

HCFI Dr KK Aggarwal Research Fund

Coronavirus Updates

China eases COVID restrictions

In a major shift from its zero COVID policy, China has now allowed home quarantine for asymptomatic cases and patients with mild COVID-19. These patients can shift to designated hospitals if their condition worsens, according to the National Health Commission (NHC). The policy regarding high-risk zones has also changed. Now the high-risk areas will be defined by “building, unit, floor and household” and not the entire buildings or residential societies... (Source: *Medscape*, Dec. 8, 2022)

Children aged 6 months are now eligible for COVID vaccine

The US Food and Drug Administration (FDA) has authorized the bivalent Pfizer-BioNTech and Moderna COVID-19 vaccine for emergency use in children as young as 6 months of age. Now children aged 6 months to 5 years, who have been vaccinated with the monovalent Moderna vaccine can now take the single dose of bivalent vaccine as booster after a gap of 2 months. While the unvaccinated children in the age group 6 months to 4 years will get the bivalent Pfizer vaccine as the third dose after two doses of the original Pfizer vaccine... (Source: *US FDA*, Dec. 8, 2022)

Effectiveness of COVID-19 vaccines against long COVID

Compared to the unvaccinated, even a single dose of the vaccine was protective against long COVID. Analysis of data of 1.6 million subjects showed that the effectiveness of a single dose of Pfizer, Moderna, AstraZeneca or the J&J vaccine in preventing long COVID ≥ 3 weeks was 29%. The protective efficacy increased to 35% among individuals who had taken the vaccine prior to getting COVID-19 compared to 27% effectiveness in those who took the vaccine post-COVID-19... (Source: *Antimicrobial Stewardship & Healthcare Epidemiology*, Dec. 6, 2022)

Marked increase in suicidal ideations during the pandemic

A *PLoS One* study has reported almost fivefold increase in suicidal ideation during the COVID-19 pandemic. A 13% increase in suicidal ideation was noted in the study. Thirty-one percent of people who were unable

to pay rents developed suicidal ideation, while 24% of those who lost their jobs and 25% of those who were lonely had high prevalence of suicidal ideation... (Source: *PLoS One*, Nov. 16, 2022)

Benefits of COVID-19 vaccine in patients with rheumatic disease

Fully vaccinated patients with rheumatic disease reduce their chances of developing long COVID by at least 50%. Four weeks post-COVID, 41% of the fully vaccinated patients reported at least one symptoms versus 54% of the partially or unvaccinated patients. After 3 months, 21% of fully vaccinated patients complained of one persistent symptom compared with 41% of the partially or unvaccinated patients... (Source: *Annals of Rheumatic Diseases*, Nov. 28, 2022)

WHO Director General hopes to remove the global public health emergency tag from COVID-19 next year

Addressing a media briefing, Dr Tedros Ghebreyesus, WHO Director General expressed hope that the COVID-19 pandemic would not be considered a global public health emergency in the coming year. When quizzed about the conditions for lifting the Public Health Emergency of International Concern (PHEIC), WHO's Senior Epidemiologist Maria Van Kerkhove said that there's more work to be done... (Source: *Medscape*, Dec. 15, 2022)

Hong Kong permits 5th COVID-19 dose

Following a resurgence in COVID-19 cases, the government of Hong Kong has allowed the residents aged 18 years to take a 5th dose of the COVID-19 vaccine... (Source: *Reuters*, Dec. 16, 2022)

Hong Kong lifts restrictions for international visitors, but testing on arrival stays

Hong Kong has ended the “amber” health code for international visitors to the city. Inbound travelers, testing negative on polymerase chain reaction (PCR) COVID test on arrival, can now freely visit the restaurants, gyms and other venues as soon as they land in the city. Undergo the “0 + 3” medical surveillance period is no longer mandatory. However, a vaccine certificate is still required. Residents also do not need to scan QR codes with the mandatory “Leave Home Safe” app... (Source: *Lifestyle Asia*, Dec. 13, 2022)

China has stopped including asymptomatic cases in its daily COVID cases count

From 14th December, China will not include new asymptomatic infections in the total count of COVID-19 cases. According to the NHC, many asymptomatic cases do not undergo testing leading to an inaccurate number of cases. Till now, China had counted symptomatic and asymptomatic infections separately... (Source: *Medscape*, Dec. 14, 2022)

Travelers to Nigeria no longer need to undergo COVID testing

International travelers to Nigeria will not be required to undergo testing for COVID-19 regardless of the vaccination status. Also, it is not mandatory to wear masks inside the flights and inside the airport. However, travelers aged 60 years and above and those with underlying medical conditions are encouraged to wear face masks... (Source: *Medscape*, Dec. 14, 2022)

COVID-19 vaccines have saved more than 3 million US lives, says study

A study released by the Commonwealth Fund has found that COVID-19 vaccines prevented more than 120 million more infections, more than 18.5 million additional hospitalizations and 3.2 million additional deaths from December 2020 through November 2022. Vaccines also saved at least one trillion US dollars in health care costs... (Source: *The Commonwealth Fund*, Dec. 13, 2022)

Bharat Biotech's intranasal COVID vaccine gets approval as booster

Incovacc, the intranasal COVID-19 vaccine from Bharat Biotech has been granted approval for restricted use in adults aged ≥18 years to be administered as a booster dose through nasal drops. It may be introduced in the CoWin platform. For now, the intranasal vaccine will be available in private hospitals. It is the first intranasal vaccine to get approval both as primary series and heterologous booster vaccine... (Source: *Times of India*, Dec. 23, 2022)

China faces a humongous surge in COVID-19

Hospitals in China are apparently becoming overwhelmed with a surge in infections amidst a new Corona wave in the country, according to the WHO, although the official figures appear to contradict this. The numbers have been rising since the stringent restrictions that had been in place as part of the country's zero COVID policy were eased a fortnight back. The elderly population is especially vulnerable... (Source: *BBC*, Dec. 22, 2022)

"Very concerned" about COVID situation in China, says WHO Director General

Dr Tedros Ghebreyesus, WHO Director General has said that the WHO is "very concerned" about the rising reports of severe COVID-19 across China after it lifted many measures under its zero COVID policy. The low vaccine uptake has also put a large population at risk of getting the infection. Recently, a press briefing on 21st December, he said that the WHO needs more information about hospitalizations including ICU admissions "to make a comprehensive risk assessment of the situation on the ground"... (Source: *Associated Press*, Dec. 21, 2022)

Decline in active cases in the country

India recorded 163 new COVID-19 cases and 9 deaths in the last 24 hours, as per latest data from the Health Ministry. The active case count has now decreased to 3,380 (0.01%). The total number of cases are 4.46 crores and deaths are 5,30,690 (1.19%). The total vaccination has crossed 2.20 crores... (Source: *PTI*, Dec. 23, 2022)

BF.7 variant present in 91 countries since last year

The BF.7, also known as BA.5.2.17, variant has been in circulation since last year and has been detected in 91 countries according to a report by the Scripps Research Institute. It is a sublineage of the Omicron variant. As per the report, the global prevalence of BF.7 has been 0.5% worldwide in sequenced samples. BF.7 is presumed to be the key variant behind the latest surge in cases in China... (Source: *Times of India*, Dec. 23, 2022)

With inputs from Dr Monica Vasudev

HCFI Round Table Environment Expert Zoom Meeting on "Construction and Demolition Waste (C&D Waste) Management: Issues and Challenges – Part 1"

December 4, 2022 (Sunday, 12 noon – 1 pm)

- Construction and demolition (C&D) waste is waste generated from construction activity, renovation, repair and demolition of houses, buildings, roads, bridges, etc.
- The major components of C&D waste are cement concrete (demolished), broken bricks, broken cement plaster, steel, rubble, broken stone, broken timber and wood, soil and sand and gravel. About 70% of C&D waste consists of mixed sand and soil.
- Management of C&D waste particularly in towns and cities is a big challenge. It is generally dumped in landfills, where recycling facilities are lacking. It is also an important source of air pollution,

especially in Delhi-NCR area. Not just air pollution, it is also a concern for land and water pollution too.

- Earlier C&D waste was covered under the then existing Municipal Solid Wastes (Management and Handling) Rules, 2000. In 2016, the MoEF, Government of India notified a separate rule called Construction and Demolition Waste Management Rules, 2016. These rules are applicable to every waste resulting from construction, remodeling, repair and demolition of any civic structure of individual or any organization or authority, which generates C&D waste as building material, debris, etc. In 2017, the Central Pollution Control Board (CPCB) also issued guidelines on the management of C&D waste.
- There is a huge gap between generation and processing or recycling of C&D waste. The waste that is not processed or recycled finds its way either to landfill sites or is dumped in the roadside or flood plain, forest area, drain side.
- The total construction market in India is over Rs. 9,00,000 cr per annum. Construction industry is growing at twice the world average. C&D go side by side; hence, C&D waste is generated. In India, the annual generation of C&D waste in 2018 was 100 million MT of C&D waste is generated. In Delhi, the amount of C&D waste is 7,000 tons/day.
- Metal, wood, plastic are not found in C&D waste. We find soil, sand, aggregates and chips.
- To manage C&D waste it is important to estimate it. Estimation will depend only on the progress of the construction.
- In 2000, TIFAC (Technology Information, Forecasting and Assessment Council) found that for new construction, around 40 to 60 kg/sq. m of C&D waste is generated; for building repair, it is around 40 to 50 kg/sq. m and for demolition of buildings, it is around 300 to 500 kg/sq. m. This needs to be revisited.
- In 2017-18, IIT Kanpur conducted a study where they found that from 7,000 MT waste of Delhi; 6.5 tons/day of PM10 and PM2.5 is generated.
- If C&D waste is properly managed, then up to 95% to 98% can be recycled.
- From C&D waste we get soil, sand, recycled aggregate and recycled concrete aggregate. From these, value-added products like kerb stones, paver blocks, tiles, brick blocks are made nowadays.
- In India, the journey of C&D waste started in 2005. The first plant came up in Delhi at the time of Commonwealth Games in 2009. In 2014, the Indian Concrete Institute (ICI) and the Central Public Works Department (CPWD) together made guidelines for reuse and recycle of C&D waste, from generation to disposal process to use of recycled products. In 2015, UN made a guideline and in 2016, GIZ made another report. The C&D waste management rules were formulated only in 2016 by the government. CPCB made its guidelines in 2017. In the same year, GIZ made training manual for this. In 2018, NITI Aayog made a report. In 2018, the Building Materials and Technology Promotion Council (BMTPC) developed guidelines on C&D waste recycling. After great efforts, in 2016 Bureau of Indian Standards (BIS) incorporated it into IS 383. The specifications and rates have been finalized along with CPWD, but they are not being used.
- The C&D waste management rules are for every individual, local bodies, state governments, bulk waste generators, pollution control boards, CPCB and also for the Central Government.
- The quality of recycled aggregates from mixed C&D waste has been tested for 6 months and was found to be safe.
- In Delhi, out of the 7,000 MT of waste generated, ~6,500 MT is collected per day. Out of this; 5,000 reaches the plants and 1,500 goes to the landfill sites.
- There are collection centers in every ward where small generators can dispose of their C&D waste at designated sites, from there the MCD collects it and takes it to the plants.
- Bulk waste generators directly dispose of the waste at the plants.
- The plant in Shastri Park, Shahdara was started in 2015 with a capacity of 500 tons, now the capacity has increased to 1,000 tons/day. One of the most advanced wet processing technologies has been adopted in this processing facility.
- The first plant in Jahangirpuri began with capacity of 500 MT and was further expanded to 2,000 MT.
- Mundka waste processing facility has processed 1.5 lakh MT of C&D waste since its inception. The Bakkarwala processing facility has processed 2.5 lakh MT of C&D waste since inception.
- So far, these projects have processed around 80 lakhs of C&D waste. The government of India has made it compulsory to install one such plant in cities with a population of above 10 lakh.

- For air quality management, water sprinklers are used during unloading and operations. Recycled water is used for wet processing. Greenery has been developed to attenuate noise.
- If we generate 100 tons waste, from this 50% is soil. Soil and sand can be separated in the plant. Five percent recycled concrete aggregate is recovered; 24% recycled aggregates, 15% manufacturer's sand, 1% to 5% plastic, iron, etc. Value-added products like bike kerb stones, concrete blocks, brick blocks, paver blocks and tiles are made from this.
- All bus stops in Delhi during Commonwealth Games were renovated with these tiles. All the material used in the new Supreme Court building is from recycled material.
- Processing of the C&D waste is done by using state of the art wet/dry process technology.
- Reuse of C&D waste will reduce burden on dumpsites. City will be cleaner; drain clogging will be less. Useful products made out of recycled waste can be again used by the building industry. It will save natural resources.
- Separation of concrete waste and nonconcrete waste greatly increases financial viability.
- Way forward: Seamless integration from demolition to processing, incentive to waste generator for sale of C&D waste and concession on purchase of recovered material including value-added products.
- The challenges we face are sector-specific and geographic-specific. The enforcement cannot be the same across the country has to be different.
- Forty percent of the total waste in Delhi is C&D waste, which contributes to 650 units of ppm. This needs serious attention as to how strict enforcement right from generation to disposal happens. Proper management of C&D waste may lead to improvement in air pollution with Delhi being an urban island.
- Circularity in waste means where every bit can be reused and recycled for many productive things.
- There are so many constructions going on in Delhi but where the waste goes is not defined. No accountability, no transparency. Data compilation is a big challenge.
- It should not be looked as NIMBY (not in my backyard) factors but as CIMBY (circularity in my backyard) factors. CIMBY has to be practiced in such a way that this particular waste which contributes to 40% of waste in Delhi needs to be returned back to the society. Everything should be highly priced and not be given on discount. People should be given incentives, which can be in the form of tax rebate, enhance FAR, rebate on building fee, etc.
- When the municipal corporation sanctions any building plan then it should put a condition how they will dispose of the C&D waste and how they will comply. Implementation is poor.
- The management at the level of local bodies needs to be strengthened so that all these conditions that are imposed during sanction of plan are really monitored and seen that they are implemented.
- Construction and demolition waste is being dumped in the green belts, where trees and shrubs die with time.
- The products made from C&D waste are good for non-load bearing structures.
- It has been made mandatory for the contractors to at least use 10% of these products in circulatory areas.
- Every department should have an environment department for awareness about the rules, which usually do not percolate down. People should be aware of the repercussions of not following the rules.

Participants: Dr Anil Kumar, Mr Pradeep Khandelwal, Mr Sanjiv Kumar, Dr Sanjeev Agrawal, Mr Neeraj Tyagi, Dr Dipankar Saha, Mr PK Jain, Mr Vikas Singhal, Dr S Sharma

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