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## NEGATIVE IMPACT OF COVID-19 IN THE LIFE OF WOOD CHARCOAL ENTREPRENEURS

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### Abstract

*In the face of the worldwide COVID-19 pandemic, Entrepreneurs must face a new reality: it is not only a huge sanitary and health crisis affecting millions or even billions of people all over the world but also an unprecedented downturn on the global economy revealing its breakability and fundamentals. The government, public health and economic responses are tremendously different if you are an entrepreneur based in India. As an entrepreneur, you also don't have the same action plan to put in place depending on your sector and industry. Compared to online shopping, food delivery, video gaming or video conferencing industries all currently booming, while businesses in the hotel, restaurant, retail, entertainment and sports industries, could take the opportunity to innovate with more digitalization and disruption implemented in their business models to increase the touch points with their customers. Likewise, the wood charcoal-based entrepreneurs are facing very highlighted problems in their business activities as well as the family situation.*

**Keywords:** Wood Charcoal, Entrepreneurs, COVID-19, Pandemic Situation

### Introduction

The Covid-19 pandemic could help trigger an uptake in renewable power infrastructure and generation in India, according to a new report published by the Institute for Energy Economics and Financial Analysis (IEEFA). The report, 'Who would still fund a new coal power plant in India?', draws on a decade of data to highlight a steady decline in new coal projects in India, noting that there was an 80% decline in new thermal power installations in the four years to the 2015-16 financial year alone, while renewable energy delivered more than two-thirds of

India's new generating capacity in the 2019-20 financial year.

It went on to highlight a disparity between planned and actual spending on new power infrastructure to the tune of \$70bn, with the Indian Government planning to install at least 70GW of new coal power plants between 2018 and the 2026-27 financial year, but there are now concerns as to where this funding will come from.

This trend has been intensified by the spread of Covid-19 and the resulting lockdown, which has caused energy demand to collapse across the world, and

India is no different. While the International Energy Agency has reported a 25% fall in global weekly energy demand, India saw its energy need decline by 26% over just ten days in late March, according to figures from the country's Power System Operation Corporation. This collapse was led by a 34% decline in energy need in the country's western region alone. This has had a significant impact on Indian coal power generation; in the first 33 days of the 2020-21 financial year, coal-fired power generation fell by 30TWh compared to previous years, raising concerns about the long-term viability of the sector as the world deals with the impacts of the Covid-19 pandemic.

Due to increasing COVID cases, the State government of Tamil Nadu has ordered a 12-day complete lockdown in the Greater Chennai Police Commissionerate Limits areas in Tiruvallur District, Chengalpattu District and in Kancheepuram District. This lockdown will be in effect between 19 June 2020 and 30 June 2020. The notification provides, among other things:

- ❖ Auto, taxis, and private vehicles will not be permitted, except for medical emergencies.
- ❖ E-pass will be restricted to those applicants only who intend to travel from Chennai to other districts for marriage, funeral and medical emergencies, provided they submit relevant documents.
- ❖ A full-day lockdown will be enforced on two Sundays - 21 June 2020 and 28 June 2020 - without any relaxations.

The existing procedure with respect to operation of trains, and international and domestic flights will continue to be in effect.

### **Current Situation**

COVID-19 has adversely impacted the overall investment sector. While businesses across all sectors can sense the repercussions of COVID-19,

start-ups have particularly been one of the most vulnerable, and in fact, are facing various formidable challenges both, from a business as well as from an operations' perspective. Most start-ups have witnessed a decline in supply and or demand, except for those start-ups that are engaged in the supply and, or delivery of 'essential services', educational technology, gaming or streaming services. Notwithstanding the above, glitches in the supply chain network have either way presented challenges for all start-ups. However, the start-up ecosystem has been continuously striving to adapt to the present situation as flexibly as possible, by focussing on the need to innovate and diversify their business techniques and its operations.

In the past couple of years, the start-up ecosystem in India has emerged as a reckoning force, largely attributable to the efforts of the stakeholders, and the initiatives implemented by the government to facilitate the growth of the start-ups. Investments in start-ups have dramatically surged to \$14.5 billion in 2019 from the previously \$550 million in 2010.

### **Changes in Bamboo Charcoal Industry**

Bamboo Charcoal Manufacturing Business. Production of Activated Charcoal from Bamboo. Bamboo charcoal powder consists of pieces of bamboo plants, which are harvested after a minimum of five years. It is manufactured using the pyrolysis or carbonization process, which usually consists of heat treatment at the temperature of 800°C to 1200°C. The process imparts high adsorption properties to the bamboo charcoal powder, thus making it useful for a wide range of applications. Bamboo charcoal powder can attract and hold a variety of materials, minerals, chemicals, humidity, radio waves, odors, and other substances. Thus, it provides these materials with healing and detoxification characteristics. The use of bamboo

charcoal powder is also popular because it is an environmentally-friendly product.

Bamboo charcoal can be used as household fuel for heating and cooking, as well as in a range of purification and absorption applications, such as purifying drinking water, in air filters, in mattresses and pillows as a deodorizer, and for certain industrial purification uses. Bamboo vinegar, a by-product of the manufacturing process, is also used as an ingredient in health products. Bamboo is an excellent resource for charcoal because of its high surface area (up to 385 m<sup>2</sup>/g) and the ability to reach high temperatures (the surface temperature of bamboo charcoal can reach 700°C). Bamboo grows naturally because of the country's largely undisturbed forests and the limited agriculture practiced in areas where bamboo proliferates. Four dzongkhags have a significant production of bamboos. These are Samtse, SamdrupJongkhar, Tsirang and Zemgang.

Bamboo charcoal can be used for a wide range of different purification and absorption application. Reduce Indoor Air Pollution - Bamboo charcoal absorbs harmful chemicals in the air. It is especially useful for absorbing formaldehyde, ammonia, benzene from paints and strong adhesives, or when antifreeze is kept indoors. It also reduces smog as it absorbs carbonic oxide, ammonia, formaldehyde, benzopyrene, nicotine, and tar.

Purifying Drinking Water - As bamboo is naturally anti-bacterial and anti-fungal, bamboo charcoal also possesses similar properties. Bamboo charcoal also absorbs 2, 4-dichloro-hydroxybenzene, a major harmful pollutant in drinking water. Bamboo charcoal also eliminates harmful substances such as surplus chlorine, chloroform, and contains rich natural mineral, like, potassium, magnesium, sodium, calcium etc. Water quality is improved when bamboo charcoal is used in cooking and boiling.

Adjusting Humidity - Bamboo charcoal is both an effective natural humidifier and dehumidifier, a result of the pores present in its substructure which can trap and release moisture. Promote Metabolism and Blood Circulation - As bamboo charcoal absorbs and emit far infrared rays, it promotes blood circulation. Bamboo charcoal in mattresses, cushions and comforters help to warm the body faster. Due to its absorbent properties, bamboo charcoal is often used in refrigerators, trash cans, shoe insoles, etc. to absorb odor. Bamboo charcoal products are not only functionally sound, but also good for protecting the environment.

#### **Market Outlook**

Based on the raw material required for manufacturing bamboo charcoal, bamboo charcoal market is categorized into raw bamboo charcoal and bamboo briquette charcoal. Raw bamboo charcoal and bamboo briquette charcoal are prepared from branches, roots, and culms of bamboo plants. Different manufacturing method for preparation of bamboo charcoal powder include the brick kiln process and mechanical process. The bamboo charcoal market is broadly categorized into three major segments based on the application type such as food industry, textile industry and cosmetics industry. Cosmetics industry segment is growing rapidly in the bamboo charcoal market with substantial revenue generation in the last few years. Growing popularity of bamboo charcoal in cosmetics industry segment is attributed to the increasing product penetration in newer market and increasing use in household applications.

The global charcoal market is estimated to value \$5,813.2 million in 2017 and is projected to grow at a CAGR of 2.0% during the forecast period. The growing demand for charcoal as a metallurgical fuel in the metal and mining industries is driving the growth of the market. On the basis of type, the charcoal

market is segmented into lump charcoal, charcoal briquettes, Japanese charcoal, sugar charcoal, and others. Others include various forms of activated charcoal. In terms of value, lump charcoal is estimated to contribute the largest share, of more than 67.0%, to the market in 2017. Lump charcoal burns quickly and produces a high amount of heat on burning. Owing to these properties, the demand for lump charcoal is growing for barbecue cooking purposes.

Charcoal is increasingly being used in the production of steel, ferroalloys, aluminium, lead, cast iron, tin, copper, lanthanides, nickel, and some rare metals. It is also employed in the smelting of certain types of brass and bronze. The demand for charcoal is increasing due to technological developments and growing inclination toward the use of clean and renewable resources. Charcoal briquettes compressed from biomass materials produce less ash and reduce greenhouse gas emissions. They are therefore more preferred than traditional fuels. Such environmental sustainability benefits are fuelling their demand among users, which, in turn, is driving the growth of the charcoal market.

Asia-Pacific region is estimated to hold a major share in the bamboo charcoal market with massive growth in forecast period. Countries such as India, China and Singapore are leading the Asia-Pacific market with strong economic growth, rapid industrialization, rising demand from end-use industries, and significant investment by leading industry players considering potential growth opportunities in the region. The key players in the bamboo charcoal market are Hangzhou Fuyang Motor Carbon Ltd., Guilin Hsinchu Nature Biomaterials, Apex Biotechnology Corp., Jiangshan City Green, The Charcoal House, Japan Daisentakuzumi Corp., Quzhou Modern Carbon Industry, Shanghai Hainuo

Carbon Industry, and the Suichang Bamboo Charcoal Factory.

A lot of support services for entrepreneurs have shifted online to ensure that they have access to the guidance they require even in the absence of physical convenings. However, in doing so, the assumption that both men and women have equal access to space, internet, and available time to leverage these resources, is in itself flawed. Additionally, charcoal entrepreneurs often do not have the same network of peers to reach out to for moral or technical support.

#### **Activated Charcoal from Wood**

NIIR Project Consultancy Services (NPCS) through its network of project consultants in a wide range of business and technological disciplines is engaged in providing services to its clients by way of preparation of project reports. We provide the pre-investment information and business plans required for promoters, business leaders, young entrepreneurs, women entrepreneurs, investors, NRI (Non-Resident India), startups, professionals looking to start their own venture. The comprehensive project profile reports cover all the aspects of business, from analyzing the market, confirming availability of various necessities such as plant & machinery, raw materials to forecasting the financial requirements.

The scope of the report includes assessing market potential, negotiating with collaborators, investment decision making, corporate diversification planning etc. in a very planned manner by formulating detailed manufacturing techniques and forecasting financial aspects by estimating the cost of raw material, formulating the cash flow statement, projecting the balance sheet, break-even point, rate of return, etc. the DPR is formulated by highly accomplished and experienced consultants and the market research and

analysis are supported by a panel of experts and digitized data bank.

Capacity	15MT/Day	Plant and Machinery cost	80.00 Lakhs
Working Capital	113.00	Rate of Return (ROR)	24.13 %
Break Even Point (BEP)	62.30 %	TCI	262.00 Lakhs
Cost of Project	262.00Lakhs		

Source: [www.entrepreneurindia.co](http://www.entrepreneurindia.co)

Activated wood charcoal is a very important chemical widely employed by certain gases and vapours in purification in catalytic chemical reactions and decolorization of vegetable oils and sugar solutions. Activated wood charcoal is available in diverse forms like symmetrical pellets, irregular shaped

granules and in cubical form. Due to expansion of pharmaceutical and vegetable oil industries the demand of activated wood charcoal is expected to rise sharply in the coming years. New entrepreneurs venture in to this field will be successful.

Capacity	1,200 MT per Annum	Plant and Machinery cost	216.00 Lakhs
Working Capital	0.00	Rate of Return (ROR)	27.00 %
Break Even Point (BEP)	56.00 %	TCI	0.00 Lakhs
Cost of Project	498.00Lakhs		

Source: [www.entrepreneurindia.co](http://www.entrepreneurindia.co)

Activated charcoal of three grades namely powder, granular and pelletized finds hundreds of different applications. By chemical activation, predominantly powder activated charcoals are made and these qualities are mostly used for wastewater treatment. Granular products and pellets used for gas purification are predominantly made by gas steam activation. To cite some examples from the numerous applications: decolorization of sugar and sweeteners, drinking water treatment, gold recovery, production of pharmaceuticals and fine chemicals, catalytic process, off gas treatment of waste incinerators, automotive vapor filters, colour correction in wines and fruit juices.

Wood activated charcoal market has been segregated based on product, application, end-user and region. The product segment comprises powdered and granular wood activated charcoal. Among these, powdered form will hold over two-thirds of the entire wood activated charcoal industry in 2024. As a whole

there is a good scope for new entrepreneur to invest in this business.

Few Indian major players are as under:

- Active Char Products Pvt. Ltd.
- Acuro Organics Ltd.
- Birla Carbon India Pvt. Ltd.
- Core Carbons Pvt. Ltd.
- Kalpaka Chemicals Pvt. Ltd.
- Kan Carbon Pvt. Ltd.
- Phillips Carbon Black Ltd.

#### What can we do?

Supporting charcoal entrepreneurs with relevant trainings, and providing access to flexible financing options to help keep their businesses afloat are definitely good places to start. We have an opportunity to pivot and rebuild support structures. Here are some things to keep in mind as we do so:

#### ***1. Make interventions business responsive***

We need to ensure that, in addition to considering business norms, roles, and relations, our interventions understand how these affect access to resources, and

offer remedial action to overcome these obstacles. Collaborating with known experts in the field is a good way to work towards this. For example, the Indian Charcoal Social Entrepreneurs Network (ICSEN), formed from one such collaboration, seeks to provide charcoal social entrepreneurs across India with leadership and management skills to help scale their businesses, especially in these times.

## **2. Make financial services more inclusive**

Charcoal Entrepreneurs in developing countries tend to not have the same access to information, skills, or awareness to fully leverage financial services. The pandemic provides governments and private finance providers an opportunity to design or tweak existing financial services to be made more inclusive for women entrepreneurs, both from rural and urban backgrounds.

## **3. Focus on digital inclusion**

SGBs are undergoing a transformation to make it through this crisis. In a country where the female internet user population is only half of that of the men, with the divide being more distinct in rural India, this overhaul of services to digital platforms can widen inequalities. Entrepreneur-support organisations must work with SGBs to set in place an inclusive plan to gradually build digital awareness and adoption.

This pandemic has acted as a mirror for the unequal systems and structures we had become accustomed to as a society. However, it is also presenting us with an opportunity to change the status quo and look at designing inclusive and sustainable support systems for entrepreneurs. Let us use it to build back better.

## **Conclusion**

Black Death, for instance was a turning point that increased real wages which subsequently led to innovation in production process that improved

productivity ultimately culminating in Industrial Revolution. The SARS CoV2/COVID – 19 Pandemic is a Black Swan event that poses a challenge for countries across the world as the trade-off is between saving lives and protecting livelihoods. It also presents a unique opportunity to undertake bold, courageous reforms that can unshackle India's productive potential. We would be compounding the tragedy if we waste this opportunity. Swift policy response will be the key to recovery as government's combat a simultaneous demand and supply shock unlike ever seen before. The prospects of recovery in the short run ultimately demand on the scale, mechanism and instrument of policy action.

Customers — both individual consumers and businesses — are becoming accustomed to new forms of business, such as online ordering for home delivery. Their established habits have been disrupted, changing attitudes and expectations. For example, the surge in video meetings creates comfort with this method of interaction, and users learn how to be effective in meetings without face-to-face interactions. After the shutdown, many people will expect more integration of online and offline offerings. They will likely also be more at ease with using new technologies, especially video conferencing that can also reduce travel costs and carbon emissions. It's clear the post-pandemic future will be different. What's happening during the crisis will have a lasting impact on society. Current signs of entrepreneurial initiative and goodwill give us some cause for optimism.

In the words of Stanford economist Paul Romer: "A crisis is a terrible thing to waste."

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