shift away from fossil fuel-based energy generation, which this type of behavioural change does not really address.

Despite all the hype, WFH practices can be adopted, if at all, by only a small section of the workforce in India even if cultivators and agricultural workers are excluded for obvious reasons. In the would-be smart cities of India, manufacturing activity and workers who sustain it have been relegated to the margins, and also to the margins of middle-class consciousness it seems. But it must be acknowledged that cities are also places where people produce physical commodities, and this is largely in the unorganised sector. Obviously, WFH does not apply to this sector. Even within the service sector, remote work is possible only in some cases. For example, sectors such as hospitality, banking, health care and social work, and education—which correspond to 7 per cent of our workforce—require the physical presence of employees to varying degrees.

Further, WFH would be a hugely iniquitous approach given our infrastructural conditions and socio-economic realities. The National Family Health Survey (2015-16 Round) indicates that a little under half of India's population still lives in houses made of non-permanent materials. Data from the 2014 National Sample Survey Office (NSSO) report on energy and domestic expenditure in India reveal that the average household consumption of electricity in India is just 90 kilowatt-hour, one-third of the global average. The 2017-18 NSSO report on education reveals that only one-fourth of all households have access to the Internet, including access via smartphones. And, we are not even getting into the enormous variation and inequality in access across caste, gender and regional divides. In most households, therefore, the possibility of working or studying from home is non-existent.

Indeed, those advocating these measures for countries such as India ought to first demand adequate and affordable conditions of housing and basic amenities for all. But to build these capacities and amenities, India would require more and not less industrial and manufacturing activity, which currently employs only about one-tenth of the workforce. India needs labour and energy to build housing, schools, hospitals, roads and other infrastructure; in fact, in all these areas India has a huge backlog to clear before it even addresses the needs of the future.

When arguments for equity in climate action are voiced at international fora, it is this aspect of lack of infrastructure in developing countries that they aim to address. India's experience of the pandemic should show us how important it is to actually build such infrastructure. This is the context in which one ought to look at proposals for a "green" recovery.

It is almost a certainty now that the impact of COVID-19 and the measures taken to contain it will lead to a severe slowdown of the global economy; in fact, most accounts indicate a global recession in the offing. Governments all over the world have announced hefty fiscal packages to foster economic recovery that include measures such as direct transfers to the working population and bailouts for specific sectors.

However, many environmental think tanks and policy advocacy groups have also called for “green” conditionalities to be imposed on firms and industries that access these fiscal packages. For example, it has been argued that the automobile sector should get support only if it agrees to invest in electric vehicles and implement a concrete plan to phase out fossil fuel-based internal combustion engines. It has also been suggested that the power sector be supported only on the condition that it becomes greener in terms of resource and energy use. Similar sustainability conditions are sought to be applied to the manufacturing sector.

These suggestions are based on the assumption that a shift to greener production systems is affordable and easily achievable. Further, it also assumes that the failure to achieve this shift is on account of the inability of companies to think beyond their immediate profits. While these assumptions are partly true, they do not address the technical and economic constraints or the economic impact such a green shift would entail. In particular, they do not account for the conditions of production in developing countries such as India.

The supply chains of large manufacturing units comprise small enterprises, including those in the unorganised sector. For example, large automobile manufacturers depend on smaller units that supply nuts, bolts, gears, brakes, plates, batteries and a host of other components. However, the exact nature of this relationship is specific to the sector and to the product being produced.

Shifting from the production of internal combustion engine-based automobiles to battery-powered vehicles does not merely involve replacing one part in a vehicle with another. It requires a completely different approach to vehicle design. This, in turn, has a major impact on the manufacturing units supplying components that go into the new-generation automobiles. Even if an individual manufacturer were to sell a more sustainable final product, a bulk of this would need to be manufactured by small-scale units in the unorganised sector that may still be individually polluting. These supply chains also extend beyond local agglomerations to international supply chains.

Another example is that of power distribution companies in India, which are already in serious financial trouble because of existing green policies. In the last two months, these companies have been forced to absorb all the renewable energy generated despite a drastic fall in energy demand due to the nationwide lockdown. As a consequence, these companies have incurred a heavy cost by backing down cheaper thermal power generation plants. Solar energy, particularly from older solar plants, is expensive but no relief has been extended to distribution utilities even during a crisis as big as the ongoing one.

A transition to greener production is necessary, but it is difficult and will have a serious impact on labour even in the best of times. To force labour to bear this burden during one of the worst crises in decades would be grossly unfair. In fact, the glaring absence of consideration for the interests of workers and the unorganised sector in these "green" proposals leaves one in no doubt that the more vulnerable segments of the supply chain and workers will inevitably bear the extra burden of greening the economy.

Deindustrialisation for the environment and health

The third argument is that industrialisation (and the consequent urbanisation) cannot be the way ahead for the future because it is a cause of both the health and climate crisis. It is further argued that industrial development will worsen the problem as it is incapable of providing a solution.

The scepticism regarding industrialisation ignores the fact that the world's capacity to respond to a health or environmental crisis depends upon scientific and technological advances, which are in turn connected to productive economic and industrial activity. In fact, the solution to the health crisis can only emanate from advances in science and technology, the development of a vaccine or a drug, the capacity to manufacture ventilators and the rapid scaling up of modern health care infrastructure. Similarly, the world's capacities to improve the environment, to address the danger of climatic change and to mitigate such crises are also dependent on scientific development. The processes of waste recovery, enhancing energy efficiency and recycling techniques, for example, develop because of industrial activity and not in spite of it. The argument against industrialisation also trivialises the hardship, drudgery and exploitation that are vestiges of the pre-industrial era. The limited scientific and industrial capabilities available in the past offered less, not more, protection from infectious diseases, which killed far more people then than now. This drudgery still continues for many in India as it remains an industrially and technologically less developed nation.

Further, this argument also precludes the need to work towards a more just and equal society. COVID-19 has laid bare the utter inability of advanced capitalist countries to deal with a major health care crisis. Ironically, the same insurance-based frameworks that have been spectacular failures in the health care crisis are now being touted as the solution to address the environmental and climate crises. For example, insurance-based measures are being peddled as solutions to deal with the impacts of weather-variability on agriculture, and aggressive disinvestment of public utilities is being urged to draw in private investment to renewable energy. These are not direct parallels, of course, but if at all the pandemic is an opportunity, it is to critically re-evaluate the economic and political structures that have been promoted to address environmental sustainability.

Without this overhaul, the idea of reducing consumption ignores the fact that in an unequal world such strategies would put an unfair burden on the working poor. We ought not to forget that estimates of economic losses due to the COVID-19 crisis,

expressed in terms of gross domestic product percentages, actually translate into lost lives, livelihoods, jobs, homes and aspirations. Those who were already experiencing precariousness are bearing the brunt of COVID-19.

The ongoing public health crisis offers important lessons on how to deal with the upheaval that climate change promises. First, there is a need to go beyond temporary measures and to avoid making hasty announcements of victories for the environment. Second, the state needs to respond quickly to protect the most vulnerable, especially the working poor.

Moreover, as the ongoing crisis has shown, direct resource transfers to rural and urban workers need to be complemented by support to manufacturing units and to ease supply chain bottlenecks so that they restart. But, in the longer run, people need to be assured of decent housing, incomes and health care support. These would be the first and a durable line of defence in dealing with the looming crisis that climate change poses.

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