THE IMPACT OF COVID-19 ON DIFFERENT SECTORS OF KERALA

RAJIV GANDHI
INSTITUTE OF
DEVELOPMENT STUDIES

RAJIV GANDHI INSTITUTE OF DEVELOPMENT STUDIES

REPORT ON

THE IMPACT OF COVID-19 ON DIFFERENT SECTORS OF KERALA

June 2020

Printed & Published by:

Rajiv Gandhi Institute of Development Studies (RGIDS)
Neyyar Dam P O, Thiruvananthapuram
Kerala – 695572
E-mail: rgidskerala@gmail.com
www.rgids.in

We would like to dedicate this report to the "Corona Warriors" of our State for their selfless, tireless fight against the pandemic. We salute all frontline workers including doctors, nurses, other paramedical staff, and officials of revenue, police, local self-government, and all other departments who participated in the fight against the spread of the COVID-19 in Kerala.

Contents

FOREWORD

The COVID-19 pandemic has brought the world to a grinding halt, affecting millions of lives. Since its outbreak in China in December 2019, the pestilence has caused great devastation across the globe. The whole world had gone into complete lockdown during the initial phase of the outbreak. In India and in the State of Kerala, stringent restrictions were imposed since the outbreak and is more or less continuing.

On the flip side, these stringent lockdowns have affected the underprivileged and downtrodden sections of the society, who earn their daily meal with difficulties. The street vendors, construction workers, autorickshaw drivers, household workers, farmers, temporary workers and the students among others are finding it hard to survive in these testing times. The state finances also have taken a beating due to the plummeting demand and the complete lock down.

The growing concerns over the severity of the economic and social impact of lockdown are being discussed across the country. This has left the decision makers to choose between ‘lives’ and ‘livelihoods’.

It is at this critical juncture that the Rajiv Gandhi Institute of Development Studies (RGIDS) has taken up the study to assess the impact of COVID-19 - induced lockdown on the people of the State. I am sure that this comprehensive report will serve as a guide for the Government of Kerala to recast their priorities in the coming days.

Ramesh Chennithala
Chairman, RGIDS

Delivering the 2020 Nelson Mandela Annual Lecture on 18 July 2020, held online for the first time, in the light of the ongoing COVID-19 pandemic, UN Secretary-General António Guterres said that coronavirus has revealed the ‘fragile skeleton’ of societies and could push 100 million people into extreme poverty. Guterres added that the economic fallout of the pandemic, which has infected more than 14 million and killed close to 600,000 people worldwide, is being disproportionately felt among informal workers, small businesses and women. In his lecture he said, "We face the deepest global recession since World War II and one hundred million more people could be pushed into extreme poverty. We could see famines of historic proportions". Further, as Guterres said, the COVID-19 spotlight has shown that while we are all floating on the same sea, it’s clear that some are in superyachts, while others are clinging to the drifting debris.

The experiences over the past few months have made governments and people at large realise that the pandemic has become an unprecedented socio-economic crisis, with potential to create devastating impact on the lives and livelihoods of millions of people and national economies. As the pandemic has created multiple crisis in several fronts especially health, travel, economy, finance, production and output, employment, prices, emigration and remittances, and overall fiscal health of governments the Rajiv Gandhi Institute of Development Studies (RGIDS) has conducted a study on the impact of COVID-19 on various sectors of Kerala. The study was done with the objective to give suggestions to the government to address the crisis effectively. It examined the spread of the pandemic, the impact of lockdown on the Gross State Domestic Product (GSDP), impact on employment, unemployment, returnee emigration from the Gulf and other countries, impact on certain sectors of state economy and state finances. The study carried out by RGIDS is based on data gathered from state and central governments, international organisations and media reports both print and electronic. It is not only an empirical study, but also based on relevant literature review and consultation with experts from varied backgrounds and across sectors of the state’s economy.

The study has shown us the realities in the lives of the huge segment of guest workers, who were beyond the radar of our social policies with very little knowledge of their numbers, their contribution to the GSDP, and their importance in keeping the state economy running. It has identified multiple issues from the ground post a thorough prognosis of the various sectors, trade, professions, employment and unemployment status, etc, thereby providing valuable insights, and wide range of recommendations to Government, Trade Unions and Civil Society Organisations (CSOs). Moreover, this study will rejuvenate governments, policy makers, public intellectuals, activists, NGOs, CSOs, and diverse stakeholders within and outside the state towards building effective policies and interventions.

BS Shiju

Director, RGIDS

About RGIDS

The Rajiv Gandhi Institute of Development Studies (RGIDS) is a nongovernmental research organisation, registered under the Travancore Cochin Literary Scientific Charitable Societies Registration Act, 1955. It has been engaged in social science research, training and policy support to both Central and State Governments since its inception in 2005. Its strong academic base and core competence in the areas of decentralised governance and centre-state relations have been contributing significantly to the State of Kerala.

The institute has also been involved in training and capacity building of the elected representatives of Panchayati Raj Institutions. RGIDS has conducted various research studies for the Ministry of Overseas Indian Affairs, National Institute of Rural Development (NIRD), Kerala Institute of Local Administration (KILA), Planning Board, Kerala State Higher Education Council (KSHEC), etc. With its strong academic base and expertise in the field of centre-state relations, decentralised governance and decision making, RGIDS fosters an innovative and practical approach, while addressing contemporary challenges facing the society.

Acknowledgment

This study on “The Impact of COVID-19 on Various Sectors of Kerala” has been made possible by the valuable support extended by various organisations and experts from diverse fields.

At the outset, we express our profuse thanks to the elected representatives of various local self-government institutions, Legislative Assembly, Parliament of India, and officials of various departments for providing us with necessary wherewithal for the completion of the study.

Special thanks are due to MK Raghavan MP, Shri. KM. Chandrashekar (Former Cabinet Secretary, Government of India), Shri. Jiji Thomson (Former Chief Secretary, Government of Kerala), Shri. MP Joseph (Former Additional Chief Secretary), Prof. Irudaya S Rajan (Professor, Centre for Development Studies, Thiruvananthapuram), Dr. S.S. Lal- (Professor and Head, Public Health, Global Institute of Public Health), Dr. Jose Joseph (Former Registrar, Kerala Agriculture University, Thrissur), EM Najeeb (President, Confederation of Kerala Tourism Industry), Shri. Pranav Kumar Suresh (Founder of Startup Village), Prof. Victor George (Former Registrar, Kerala University of Fisheries and Ocean Studies), KP Nandakumar (Former Joint Secretary, Tourism Department), Dr. Shibu Puthanparambil (Vice Principal and Head of the Department of Public Health, School of Medical Education, Kottayam), Dr. GK Mini (Assistant Professor, Global Institute of Public Health), Maria Shirley Morris (Associate Professor, Department of Public Health, School of Medical Education, Kottayam) and Arun B. Nair (Public health activist) for committing us to rigorous research standards and contributing valuable inputs and suggestions towards completing the study.

We are beholden to former Chief Ministers of Kerala Shri. AK Antony and Shri. Oommen Chandy for their valuable guidance. We extend our thanks to Shri. KC Venugopal MP, and General Secretary, All India Congress Committee and Shri. Mullappally Ramachandran, President, Kerala Pradesh Congress Committee, for all their support.

We are grateful to Shri. Ramesh Chennithala, the Leader of Opposition, Kerala Legislative Assembly and the Chairman of RGIDS, for providing valuable insights and expertise that greatly assisted the study. Thanks are due to research associates of the study Ramaswamy, Vinshy PK and Sameera Manhappulan for their immense support in timely completion of the report. We also duly acknowledge the support given by various people, who shared their experiences in the context of COVID-19, from various sectors and industries.

Key Contributors

The Rajiv Gandhi Institute of Development Studies (RGIDS) has conducted a study on "The Impact of COVID-19 on Various Sectors of Kerala". The Institute had set up a team with Prof. BA Prakash (Professor, RGIDS) as the Convener of the study.

Several distinguished persons and experts made their substantial contributions in realising this study. They include Shri.KM. Chandrashekar (Former Cabinet Secretary, Government of India), Shri. Jiji Thomson (Former Chief Secretary, Government of Kerala), Shri. MP Joseph (Former Additional Chief Secretary, Government of Kerala), Prof. Irudaya S Rajan (Professor, Centre for Development Studies, Thiruvananthapuram), Dr. Jose Joseph (Former Registrar, Kerala Agriculture University, Thrissur), EM Najeeb (President, Confederation of Kerala Tourism Industry), Shri. Pranav Kumar Suresh (Founder of Startup Village), Prof. Victor George (Former Registrar, Kerala University of Fisheries and Ocean Studies), KP Nandakumar (Former Joint Secretary, Tourism Department), Dr. Shibu Puthanparambil (Vice Principal and Head of the Department of Public Health, School of Medical Education, Kottayam), Dr. GK Mini (Assistant Professor, Global Institute of Public Health), Maria Shirley Morris (Associate Professor, Department of Public Health, School of Medical Education, Kottayam) and Arun B. Nair (Public Health Activist).

ABBREVIATIONS

CII: Confederation of Indian Industry
CMIE: Centre for Monitoring Indian Economy
CSOs: Civil Society Organisations
CSS: Centrally Sponsored Schemes
DIC: Directorate of Industries and Commerce
e-LAMS: Electronic Ledger Account Monitoring System
EMDE: Emerging Market and Developing Economies
FICCI: Federation of Indian Chambers of Commerce and Industry
GSDP: Gross State Domestic Product
GST: Goods and Services Tax
IMF: International Monitory Fund
KFR: Kerala Fiscal Responsibility
KIIFB: Kerala Infrastructure Investment Fund Board
LIC: Low-Income Countries
LSGs: Local Self-Governments
LSGIs: Local Self-Government Institutions
MFI: Micro Finance Institutions
MGNREGA: Mahatma Gandhi National Rural Employment Guarantee Act
MGNREGS: Mahatma Gandhi National Rural Employment Guarantee Scheme
MIS: Management Information System
MSME: Micro, Small and Medium Enterprises
NAFIS: NABARD All India Rural Financial Inclusion Survey
NBFC: Non-Banking Financial Companies
NGO: Non-Government Organisations
NSO: National Statistical Office
SEBI: Securities and Exchange Board of India
SHG: Self-Help Groups
SRT: State Response Team
STSB: Special Treasury Savings Bank
UAM: Udyog Aadhar Memorandums
UAN: Udyog Aadhaar Number

EXECUTIVE SUMMARY

Global pandemic COVID-19 has become the defining health crisis since December 2019. It is currently the greatest challenge humanity has faced since the World War II. COVID-19 has also become an unprecedented socio-economic crisis, with its potential to create devastating impact on the life and livelihoods of millions of people and national economies across the world. The vulnerability to the pandemic has made almost all the countries to implement lockdown, quarantines and social distancing practices to contain it. The pandemic and the lockdowns have created multiple crisis in several fronts: health, travel, economy, finance, production and output, employment, prices, emigration and remittances, overall fiscal health of governments, etc.

The Indian economy has been experiencing an economic slowdown for two years prior to the spread of COVID-19. The Government of India had failed to take proper measures to stimulate demand. As a consequence, domestic savings, domestic investment and capacity utilisation went down and the national economy has been in the doldrums. Further, the national lockdown of 68 days, implemented in this context of pandemic in India, has inflicted severe damage on all sectors of national and states' economy, and pushed the economy to an unprecedented recession.

In this context, the Rajiv Gandhi Institute of Development Studies (RGIDS), Thiruvananthapuram, Kerala, has conducted a study on the impact of COVID-19 on different sectors of Kerala. The study was done with the objective to give suggestions to the government to address the crisis effectively. It examined the spread of COVID-19, the impact of lockdown on the Gross State Domestic Product (GSDP), impact on employment, unemployment, returnee emigration from the Gulf and other countries, impact on certain sectors of Kerala economy, impact on state finances. A number of experts, belonging to different fields, were consulted for the study. The exercise made use of data of state and central governments, international organisations and published media reports both print and electronic for the study. Apart from these, discussions were held with a number of persons and organisations on public health, trade, industry, construction, IT, agriculture, etc. to gather information on the impact of the pandemic.

In the first phase of COVID-19, Kerala was able to contain the spread due to the effective measures taken. However, in the second phase (last week of April and May) the state reduced testing of cases drastically, which was a wrong decision. There has been a continuous flow of Keralites from other states in India and also from abroad. The state government did not come up with a proper plan to address the health-related issues of returnee emigrants. It informed the union government that two lakh rooms for institutional quarantine of returnees are available, but hardly 20,000 were actually available. The study has found that the current planning of infrastructure for COVID-19 treatment is highly insufficient to arrest the spread of the infections and cater to a large number of cases. In the event of large-scale spread of COVID-19, the public sector hospitals and institutions do not have facilities to address the problem. A major error in the state policy is the non-participation of private sector hospitals and institutions in quarantining, testing and treating of COVID-19 patients. The policy of making the prevention of the spread of COVID-19 and its treatment the monopoly of public health institutions has been a colossal blunder. The overall response of the health department was immature, and lot of time was spent on comparing Kerala with other states in terms of certain indicators and not taking any concrete step for the containment of infection or developing a robust plan for increasing bed capacity. One of key components of effective response to any epidemic of this proportion is to have transparency in testing, containment and treatment-related data and information. However, the government miserably failed in this aspect and the credibility of the data released by government has raised more questions than answers.

Impact of COVID-19 and Lockdown

a) Agriculture

The rapid spread of COVID-19 and the lockdown of economic activities have taken a severe hit on the agriculture sector in Kerala. The major impacts are the disruptions in agriculture supply chain, closure of agricultural markets and non-availability of farm labourers for various agricultural operations. The blockage of transport routes has reduced market access for farmers, especially for their perishable commodities like banana, pineapple, mango, papaya and other fruits and vegetables. During its first phase from 25 March 2020, lockdown has affected harvesting operations. Small and marginal farmers were hardly hit with reduction in price of their produce varying from one-third of the normal price to complete loss. Vegetable farmers faced hardship in finding markets for their produce. COVID-19 spread and lockdown have also hit the processing and nursery activities. The Association of Planters of Kerala (APK) has estimated the loss in the plantation sector in the state to be around Rs 500 crore. Small and marginal farmers in the state, who have not fully recovered from the two floods in 2018 and 2019 have suffered a loss of around Rs 1000 crore so far. This has pushed the small farmers and agricultural labourers to economic distress, indebtedness and poverty.

The Central Government has announced a stimulus package of Rs 1.63 lakh crore for the agricultural sector as part of Atma Nirbhar Bharat. The Kerala Government has announced Rs 3000 crore 'Subhiksha' package for cultivating fallow lands in the state with vegetables and food crops. However, these packages are highly insufficient to meet the challenges faced by small and marginal farmers and agricultural labours.

b) Fisheries

As many as 3.1 per cent of the state's population work in fishing and allied sectors. The fish worker population of the state, residing in 222 marine fishing villages and 113 inland fishing villages, is estimated to be around 2 million. COVID-19 has created immense impact on the fisheries sector. The new sanitary measures, changing consumer demands, market access and logistical problems related to transportation and border restrictions are some of them. Informal daily wage earners in the sector have lost their jobs and incomes. The pandemic has shattered fish workers' and fish farmer's livelihoods, as well as the food security and nutrition for populations that rely heavily on fish.

c) Information technology

The IT industry has been a beacon of hope and a means of livelihood to a large number of IT engineers in the state. Over the last couple of decades, the IT industry has been the leading sector in the state's economic growth. However, due to the pandemic, players in Kerala's IT services will see a significant slowdown in growth during this financial year. Reports claim that top software exporters will be impacted most by the reduced technology spending by clients in the US and Europe following lockdowns across the globe. Moreover, customers are also expecting to reduce their IT budgets and slow down new initiatives due to the fear of uncertain economic situation and recession. In recent times, firms have faced several projects cancellations by clients across sectors due to limitations in air travel and shutting down of cities and countries to contain the spread of the COVID-19 pandemic. According to GTech, an organisation of IT and IT Enabled

Service (ITES) companies across Kerala, the sector would face a loss of Rs 4500 crore in revenue by December 2020, apart from loss of over 26,000 direct jobs and 80,000 indirect jobs.

d) MSME

Kerala has the 12th largest number of MSMEs in India. Around 2.4 million MSME units are generating employment for approximately 4.5 million people. While about 44 per cent of the labour force work as casual workers in the informal sector, there are also about 3.5 million migrant labourers operating as casual workers and 0.7 million as factory employees.

The pandemic and the subsequent lockdown have substantially disrupted the operations of MSMEs in the state. The major reasons were due to the dependence of the sector on cash-economy, which was severely hit by the lockdown, the physical non-availability of workers, and restrictions in the availability of raw materials and transport infrastructure.

e) Travel and tourism

Even as the travel and tourism industry has been recovering from the dip in footfall following the 2018 flood and the Nipah virus scare, it has collapsed again with the COVID-19 pandemic. Kerala's travel and tourism sector, more dependent than others on the free and confident movement of people, is staring at thousands of disappearing jobs and a grey future. As a result of the nationwide lockdown, with no travel possible, the tourism industry in Kerala is being badly hit. Since the lockdown was announced, almost all hotels, travel agencies and handicraft shops are having been shut down. March, April and May usually see a surge in weddings, conferences and other occasions. The month of May used to be the peak season for tourism industry, which sees hundreds of travellers flocking to popular destinations. With all events cancelled or postponed, most of the hotels are recording zero occupancy this season, and hotels and resorts have reported losses to the tune of crores. Hotel owners also opined that they don't expect the industry to revive anytime soon with social distancing norms in place. It is unsure when the situation will return to normalcy.

Travel and tourism sector, which provides employment for more than 10 lakh people in Kerala, suffered a loss more than 90 per cent due to lockdown. If this trend continues as the COVID-19 crisis progresses, it will be a setback for employment in the sector.

According to the Government of Kerala, the state's tourism sector has incurred a loss of Rs 15,000 crore due to the coronavirus-induced lockdown. Business has also slumped in all categories of the tourism industry including the government-run Kerala State Cooperative Tourism Federation Ltd (Tourfed), which had planned a slew of attractive packages for the summer season.

f) Entertainment industry

The pandemic has shattered the entertainment industry across the globe. With theatres under lockdown, film and television serial shootings stalled, advertisement and promotional events, interviews on hold due to the spread of coronavirus, the entire entertainment sector is facing huge losses in Kerala. The Malayalam film industry is staring at a bleak future.

When the lockdown was announced, nearly 30 Malayalam films were at the various stages of production, which included some big-budget movies. Most producers have borrowed huge amounts from private financiers in Chennai for their projects. Some of them are paying a monthly interest of Rs 3 lakh for every Rs 1 crore, according to a producer. Moreover, it is known that a good number of producers in Malayalam films are businessmen from the diaspora community. The pandemic being a global phenomenon, there are considerable concerns in the sector about their future involvement and investment in new films. At present there are four blockbuster films, including films of superstars Mammootty and Mohanlal, which were set to be released. The total cost of production of these films is around Rs 200 crore. Besides there are around 26 films in various stages of production.

Exhibitors, who own around 625 theatres, are one of the major segments of the film industry in the state. Although it is hard to quantify exactly how much money is at stake, one can only estimate the losses based on average collections per day before the pandemic. On a normal day in Kerala, the average collection in all the movie halls was around Rs 1.30 crore, and achieving this figure again sometime soon seems to be a distant possibility. Exhibitors are in deep trouble as they have to pay very high electricity bill.

There is hardly any artistic and cultural activity, including drama and performing arts, happening in the state. Most of the performing artists depended on the entertainments sector for their livelihood, and the pandemic has made all of them inactive for the past few months.

Television industry is also facing problems. No new programme shooting is happening due to social distancing. Most of the business houses are facing financial crisis, and they are not in a position to spend money for advertisements and commercials. Due to that most of the television channels are facing huge revenue loss. Naturally this has affected their day-to-day functioning also.

Kerala has more than half a dozen amusement parks. There are nearly 10 such parks in the state, including the famous Wonderla in Kochi, which give direct employment to around 5000 people and indirectly provide livelihood to nearly 30,000. Their continued closure due to the pandemic has devastated them financially. There is 100 per cent loss in this segment.

The summer months of April and May are peak months for theme parks. These are the months when children have their summer break and families throng amusement parks. In this period, theme parks generate 35-40 per cent of their annual income. The lockdown, which began in late March, has resulted in huge losses to theme park owners. According to the Wonderla management, they have suffered a loss of Rs 4 crore per month. The Indian Association of Amusement Parks and Industries (IAAPI) pegs the losses incurred by the sector due to the lockdown at Rs 1100 crore. The industry has lost its biggest peak season (summer), which generates approximately 45-55 per cent EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortisation), and is usually followed by a long off season.

g) Employment

The lockdown has resulted in unprecedented loss of employment in all the sectors of the state’s economy, and loss of wages and income to lakhs of workers. The impact of the loss of employment was severe in the case of self-employed and casual workers in the state. Further, the lockdown has pushed more than two-thirds of self-employed and casual workers to acute unemployment, financial crisis, indebtedness and economic distress.

h) Emigrants

Due to the spread of COVID-19, there was panic among the Keralite emigrants in the Gulf and other countries and a large number of them have registered with NORKA and other agencies for immediately returning to the state. The total foreign registrants, who wanted to return, including migrants, their dependents, persons on short visits, students, etc. was 4.13 lakh as on 3 May 2020. This included 61,009 emigrants who lost jobs, 41,236 visiting visa expired persons, 27,100 persons whose visa expired or was cancelled and 7276 students. Of this, the share of Keralites in the six Gulf countries viz. UAE, Saudi Arabia, Kuwait, Bahrain, Oman and Qatar was about 3.2 lakh.

The increase in the number of deaths of Keralites due to COVID-19 (186 death as on 6 June 2020), the lack of facilities for treatment, lack of hospital beds to admit COVID-19 patients, inability to undergo costly treatment in private hospitals, lack of space and facilities for quarantine in labour camps, etc., compelled Keralite emigrants to return to their home state. It is likely that two to three lakh migrant workers may lose jobs and return to Kerala due to COVID-19 crisis.

It is likely that thousands of households, which solely depend on remittances for their survival, will face severe economic distress. The fall in remittances will adversely affect investment on land, construction of houses and other buildings, consumption, education, health, repayment of loans to banks in those districts, which have high intensity of emigration. There will be a recession in those districts with a high intensity of emigration. Among the returnee emigrants, nearly half will be likely to be absorbed in the labour market in the state. A sizeable number will still remain unemployed.

i) Economy

The state's economy suffered a huge loss of GSDP due to the 55 days lockdown (March 24 to May 17). The total estimated loss of GSDP in the first phase (March 24 to April 19) is 82 per cent, while it is 72 per cent in the second phase (April 20 to May 3) and 61 per cent in the third phase (May 4 to May 17). The estimated total loss of GSDP for 55 days is Rs 87,159 crore, which will be equivalent to 11 per cent of the GSDP for a year. A sector-wise breakup of the loss shows that primary sector incurred a loss of Rs 7305 crore, secondary sector Rs 21,836 crore and tertiary sector Rs 47,605 crore. During the financial year 2020--21 the GSDP has been projected to register a negative growth rate (below zero).

Suggestions and Recommendations

a) Healthcare system

An efficient primary healthcare system is needed, rather than the existing curative model. Increase in laboratory network and testing, improvement of health information system, utilisation of services of private health institutions in the prevention and treatment of COVID-19, enhancing the role of academic and research institutions, priority for skilled and efficient public health work force, engaging and communicating with communities are required. A serious issue being faced today in Kerala's health sector is the collapse of waste disposal system. The local governments should be assigned additional functions- taking preventive steps to contain the spread of COVID-19, providing relief to the people in the time of spread of infection, organising community kitchens and also providing other required measures with the co-operation of NGOs, voluntary organisations and resident associations.

b) Agriculture

In order to address the crisis in agriculture, the following measures are proposed: a) Compensation to farmers for the loss of crops due to flood and natural calamities; b) moratorium for all loans availed by farmers; c) introduction of a loan-waiver scheme; d) promotion of rural agricultural markets; e) promotion of marketing through multiple ways; and f) prevention of disruption in supply chain and promotion of lease and contract farming. Government should create a registry of all farmers, self-employed farmers and agricultural labourers, who get their major source of income from agriculture in Krishi Bhavan of each Grama Panchayat.

c) Fisheries

Selling fish through shops having freezers, providing accommodation and other facilities for fish workers from other states, promoting dry fish, declaring fish farming similar to agro farming, etc. are suggested to revive the fisheries sector. All the fishermen who engage as full-time fishermen, self-employed fishermen and casual labourers in fishing sector (marine and inland) should be asked to register with fisheries department (local offices). The subsidies and other financial support should be distributed to the registered fishermen.

d) Information technology

The rent waiver, which was announced by the state government, may be extended to all the IT companies working in IT parks owned by the government. The concession may be given for six months starting from April 2020. The request of the IT companies to expedite the payment of pending arrears of state government and GST refunds may be accepted. As most of the IT units come under MSMEs, they can also avail the assistance, support for workers, credit support, other measures, etc. announced in the economic revival package by the central government. The industry needs support from the government to keep the companies afloat to retain jobs and provide more employment within the state.

e) MSME

Efforts should be made towards implementing a payroll protection programme, enhancing access to capital, implementation of a six-month moratorium on loan repayment and waiver of interest, providing special assistance to artisans, weavers and those engaged in handloom and cottage industries, declaring a tax holiday for six months for MSMEs, providing assistance to bring back migrant workers to industrial clusters, rationalise GST tax rates and simplify the GST structure, implement revival measures to boost MSME, etc.

f) Travel and tourism

Government should convert resorts and hotels temporarily to paid quarantine centres. Ensure that the regular employees in tourist units get half the pay till revival of tourists business by the owners, give more time for repayment of loans and interest to the borrowed funds from banks and financial institutions, change the focus from luxury tourism meant for rich to affordable tourism meant for middle class domestic tourists, and also promote Kerala as a health tourism hub to attract foreign tourists.

g) Entertainment industry

The government needs to step in to save the entire entertainment industry from the current crisis. It has to waive the fixed charges, as they are not hopeful about to see theatres in full occupancy. The IAAPI has already submitted the standard operating procedures (SOPs) to be followed to the Union Home and Health ministries, Prime Minister's Office (PMO), and the chief ministers of various states. Gatherings can be easily controlled in the amusement parks and it is also possible to maintain social distancing. Even the water parks are safe as chemicals are used to kill any kind of virus. Sanitisation of employees and all individual units inside the parks will be undertaken with considerable vigil. If the parks are allowed to reopen, at least they will generate some revenue despite low footfalls. With no revenue, the park managements are giving salaries to the staff. If the situation remains unabated, they will not be able to manage.

h) Employment

The study has come up with suggestions to expand the activities of MGNREGS, such as immediate release payments pending under MGNREGS to the states, including to workers deemed to be at work; effective and flexible implementation of MGNREGS, including increasing budgetary allocation, on-spot registration of migrant workers, increase in days of work per family from 100 to 150, option for smaller slots of work, flexible labour to material ratio within limits, immediate opening of worksites, and increase the wage rate; empower Gram Panchayats to sanction work based on minimal documents, include new categories of work under MGNREGS, rolling out short-term employment programmes and implement 'One Nation One Ration Card' scheme, etc.

i) Work places

In the light of the shift of activities from work place to home, the State Electricity Board should take urgent steps to provide uninterrupted 24-hour supply of electricity with adequate voltage to all electrified households in Kerala. The Water Authority should take urgent steps to provide uninterrupted supply of water to all houses with water supply connection. The state government should take urgent steps with the public and private internet providers to expand internet infrastructure and facilities. Banks and financial institutions should provide loans for purchasing computer, laptops and smart phones to the students/parents.

j) Emigrants

The state government has to give financial and other support for a large number of returnee emigrants to help them find gainful self-employment. In order to address the changes in labour market due to the return of migrant workers to their native states and incoming of Keralite workers from other states and abroad and to generate more gainful employment a few suggestions are proposed in the study. This includes a major project to replace migrant workers with gulf returnees, with major components like re-skilling or up-skilling, setting up counselling for gulf returnees, training and counselling for trade union workers at the grassroot levels and change the wage rate from high rate to medium rate. The study also recommends developing Thozhil-Bandham app and Shramik Bandhu app. It is suggested that all the migrant workers belonging to other states and working in Kerala should be asked to register in labour department (District, Taluk or sub offices) and should be issued an identity card.

k) Economy

Since the loss of GSDP is huge and the present crisis is likely to be transformed in to depression in the near future, the state government should prepare an action plan to revive the economy and take urgent steps to revive each sector and sub sectors. The state government should effect substantial cut in its expenditure including plan expenditure to find resources for the revival package.

l) Fiscal situation

A plan holiday for one year and diverting the available funds for the economic revival package and measures to contain the spread of COVID-19 and related public health activities are recommended. The government should take urgent steps to curtail the fiscal extravagance of all its departments, LGs, autonomous bodies, public sector undertakings and other state-funded institutions. It should defer all proposals to start new educational institutions, new batches and creation of new posts in public and private aided sector during the academic year 2020--21. Reduce the government sector pay roll burden by abolishing unnecessary establishments and surplus staff.

It is suggested that the government should publish a white paper to present the facts on the loss of revenue due to COVID-19 crisis in the state and the fiscal situation in the post-lockdown period. A public debate on the grim fiscal situation, the role of state in dealing the COVID-19 crisis and changes in the strategy and approach are needed.

I. Introduction

Global pandemic COVID-19 has become the defining health crisis since December 2019. It is currently the greatest challenge humanity has faced since the World War II. COVID-19 has also become an unprecedented socio-economic crisis, with its potential to create devastating impact on the life and livelihoods of millions of people and national economies across the world. The vulnerability to the pandemic has made almost all the countries to implement lockdown, quarantines and social distancing practices to contain it. COVID-19 has spread to 215 countries and territories and the number of cases went up to 159.31 lakh and 6.41 lakh people died as on 24 July 2020. Scientists are finding it difficult to predict future spread of the disease, its containment, time required to control it or magnitude of loss of human lives.

The global pandemic has created multiple crisis in several fronts: health, travel, economy, finance, production and output, employment, prices, emigration and remittances, overall fiscal health of governments, etc. It has turned the public health crisis into world economic crisis. The International Monitory Fund (IMF) in its April World Economic Outlook projected that the global growth in 2020 will fall to (-)3 per cent. It observes that this makes the great lockdown the worst recession since the Great Depression, and far worse than the global financial crisis.

The Indian economy has been experiencing an economic slowdown for two years prior to the spread of COVID-19. The Government of India had failed to take proper measures to stimulate demand. As a consequence, domestic savings, domestic investment and capacity utilisation went down and the national economy has been in the doldrums. The gross domestic product (GDP) growth rate had declined, unemployment increased and the Micro, Small and Medium Enterprises (MSME) sector witnessed a decline. The demonetisation and imposition of the Goods and Services Tax (GST), without sufficient preparation, has aggravated the situation. The national lockdown of 68 days, implemented in this context of pandemic in India, has inflicted severe damage on all sectors of national and states' economy, and pushed the economy to an unprecedented recession. The Reserve Bank of India (RBI) on 22 May stated that India's GDP growth will become negative (-0) in 2020-21 as the outbreak of COVID-19 has disrupted economic activities. Domestic economic activity has been impacted severely by the two-month lockdown. The top six industrialised states that account for 60 per cent of India's industrial output are largely in red and orange zones. The biggest blow has been on private consumption that accounts for 60 per cent of domestic demand. The Centre for Monitoring Indian Economy (CMIE) estimated that India's unemployment rate increased to 24 per cent for the week ended 17 May 2020. The rural unemployment was 23 per cent and the urban unemployment rate was 27 per cent. The available evidence suggests that the spread of COVID-19 has been pushing the national and states' economy to an unprecedented recession.

In this context the Rajiv Gandhi Institute of Development Studies (RGIDS) has conducted a study on the impact of COVID-19 on different sectors of Kerala. The study was done with the objective to give suggestions to the government to address the crisis effectively. It examined the spread of COVID-19, the impact of lockdown on the Gross State Domestic Product (GSDP), impact on employment, unemployment, returnee emigration from the Gulf and other countries, impact on certain sectors of Kerala economy, impact on state finances. A number of experts, belonging to different fields, were consulted for the study. The exercise made use of data of state and central governments, international organisations and published media reports both print and electronic for the study. Apart from these, discussions were held with a number of persons and organisations on public health, trade, industry, construction, IT, agriculture, etc. to gather information on the impact of COVID-19.

II. Outbreak of the Pandemic

1. COVID-19 and its Spread Globally

Identified in December 2019, COVID-19 spread across the world at an unprecedented pace. In a globalised world where people have the habit of frequent international travel, the disease spread to a large number of countries within a short time. COVID-19 cases increased from 580 to 102,050 in a short period of 44 days. Within another 52 days, the total cases increased to 30.57 lakh (Table 1). As on 24 July 2020, the total number of COVID-19 patients went up to 159.31 lakh and the number of deaths increased to 6.41 lakh. Modern world totally failed to prevent the rapid spread of the pandemic, and even the so-called best healthcare systems of the developed countries were unable to contain the alarming increase in the number of COVID-19 cases and deaths. This has created a panic situation in developed as well as less developed countries. In the absence of any vaccine to contain the disease most of the countries in the world resorted to lockdown of their economies. The pandemic has spread to 215 countries and territories as on 24 July 2020.

Table 1: Spread of COVID-19 across the World (January to 24 July 2020)

Month/Date	Total No. of Cases	Active Cases	No. of Deaths
22 January	580	141	17
12 February	59,287	37,282	1261
6 March	102,050	39,812	3493
26 March	532,807	267,010	24,691
2 April	10,20,920	591,519	55,503
15 April	20,76,502	12,96,356	140,791
27 April	30,57,280	18,12,388	214,748
8 May	40,09,284	23,37,180	275,976
20 May	50,85,449	27,33,276	329,239
31 May	62,59,249	30,41,554	373,697
15 June	81,08,667	34,73,090	438,596
24 July	1,59,31,445	55,72,588	6,41,885
Month/Date	**Growth Rate (%)**		
22 January	-	-	-
12 February	10,122	26,341	7318
6 March	72	7	177
26 March	422	571	607
2 April	92	122	125
15 April	103	119	154
27 April	47	40	53
8 May	31	29	29
20 May	27	17	19
31 May	23	11	14
15 June	30	14	17
24 July	96	60	46

Source: https://www.worldometers.info/coronavirus/

2. Initial Impact on Global Economy

The emerging market and developing economies (EMDEs) with weak health systems, those that rely heavily on global trade, tourism, or remittances from abroad, and those that depend on commodity exports are severely affected by lockdown and other restrictions. The steep decline in oil prices since March 2020 adversely affected the oil-exporting EMDEs. In the context of alarming spread of COVID-19, governments around the world have taken unprecedented measures—including lockdowns and quarantines, school and business closures, and travel restrictions—to stem the spread of the pandemic. These measures, together with the spontaneous reactions of consumers, workers and businesses, have caused severe disruptions to activity in many sectors and a sharp global economic downturn.

A review of the macro economic effects of COVID-19 by the World Bank arrived at the following conclusions. While outbreaks in most advanced economies appear to be abating, the pandemic is rapidly spreading across EMDEs, including low-income countries (LICs), where healthcare systems have limited capacity. Along with the public health crisis, EMDEs are facing tighter financing conditions, plunging oil and other commodity prices, sharp declines in remittances, and collapsing international trade. EMDEs that are most vulnerable to the impact of the pandemic include those that have weak health systems, that rely heavily on global trade or tourism, that are vulnerable to financial disruptions, and that depend on oil and other commodity exports. The long-term damage will be particularly severe in economies that suffer financial crisis and in energy exporters, because of plunging oil prices. In the average EMDE, over a five-year horizon, a recession combined with a financial crisis could lower the potential output by almost 8 per cent.

3. COVID-19 Cases in India

India reported the first confirmed case of the coronavirus infection on 30 January 2020 in the State of Kerala. The infected person had a travel history from Wuhan, China, to Thrissur District. The number of cases increased beyond 10,000 since April 2020. The lockdown implemented in India between 25 March and 31 May 2020 (68 days) may have helped to contain the spread of the infection to some extent. However, there has been a rapid increase in its spread since May 20. As on 24 July, while the total cases in the country was 13.37 lakh, the number of deaths was 31406 persons (Table 2). A state-wise review of the confirmed cases and number of deaths shows that the state of Maharashtra has the largest number of confirmed COVID-19 cases and death as on 24 July 2020. The other states having the second, third and fourth positions with respect to confirmed cases are Tamil Nadu, Delhi and Karnataka. These four states account for 58 per cent of the total confirmed cases in India (Table 3). Compared to other major states, Kerala has a lower rate of confirmed cases. A disturbing issue about the spread of COVID-19 in the states is the low rate of tests conducted to detect the cases. Also, the reporting systems in the country are far from reliable and in a situation such as COVID-19, there could be a high propensity for under reporting at all levels. Therefore, the actual number of cases in India could be slightly higher, if not many times more.

Table 2: Status of COVID-19 Cases in India (January to 24 July 2020)

Month/Date	Total	Active	Recovered	Death	Total test
30 January	1	1	0	0	-
14 March	28	25	3	0	-
28 March	1019	910	85	24	27,688
13 April	10,454	8897	1198	359	217,554
21 April	20,081	15,459	3976	646	462,621
28 April	31,360	22,613	7739	1008	716,733
3 May	42,778	29,552	11,763	1463	10,46,450
10 May	67,176	43,993	20,970	2213	16,09,037
20 May	112,200	63,343	45,422	3435	25,12,388
31 May	190,649	93,381	91,862	5406	37,37,027
15 June	343,071	152,792	180,318	9918	57,74,133
24 July	13,37,022	4,55,089	8,50,107	31,406	1,58,49,068
Month/Date	**Growth Rate (%)**				
30 January	-	-	-	-	-
4 March	2700	2400	-	-	-
28 March	3539	3440	2733	-	-
13 April	926	878	1309	1396	686
21 April	92	74	232	80	113
28 April	56	46	95	56	55

3 May	36	31	52	45	46
10 May	57	49	78	51	54
20 May	67	44	117	55	56
31 May	70	47	102	57	49
15 June	80	64	96	83	55
24 July	289	198	371	217	174

Source: https://www.COVID 19india.org/

4. COVID-19 Cases in Kerala

As mentioned earlier, the first COVID-19 case in India was reported in Thrissur District of Kerala. The total number of cases was only 182 till 28 March 2020 in the state. However, there has been an increase in the number of cases during the months of June and July (Table 4). Compared to other states, the growth rate in the number of COVID-19 patients and death was very low in the state in the first phase. Kerala has succeeded in preventing the spread of the disease due to the lockdown and the preventive measures implemented by state health department. The factors responsible for a low rate of infection and death in the state include: Firstly, the Central Government has implemented a national lockdown for 68 days to prevent the spread of the pandemic (25 March to 31 May 2020) and Kerala has effectively implemented the same; secondly, Kerala had the experience in containing the outbreak of NIPAH virus during May and June 2018; and thirdly, Kerala has an effective public health system, which consists of hospitals at panchayat, taluk and district levels. Super speciality hospitals are also available in most of the districts attached with government medical colleges.

Table 3: State-wise status of COVID-19 cases in India (24 July 2020)

State/UT	Confirmed	Confirmed % to Total	Active	Recovered	Deceased	Total Test
Maharashtra	3,57,117	26.7	1,43,714	1,99,967	13,132	17,90,610
Tamil Nadu	1,99,749	15.0	53,132	1,43,297	3,320	22,23,019
Delhi	1,28,389	9.6	13,681	1,10,931	3,777	9,08,735
Karnataka	85,870	6.4	52,788	31,347	1,726	11,09,568
Andhra Pradesh	80,858	6.1	39,990	39,935	933	15,41,993
Uttar Pradesh	60,771	4.5	21,711	37,712	1,348	17,05,348
West Bengal	53,973	4.0	19,154	33,529	1,290	7,73,512

Gujarat	53,631	4.0	12,418	38,931	2,282	6,06,718
Telangana	52,466	3.9	11,677	40,334	455	3,37,771
Rajasthan	34,178	2.6	9,029	24,547	602	13,49,544
Bihar	33,511	2.5	10,457	22,832	221	4,29,664
Assam	29,922	2.2	8,081	21,762	76	7,39,465
Haryana	29,755	2.2	6,420	22,953	382	5,05,220
Madhya Pradesh	26,210	2.0	7,553	17,866	791	6,70,155
Odisha	22,693	1.7	7,339	15,201	153	4,33,578
Kerala	16,996	1.3	9,371	7,562	55	6,35,272
Other states	**70,933**	**5.3**	**28,574**	**41,401**	**863**	**88,896**
Total	**13,37,022**	**100.0**	**4,55,089**	**8,50,107**	**31,406**	**1,58,49,068**

Sources: https://www.covid19india.org/

Table 4: Status of COVID-19 Cases in Kerala (January to 24 July 2020)

Month/Date	Total	Active	Recovered	Death	Total Tests
30 January	1	1	0	0	-
4 March	3	0	3	0	-
28 March	182	169	12	1	-
13 April	379	178	198	3	15,683
21 April	427	117	307	3	20,252
28 April	486	123	359	4	23,217
3 May	500	95	401	4	34,599
10 May	513	20	489	4	41,279
20 May	667	161	502	4	54,633
31 May	1270	670	590	10	77,508
15 June	2544	1348	1174	21	151,686
24 July	16,996	9,371	7,562	55	6,35,272
Month/Date	**Growth Rate (%)**				
30 January	-	-	-	-	-
March 4	200	-100	-	-	-
28 March	5967	-	300	-	-
13 April	108	5	1550	200	-
21 April	13	-34	55	0	29
28 April	14	5	17	33	18

3 May	3	-23	12	0	34
10 May	3	-79	22	0	19
20 May	30	705	3	0	32
31 May	90	316	18	150	42
15 June	100	101	99	110	96
24 July	568	595	544	162	319

Source: https://www.COVID 19india.org/

Table 5: Status of COVID-19 cases (24 July 2020)

	District	Confirmed	Confirmed % to Total	Active	Recovered	Deceased
1	Thiruvananthapuram	3,091	18.2	2,624	453	11
2	Malappuram	1,543	9.1	705	833	5
3	Ernakulam	1,391	8.2	870	515	5
4	Palakkad	1,371	8.1	335	1,034	1
5	Alappuzha	1,334	7.8	773	556	4
6	Kollam	1,316	7.7	843	468	4
7	Kasaragod	1,226	7.2	543	680	3
8	Kannur	1,100	6.5	422	670	8
9	Thrissur	1,057	6.2	438	612	7
10	Pathanamthitta	976	5.7	470	504	1
11	Kozhikode	969	5.7	507	459	3
12	Kottayam	742	4.4	361	381	0
13	Idukki	540	3.2	294	244	2
14	Wayanad	340	2.0	186	153	1
Total		**16,996**	**100.0**	**9371**	**7562**	**55**

Sources: https://www.covid19india.org/

A review of the district-wise COVID-19 cases as on 24 July 2020 shows that nine districts have a sizeable number of cases (Table 5).Thiruvananthapuram District has the largest number of confirmed cases. The other districts at second, third and fourth positions are Malappuram, Ernakulam and Palakkad. The total number of deaths reported till 24 July was 55. Kerala had 16996 confirmed cases, 9371 active cases and 7562 recovered cases as on 24 July 2020.

The central government announced more relaxations in lockdown from 4 May 2020. More freedom was given to people for travel, use of motor vehicles, opening up of trading establishments and economic sectors. Keralites stranded in other states in India and foreign countries were given permission to return to the state. Due to this, a large number of Keralites returned from other states and foreign countries especially from the Gulf. This contributed to a substantial increase in the number of COVID-19 patients during June and July 2020 (Table 4). Moreover, the number of tests conducted in the state is meagre compared to the requirement. This has been a major error in the strategy to contain the disease. The number of COVID-19 tests conducted has been far less than the State of Assam.

5. Health System in Kerala and COVID-19

Kerala has a long tradition in organised healthcare. The foundation had already been laid for a sound healthcare system, incorporating both Modern medicine and traditional medicine, accessible to all citizens much before the formation of the state. Ayurveda, the indigenous system of medicine, has been in practice in the state since centuries. When the British colonised the region, they brought the modern medical system with them. The concept of primary healthcare was also started in Kerala, and mission hospitals in remote areas under the aegis of missionaries were established. There has been a remarkable growth and expansion of government health services in the state, and from 1961 to 1986, the state greatly expanded its public health facilities. The total number of beds in government hospitals in the modern medical sector increased from around 13,000 in 1960–61 to 56,793 in 2018-19. The bed population ratio in Kerala is 880 and the average doctor bed ratio is 6.9, probably the highest in the developing world. Moreover, the easy accessibility and coverage of medical care facilities has played a dominant role in shaping the health status of the state. The strength of the state is that there are well equipped modern hospitals with sufficient doctors, nurses, paramedical staff, and health workers in all the panchayaths. The tradition of government support for health development has been a catalyst for the advancement of public healthcare in the state. The hall mark of the Kerala model of health has been the low cost of healthcare, universal accessibility and availability to poor sections of society. High rate of literacy and more access to public education, an effective Public Distribution System (PDS), spread out nature of houses, development of Local Self-Government Institutions (LSGIs) and massive government support for welfare of people have also contributed to a better healthcare in the state.

It is evident that the time-tested decades-old and successful primary healthcare infrastructure is the main reason behind the high standards of healthcare in the state. The other reasons that have contributed to its health status have been the equal importance to preventive measures like sanitation, hygiene, immunisation programmes, infant and ante-natal care, health education, etc. as well as to curative medicine. The disease surveillance system has been functioning extremely well in the state, with a robust mechanism for early recognition of any communicable disease of epidemic potential, with speedy response to control and prevent its spread. This was proved once again when NIPAH virus outbreak occurred in May 2018 in the state, which drew appreciation from various experts in the field of communicable disease surveillance and control, and also the Government of India (GoI) and World Health Organisation (WHO). With that experience, the state could act immediately to respond with the WHO recommended plan of contact tracing, isolation and surveillance. The plan relied on consulting patients, mapping their movements to see who they had interacted with, and isolating anyone in the chain with symptoms. The health department could lead the work in co-ordination with other departments at all levels, and the primary response of the health system enabled the state to limit morbidity and mortality. Team work together with the state's basic infrastructure made a success of the first and second stages of the outbreak, but the third stage has been totally different, which needs much greater infrastructure, resource and concerted effort to control the pandemic. In fact, Kerala's system is adequate to manage a few thousands of patients, but it could break down if the spread is higher. If such an outbreak at a much larger scale occurs, the state with a weakened system, which is already exhausted, may not be able to handle the spread, and the resultant calamity will be severe.

5.1 Initial response to COVID-19 (March-April)

The Kerala Government has issued clear guidelines in the state's COVID-19 action plan, which has been on-going and evolving according to newer discovery and research. Following the reporting of the first confirmed case on 30 January, the initial responses were aimed at surveillance, identifying and conducting risk-based grouping of all passenger arrivals from China. With two more confirmed cases on 2—3 February, the government declared a health emergency. When various countries started confirming cases, Kerala was the first state to draft measures for its containment. The government declared the COVID-19 outbreak a state disaster when the third case was reported on 3 February. A 24-member State Response Team (SRT) was constituted with the state's health minister, as its chairperson. The multi-sectoral team with senior officials from epidemiology, community medicine, infectious diseases, paediatrics, drug control and food safety. Eighteen state-level teams were constituted to coordinate various functions like surveillance, call centres, human resource management, training and infrastructure augmentation. These state-level teams reported back to a state control room, which functions round the clock. The inter-departmental coordination has been done efficiently by the Chief Minister himself. Important contributions are made from the departments of LSGIs, police, revenue, electricity, water and public works.

Rapid response teams have been constituted at the district level too. Each district has been brought under the charge of a minister, while the district collectors and district medical officers coordinated activities. The team includes public health experts, doctors, data entry operators, epidemiologists and technical assistants. With micro-level planning, this team has been extended to sub-districts, taluks and ward level to meet the need as and when arises so as to strengthen the functioning at the grassroot level. Manpower associated with various state programmes like Kudumbasree, ASHA, etc. has been recruited. The state has further decided to recruit volunteers through online registration to support the COVID 19 action plan.

5.2 Response to COVID-19 in the second phase (May-June)

The first phase of COVID-19 response of the government was successful because of the joint action of the frontline health workers, revenue administration, police and the overwhelmingly good response of the people who observed social distancing. The people also observed the protocols strictly during the lockdown period. During the first phase, Kerala achieved success due to high levels of testing, tracing the cases, isolating them, and preventing the disease spread. However, in the second phase, especially from the last week of April and May, the state reduced the number of testing of cases drastically. Kerala lost the first place in testing to many other states because of the wrong decision taken by the health department to reduce testing. During this time, the number of active cases came down drastically and reached around 17 on 11 May. The department should have increased the surveillance through rampant tests, as done by countries like South Korea and Singapore, during the period. However, the state remained far behind many other states in conducting testing for COVID-19 patients.

Secondly, the state government did not carefully plan for the home coming of the migrants from Middle East and other parts of the country. At the policy level, there was hesitation in actively playing a role to bring them back. There was severe lacunae in arranging infrastructure and monitoring the flow of migrants. State government notified the Union Government that 2 lakh rooms are ready for institutional quarantine of the migrants, but once they started coming home, there was no adequate infrastructure or facilities to manage them. Hardly 20,000 rooms or 10 per cent of what was claimed was in place, and even in those rooms, many did not have proper infrastructure, including sanitation facilities.

Thirdly, the current planning of infrastructure for COVID-19 treatment is insufficient. As the number of cases are going up, there is significant pressure on the health system. Additionally, due to rains, communicable diseases like dengue and fever are also increasing in the month. However, a comprehensive plan from the health department on how to provide treatment to COVID-19 and non-COVID-19 patients across the state is yet to come. Table 6 shows the comparative analysis of other states about the number of cases and fatality ratio. States like Chhattisgarh, Odisha and Assam have managed the crisis equally well, or even better than Kerala in the second phase.

Table 6: Comparison of Best Performing States in COVID-19 Management (6 June 2020)

State	Confirmed Cases	Active Cases	Cured/ Discharged/ Migrated	Deaths	Case Fatality Ratio (%)
Goa	267	202	65	0	0.0
Tripura	747	574	173	0	0.0
Assam	2397	1846	547	4	0.2
Odisha	2781	1057	1716	8	0.3
Chhattisgarh	923	653	266	4	0.4
Jharkhand	1000	520	473	7	0.7
Kerala	1807	1030	762	15	0.8
Uttarakhand	1303	869	423	11	0.8

5.3 Suggestions for improving health system preparedness

Healthcare system preparedness is the ability of the healthcare system of a country or state to prepare, respond, and recover from incidents that have a public health and medical impact in the short- and long-term. The COVID-19 crisis has again shown the need for an efficient primary and preventive healthcare system rather than having a curative model. The establishment of Directorate of Public Health and public health cadre is a necessity to have a foundation of such a system. They could effectively handle any such recurrent outbreaks of epidemics in future in Kerala. Public health experts and epidemiologists should be appointed instead of clinical experts in the directorate. This helps to quantify our health burdens to allow for meaningful comparisons in cost and intervention strategies. Some of important suggestions in this regard are given below:

a) Increase laboratory network and testing

There is a feel among the experts that Kerala is not doing adequate number of tests and several cases remain undetected. If the state tests more, there will be the possibility of more positive cases, but only such wide testing can control community spreading. It necessitates wide laboratory network, which is a key component of a highly functioning public health system. Such a network needs to be able to systematically identify, collect and transport specimens to laboratories with adequate equipment and personnel to carry out reliable testing. Technological innovation promises more cost-effective and rapid diagnostics. However, it also requires trained biomedical engineers, a scarce resource, which are critical to the functioning and integrity of a high-quality laboratory network.

b) Improve health information system

Effective surveillance is critical to containing infectious disease outbreaks. Today new technologies like big data analytics and artificial intelligence (AI) are playing a vital role in transforming the healthcare sector. Research data become the most important asset now and storing of vital data and management of information system (MIS) are very essential for the health professionals to perform functions more effectively. Data storing and analysis must be carried out by governmental agencies with sufficient credentials ensuring their security and precision. A tiered network should be integrated with the disease surveillance system at every level of the healthcare system to ensure that information reaches decision makers quickly.

c) Utilisation of the services of the private sector

The public and private sectors should effectively cooperate and complement each other to conquer the pandemic. A major error in the state's policy is the non-participation of private sector hospitals and health institutions in quarantining, testing and treatment of COVID-19. However, private healthcare sector should be properly regulated to ensure minimum standards, quality and affordability. The regulatory authority should have the powers to set up standards for hospitals and health centres at various levels and audit the actions of private hospitals. It must be composed of medical and legal experts, along with representatives from the government.

d) Enhancing the role of academic and research institutions

The academic and research institutions can play a vital role in helping to improve the quality of the public health in the state as well as improve the management of health services. They should give top priority for research and inventions. They can contribute to improving the effectiveness and efficiency in the public health and hospital sectors. The institutions should facilitate updating the technical knowledge of the existing medical professionals through continuing medical/health education. They can help indigenise global technologies and make them available at a very low cost.

e) Public health workforce

A high priority should be given to skilled, motivated and well-equipped healthcare workforce to sustain an efficient and responsive public health system. No health system can achieve its goals without this. Therefore, the state should develop and implement a workforce-strengthening strategy and plan that includes training programmes for health professionals. A strong and robust cadre of health workers, like ASHA workers, should be raised so that they can reach every panchayat and household.

f) Engaging and communicating with communities

Effective response to a potential pandemic requires skills beyond the health arena. Therefore, governments should seek the support of key players in non-health sectors, such as local self-governments (LSGs), civil society organisations (CSOs), etc. to prevent the transmission of the disease. These professionals recognise the need to work with a range of influential people in many roles and understand the importance of developing trusting relationships.

g) Modernising health systems using digital tools

Covid-19 has changed the way the health systems function. Resulting from the efforts to control spread of the disease, reduction in the hospital visits by patients in general has become the norm. Patients with suspected Covid-19 are also advised to stay at home if they don't have major illness to reduce the interaction between Covid-19 patients and others. While the one-on-one interactions at health care facilities are reduced, there is a opportunity for substitution with digital tools. Telemedicine for consultation, point of care electronic screening/diagnostic tools and Health tools to ensure treatment adherence are examples of such digital tools.

h) Care of people with diseases other than Covid-19

Whereas the major focus was diverted to Covid-19, there is a tendency to ignore patients with other illnesses. Control of both communicable and non-communicable diseases have been affected due to the shift of priority to Covid-19. Diagnosis of major infectious disease like TB, HIV, Malaria and neglected tropical diseases has been severely affected. While HIV/AIDS patients need lifelong treatment, TB patients need at least six months treatment. Treatment of such diseases are jeopardised due to Covid-19 as the mechanisms that used to ensure treatment compliance are broken. Similarly, early detection and treatment of non-communicable diseases have been affected markedly. In order to address this gap, the government should earmark certain hospitals for people with diseases other than Covid-19.

i) Data transparency

Covid-19 is a new disease and the medical and other scientific communities are still gathering information about the disease. As we globally lack experience in managing the disease, health care facilities are likely to commit mistakes from which everyone would learn and make corrections. However, making the data a secret and confidential will only impact the epidemic control negatively. The government needs to be more transparent in dealing with data and there should be mechanisms to share the data with stakeholders and researchers.

5.4 Collapse of waste disposal and spread of diseases in urban areas

A serious issue being faced in Kerala's health sector is the collapse of waste disposal system, liquid waste disposal, mosquito eradication and immunisation programmes to prevent the spread of diseases. The Thiruvananthapuram Municipal Corporation (MC) had closed the central waste processing unit and stopped collection of waste from the households. The slaughterhouse is also closed. In Thrissur, the waste disposal yard at Laloor, has been closed. In Kochi, the Brahmapuram waste disposal plant is in a dilapidated stage and the waste processing there has almost stopped. No municipality or MC has an efficient system of waste disposal system using modern technology at present. The roads, canals, ponds, streams, unused wells, public places, unused plots of lands, etc. are the dumping grounds of waste in cities and towns. A disturbing development that has been taking place is the withdrawal of municipalities and MCs from waste disposal and other core civic functions. This is creating serious public health hazards, sanitation and environmental problems. One of the basic reasons for the high morbidity rate in Kerala is due to this.

Table 7: District-wise Urban Population in Kerala, 2011

Sl. No	District	Total Urban Population	Percentage of Urban Population to Total Population	No. of Municipalities	No. of Municipal Corporations
1	Kasargod	505,176	38.78	3	0
2	Kannur	16,42,892	65.05	9	1
3	Wayanad	31,577	3.87	3	0
4	Kozhikode	20,74,778	67.15	7	1
5	Malappuram	18,16,483	44.19	12	0
6	Palakkad	677,193	24.09	7	0
7	Thrissur	20,89,790	67.19	7	1
8	Ernakulam	22,32,564	68.07	13	1
9	Idukki	52,025	4.70	2	0
10	Kottayam	565,611	28.58	6	0
11	Alappuzha	11,47,027	54.06	6	0
12	Pathanamthitta	131,461	11.00	4	0
13	Kollam	11,86,340	45.11	4	1
14	Thiruvananthapuram	17,79,254	53.80	4	1
Kerala		**159,32,171**	**47.72**	**87**	**6**

Source: Census of India (2011). *Provisional Population Totals, Paper 2.*

The state has been experiencing rapid urbanisation and the share of urban population increased to 47.72 per cent in 2011. In districts such as Kannur, Kozhikode, Thrissur and Ernakulam, the share of urban population is more than 65 per cent (Table 7). Urbanisation has been creating acute problems on disposal of solid waste, liquid waste, environmental hygiene, spread of diseases due to mosquitos, lack of availability of good quality drinking water and environment. The state government and urban local governments have failed to address the acute problems arising due to rapid urbanisation.

According to the Kerala Municipality Act (KMA) 1994, the basic functions of municipalities are to execute civic functions which are directly related to the public health and welfare of the people. The important civic functions are collection and disposal of solid waste, regulation of liquid waste disposal, maintenance of environmental hygiene, vector control, regulation of slaughtering of animals, street lighting, adoption of programmes of immunisation, prevention and control of diseases, establishment of burning and burial grounds, provision of parking places for vehicles, construction of waiting sheds, public toilets and bathing ghats and control of stray dogs. However, currently the urban local governments (LGs) are treating these as unimportant or low priority functions. They say that they have to execute a large number of other functions such as maintenance of assets of transferred institutions, formulation and execution of annual plans, agency functions such as distribution of social welfare pensions and execution of centrally sponsored schemes (CSS).

It is suggested that the urban local governments should give the highest priority for collection and disposal of solid waste, regulation of liquid waste, measures to prevent the spread of COVID-19, maintenance of environmental hygiene, implementation of programmes of immunisation, mosquito control, providing public toilets, control of stray dogs, etc.

6. COVID-19 and Local Governments

The LGs in Kerala have played an important role in arresting the spread of COVID-19 and providing relief to the people affected due to it. Municipalities and village panchayats distributed food packets to the needy people. The LGs also played an important role in effecting strict quarantine of people who have returned from other states and foreign countries. In this context, the LGs may be assigned additional functions-taking preventive steps to contain the spread of COVID-19, provide relief to the people in the time of the spread of diseases, organise community kitchens and provide other required assistance. The LGs may also be authorised to take appropriate steps to prevent contagious disease with the co-operation of NGOs, voluntary organisations and resident associations.

III. Shift of Activities from Workplace to Home

The COVID-19 pandemic has led to the imposition of severe restrictions on the mobility of people from their residence to arrest the spread of the pandemic. All public gatherings were stopped. The operation of all types of passenger transport viz. private motor transport, public transport, rail, metro rail and air transport were stopped or restricted. This has created unprecedented travel hardships to people who used to travel from one place to other using transport vehicles 24 hours of a day. Social distancing and quarantine were also introduced to prevent spread of disease.

In order to overcome the crisis, producers, traders, hotels, educational institutions, etc, introduced new ways of doing business. Some of the most pronounced changes are as follows:

a. Shift of activities from workplace to homes. Government and private establishments, IT industrial units, etc., began to ask their employees to work from their homes instead of coming to the workplace.
b. Schools, colleges and other educational institutions resorted to online teaching. Students are asked not to come to educational institutions.
c. Shops, hotels, etc. began to deliver their items at the residences of the consumers.
d. The self-employed, who conducted small-scale production activities in their units began to shift the productions to their homes.

Hence, there is an unprecedented change in the way of living by people in the post-COVID-19 period. The change is that the home of an individual has become a workplace, an educational institution a production unit, and at times even a quarantine centre. This required a lot of changes in the space available in the houses for non-housing purposes. Availability of electricity, water, internet and TV connection became a pre-condition. There is also the need to convert part of the house for quarantine purposes.

In this context the following suggestions are proposed:

a. The electricity Board should take urgent steps to provide uninterrupted 24-hour supply of electricity with adequate voltage to all electrified households in the state. In most part of the rural areas, there is frequent failure of electricity supply for long hours or major part of the day.

b. The Water Authority should take urgent steps to provide uninterrupted supply of water to all houses with water supply connection. At present the water supply is erratic and highly inadequate in most of the municipalities and GPs in Kerala.
c. The internet infrastructure should be expanded to enable all houses to get internet connection. The state government should take urgent steps with the public and private internet providers to expand facilities. Concessions and subsidies may be granted to those which provide internet facilities to inaccessible areas or forest areas. The banks and financial institutions should provide loans for purchasing computer, laptops and smart phones to the students/parents.
d. Houses may need alterations and additional construction of rooms to cater to the new requirement due to COVID-19. House owners may be permitted to make minor alterations and constructing additional rooms without the permission of GP, Municipalities and MCs (up to one or two additional room subject to a maximum floor area).
e. The banks, financial institutions of state, co-operative credit institutions, etc, shall provide loans to those needy house owners to make the alterations of the houses.
f. A COVID-19 reconstruction package should be formulated and implemented based on this by the state government to address the above crucial issues.

The state government, electricity board, water authority and local governments should give top priority to address the above-mentioned issues.

IV. Impact of the 55 Days Lockdown on GSDP of Kerala

The lockdown of 55 days (24 March to 17 May) may be classified into three phases based on the restrictions imposed and relaxations allowed. The first phase of 27 days (24 March to 19 April) lockdown, similar to a curfew, was implemented in the state. All central and state government offices, commercial, private establishments and transport services were closed. All modes of passenger transport-road, rail, water and air-were stopped. All educational institutions, places of worship, functions and gatherings were stopped. Except a few essential services such as shops dealing with food, groceries, fruits, and ration shops, banks and ATMs, telecom services, delivery of food and medicines, petrol pumps, LPG distribution, power supply, etc, and all other production, service and trading activities came to a halt. The police enforced the lockdown strictly throughout the state by inspecting movement of people and motor vehicles on the roads.

The curfew-like situation that suddenly halted almost all economic activities paralysed the economy. In the second phase of lockdown (20 April to 3 May), a few relaxations and in the third phase of 14 days (4 May to 17 May) more relaxations were allowed. The rate of loss in total production of goods and services or GSDP is different for the three phases and separate losses are estimated.

The following method has been used to estimate the loss of GSDP. First, in the absence of GSDP data for 2019-20, the sector-wise GSDP data for 2018-19 published by the Department of Economics and Statistics has been used as the base. Second, based on the data we have worked out the GSDP for a day for each sector and sub sectors (average). Third, the rate of loss of state income for each sub-sector and sector is worked based on the reports published in print and electronic media on the economic effect of lockdown for 55 days and our own assessments. Fourth, the GSDP loss was estimated for three phases separately. Fifth, the GSDP of Kerala or state income is defined as the aggregate of all the money value of final goods and services produced within the geographical boundaries of the state, without duplication during a period of one year. Sixth, the estimate is a lower approximation by about 10 per cent as we have taken GSDP data for 2018-19 as base. As per quick estimate the GSDP at current prices for 2018-19 is Rs 781,653 crore

Table 8: Loss of GSDP Due to 55-Day Lockdown in Kerala

Sl. No.	Sectors	GSDP for One Day (Rs in crore)	Loss for 27 Days with Strict Restrictions (%)	Loss for 14 Days with Small Relaxations (%)	Loss for 14 Days with Large Relaxations (%)
1	Agriculture, forestry and fishing	204.75	73	53	46
2	Mining and quarrying	8.38	100	95	80
Primary		**213.13**	**74**	**55**	**47**
3	Manufacturing	206.49	80	70	65
4	Electricity, gas, water supply & other utility services	24.30	40	40	30
5	Construction	252.02	100	95	80
Secondary		**482.81**	**88**	**82**	**71**
6	Trade, repair, hotels and restaurants	368.29	76	61	41
7	Transport, storage, communication	125.30	82	77	66
8	Financial services	75.54	70	65	60

9	Real estate, ownership of dwelling & professional services	312.52	90	85	78
10	Public administration	74.96	40	30	30
11	Other services	266.11	80	70	60
	Tertiary	**1222.73**	**79**	**69**	**58**
12	**Total GSVA at Basic Prices**	**1918.66**	**81**	**71**	**60**
13	Taxes on products	241.97	80	71	60
14	Subsidies on products	19.11	80	71	60
15	**Gross State Domestic Product**	**2141.52**	**82**	**72**	**61**

Note: Based on GSDP 2018-19, Quick Estimate for Kerala, Q: Quick estimate.

The estimate on the rate of loss of GSDP for the 55 days lockdown for the three phases are given in Table 8. It also contains the GSDP for one day during 2018-19, the base used for the estimation of the loss per day. As per the analysis done, the estimate of the total loss of GSDP was 82 per cent in the first phase, 72 per cent in the second phase and 61 per cent in the third phase. The primary sector consisting of agriculture, forestry, fishing, mining and quarrying suffered a loss of GSDP to the tune of 74 per cent in the first phase, 55 per cent in the second phase and 47 per cent in third phase. The secondary sector consisting of industries, electricity, gas and water supply and construction suffered a huge loss due to the lockdown. The loss during the first phase was 88 per cent, second phase 82 per cent and 71 per cent in the third phase. The loss in construction was 100 per cent in first phase, 95 per cent in second phase and 85 per cent in third phase. The tertiary sector consisting of trade, repair and hotels, transport, storage and communication, financial services, real estate and ownership of dwelling, public administration, etc, suffered a loss of 79 per cent in the first phase, 69 per cent in the second phase and 58 per cent in the third phase.

The total loss of GSDP for 55 days and its breakup into three periods are given in Table 9. We estimate the total loss of GSDP for 55 days as Rs 87,159 crore. This loss will be equivalent to 11 per cent of the GSDP for a year. The estimate is an underestimate (around 10 per cent), as we have taken GSDP data for 2018-19 as base. A sector-wise breakup of the losses shows that primary sector incurred a loss of Rs 7305 crore, secondary sector Rs 21,836 crore and tertiary sector Rs 47,605 crore. In secondary sector, manufacturing (industry) and construction suffered huge losses. In tertiary sector, transport, repair, hotels, financial services, real estate, professional services and other services incurred huge losses in productions of goods and services.

The unprecedented lockdown for 55 days and loss of GSDP would have very serious adverse economic consequences on the state economy. First, the loss of GSDP is huge and the present crisis is likely to be transformed into depression in the near future. Second, during the financial year 2020-21 the GSDP will register a negative growth rate (below zero). Third, it is likely that this will result in large fall in production and service activities and closure of large number of small and medium enterprises, trading establishments and service units. Fourth, the depression will result in unprecedented increase in unemployment of all categories and increase poverty in the state. Fifth, the situation in employment front become grave due to the return of Keralite migrant workers from other states and foreign countries, especially from the Gulf.

Table 9: Total Loss of GSDP for 55-day Lockdown in Kerala

Sl. No.	Sectors	Amount of Loss for 27 Days (strict restrictions)	Amount of Loss for 14 Days (small relaxations)	Amount of Loss for 14 Days (large relaxations)	Total Loss for 55 days (Rs in crore)
1	Agriculture, forestry and fishing	4035.69	1519.28	1318.66	6873.63
2	Mining and quarrying	226.26	111.44	93.8	431.5
Primary		**4261.95**	**1630.72**	**1412.46**	**7305.13**
3	Manufacturing	4460.13	2023.56	1879.08	8362.77
4	Electricity, gas, water supply & other utility services	262.44	136.08	102.06	500.58
5	Construction	6804.54	3351.88	2816.24	12,972.66
Secondary		**11,527.11**	**5511.52**	**4797.38**	**21,836.01**
6	Trade, repair, hotels and restaurants	7557.30	3145.24	2114.00	12,816.54
7	Transport, storage, communication	2774.25	1350.72	1157.80	5282.77
8	Financial services	1427.76	687.40	634.48	2749.64
9	Real estate, ownership of dwelling & professional services	7594.29	3718.96	3412.64	14,725.89
10	Public administration	809.46	314.86	314.86	1439.18
11	Other services	5748.03	2607.92	2235.38	10,591.33
Tertiary		**25,911.09**	**11,825.10**	**9869.16**	**47605.35**
12	**Total GSVA at Basic Prices**	**41,700.15**	**18,967.34**	**16,079.00**	**76,746.49**
13	Taxes on products	5226.39	2391.62	2032.52	9650.53
14	Subsidies on products	412.83	188.86	160.58	762.27
15	**Gross State Domestic Product**	**47,339.37**	**21,547.82**	**18,272.10**	**87,159.29**

V. Impact on Employment and Unemployment

1. Impact on Employment

As per the National Statistical Office (NSO) survey 2017—18, the total workers (employment) in Kerala in primary sector was 20.11per cent, secondary sector 31.07 per cent and tertiary sector 48.82 per cent (Table 10). A break up of workers into urban and rural will give a different picture about the sector-wise share of workers. In rural area, primary sector accounts for 27 per cent. The share of workers in the secondary sector was 30.38 per cent and tertiary sector was 42.59 per cent. On the other hand, in urban area, the share of primary workers was much lower and the share of tertiary workers was much larger. The availability of more regular and remunerative jobs in urban area is the reason for the greater mobility of workers to urban centres.

Table 10: Distribution of Usually Working Persons (ps + ss) by Industrial Category 2017-18, Kerala

Broad Industry Division		Rural (in %)	Urban (in %)	Rural+ Urban (in %)
A	Agriculture, forestry and fishing	26.65	10.91	19.85
B	Mining and quarrying	0.36	0.12	0.26
Primary		**27.01**	**11.03**	**20.11**
C	Manufacturing	10.23	12.73	11.31
D	Electricity, gas, etc	0.36	0.44	0.40
E	Water supply, waste management, etc	0.11	0.43	0.25
F	Construction	19.68	18.36	19.11
Secondary		**30.38**	**31.96**	**31.07**
G	Trade, repair of motor vehicles	12.26	16.33	14.02
H	Transportation and storage	8.90	9.60	9.21
I	Accommodation and food service	2.79	2.68	2.74
J	Information and communication	0.97	2.14	1.47
K	Financial and insurance	2.13	4.08	2.97
L	Real estate	0.18	0.26	0.22
M	Professional, scientific and technical	0.76	2.05	1.32
N	Administrative and support service	1.30	2.19	1.68
O	Public administration and defence	1.93	2.35	2.11
P	Education	4.60	5.43	4.96
Q	Human health and social work	2.85	4.25	3.46
R	Arts, entertainment and recreation	0.44	0.81	0.60
S	Other services	2.53	2.92	2.70
T	Activities of households	0.95	1.94	1.38
Tertiary		**42.59**	**57.03**	**48.82**
Total		100.00	100.00	100

Source: NSO (2019), *Periodic Labour Force Survey 2017—2018.*

A characteristic feature of employment is the dominance of the informal sector consisting of self-employed, casual labour and a part of the regular employed, which have the features of casual employment. The entire self-employed, casual labour and a major share of regular wage/salary employment come under informal sector (nearly 84 per cent). According to NSO survey, of the total employment 32.9 per cent is regular wage/salary employment consisting of jobs in public and private sectors and earn to get a wage on a regular basis – monthly wage or a daily wage or piece wage rate (Table 11). The share of self-employed is 37.8 per cent and casual labour 29.3 per cent. A rural-urban breakup of the employment shows that the share of self-employed and casual labour is much higher in rural areas compared to urban areas.

Table 11: Distribution of workers in usual status (ps + ss) in Kerala (2017-18)

Category	**Category of Employment**			
	Self-Employed (in %)	**Regular Wage/Salary (in %)**	**Casual Labour (in %)**	**All (in %)**
	Rural			
Male	40.7	24.7	34.6	100.0
Female	30.5	41.3	28.2	100.0
Person	38.0	29.2	32.9	100.0
	Urban			
Male	40.9	31.3	27.8	100.0
Female	28.5	55.7	15.8	100.0
Person	37.6	37.8	24.6	100.0
	Rural +Urban			
Male	40.8	27.5	31.7	100.0
Female	29.6	47.5	22.9	100.0
Person	37.8	32.9	29.3	100.0

Source: NSO (2019), *Periodic Labour Force Survey 2017—2018*.

The lockdown implemented in the state has resulted in an unprecedented loss of employment in all sectors of the economy. Due to the prolonged lockdown, quarantine, physical distancing, and other isolation measures to suppress transmission of the COVID-19, the state's economy is heading towards a recession. Non-essential services and production were directly affected by the lockdowns, which led, among other things, to a reduction in the number of hours worked and to job losses. The state, with greater dependence on the service sector, higher levels of informality and weak safeguards against the termination of employment, has been facing higher initial job losses. The lockdown has adversely affected categories such as informal workers, casual and temporary workers, young workers, migrant workers and micro-entrepreneurs and the self-employed. It has led to loss of wages and income to lakhs of workers in Kerala. Some of the sectors, which suffered severe loss of employment, are mining and quarrying, construction, transportation and storage, accommodation and food services, real estate, arts, entertainment, and recreation. The impact of loss of employment was severe in the case of self-employed and casual workers in the state. Based on the loss of GSDP for the various sectors and considering the distribution of workers to various sectors, we feel that the 55 days lockdown has pushed more than two-third of self-employed and casual workers to acute unemployment, financial crisis, indebtedness and economic distress.

2. Changing Labour Market and Migrant Workers

Kerala's labour market is characterised by excess supply of educated labour force on the one hand and shortage of manual labour force on the other. The young educated labour force has an aversion to do manual jobs in construction, quarrying, agriculture and other activities. The shortage of workers has resulted in frequent increase in wage rates. Due to high wage rate of manual and unskilled workers, the better labour atmosphere and living conditions in the state, a large number of workers migrated to Kerala from West Bengal, Assam, Bihar, Odisha, Uttar Pradesh, Jharkhand, Tamil Nadu, etc. According to the Department of Labour and Skills, Government of Kerala, the total number of migrant workers registered with AAWAZ, a free insurance programme meant for migrant workers and who are active in the scheme, is 5.09 lakh (Table 12). It is likely that a good number of migrants have not registered due to lack of interest, temporary return to native places or other reasons. According to the sources from the labour department, the unregistered migrant workers in the scheme will be about one to two lakhs. The total migrant workers in the state is estimated in the range of 6 to 7 lakh prior to the implementation of lockdown (23 March 2020).

Table 12: Number of Migrant Workers Registered for Aawaz Assurance Scheme in Kerala

Sl. No.	District	Total Cards Issued till Date	Share of Total Cards (in %)
1	Thiruvananthapuram	61,551	12.1
2	Kollam	24,849	4.9
3	Pathanamthitta	24,059	4.7
4	Alappuzha	36,926	7.2
5	Kottayam	19,551	3.8
6	Idukki	32,908	6.4
7	Ernakulam	112,567	22.1
8	Thrissur	41,900	8.2
9	Palakkad	24,694	4.8
10	Malappuram	29,856	5.9
11	Kozhikode	44,363	8.7
12	Wayanad	11,558	2.7
13	Kannur	28,723	5.6
14	Kasargod	15,858	3.1
	Total	**50,9363**	**100.0**

Source: Department of Labour and Skills, Government of Kerala.

The announcement of lockdown with four hours' notice has caused great misery to the lakhs of migrant workers in the state. Almost 90 per cent of the migrant workers, who worked in construction and other sectors, had lost their jobs and remained unemployed as a result of the 55 days' lockdown. Moreover, due to the lack of the implementation of the Inter-state Migrant Workmen Act of 1979 all over India, the migrant workers were denied their rights. Immediately after the declaration of the lockdown on 23 March 2020, the state government opened shelter camps for the migrant workers and provided food and accommodation. Three types of camps were arranged for their accommodation viz. shelter camps arranged by the state government, camps provided by the employer and places were the workers already live. An actual enumeration of the workers in the above three places by officers of labour department has estimated the total number of migrant labours as 434,280. It is pointed out that nearly one lakh workers returned to their home states before Ramadan. The state government on 5 June 2020 told the Supreme Court that Kerala has 4.34 lakh migrant workers from other states. Of this 1.53 lakh workers returned, 1.2 lakh workers wish to return to their native places and 1.61 lakh do not want to leave the state, which has effectively checked the spread of COVID-19. The above estimate of migrant workers by labour department is likely to be an underestimate. However, we do not have any other evidence to show the exact number of migrant workers in the state.

The return of migrants to their native states is not going to create a labour shortage in the post lockdown period in Kerala due to the following reasons. First, among the migrant workers 1.61 lakh do not want to leave the state and will be available for work. Second, a good number of the migrant workers who returned to their native states will come back to Kerala once the restrictions imposed due to lockdown are withdrawn and economy regains to normal situation. Third, a good portion of the unskilled and semi-skilled workers return from the Gulf and other states are likely to take up the jobs done by the migrant workers. Fourth, due to the COVID-19, there is a huge loss of employment in many sectors and people are likely to be moved to jobs previously held by migrants. It is suggested that all the migrant workers belonging to other states and working in Kerala should be asked to register in labour department (District, Taluk or sub offices) and should be issued an identity card.

Available evidence of the lockdown and consequent huge job losses, large scale return of Keralite migrants from other parts of India and abroad due to COVID-19 pandemic, the uncertainty about invention of vaccine for treatment and the period required for the economy to regain the pre-COVID-19 situation suggest that Kerala is heading towards an alarming growth in youth and educated unemployment. Its labour market has dual characteristics of excessive supply of educated labour force seeking white collar jobs on the one hand and acute shortage of manual labourers for construction and other activities on the other.

Table 13: Unemployment Rate in Kerala (2017--18) as per Usual Status (ps + ss)

Category	Kerala (age group) (in %)		India (age group) (%)	
	15-29 years	15 years & above	15-29 years	15 years & above
	Rural			
Male	20.5	5.9	17.4	5.7
Female	61.7	19.6	13.6	3.8
Person	32.5	10.0	16.6	5.3

	Urban			
Male	27.4	6.6	18.7	6.9
Female	65.2	27.4	27.2	10.8
Person	41.5	13.2	20.6	7.7
	Rural + Urban			
Male	23.3	6.2	17.8	6.1
Female	63.4	23.2	17.9	5.6
Person	36.3	11.4	17.8	6.0

Source: NSO (2019), *Periodic Labour Force Survey 2017—2018.*

The available evidence shows that the unemployment rate of youth and educated in Kerala was one of the highest in India, prior to the period of COVID-19. According to the NSO Periodic Labour Force Survey of 2017-18, the unemployment rate of youth in the age group 15-29 was 36.3 per cent in Kerala (Table 13). This means that out of the 100 persons in the labour force 36 persons are unemployed, prior to the COVID-19 period. This was the second-highest rate of unemployment among states in India. It is likely that due to effect of COVID-19 on employment front, the unemployment rate of youth has doubled (72 per cent). This will create acute economic and social problems in the state.

Further, the survey also estimates that the unemployment rate of educated having a qualification of secondary and above was 20 per cent in Kerala (Table 14). This is also the second-highest rate of unemployment among the states in India. This indicates that Kerala has very high rate of youth and educated unemployment prior to the spread of the COVID-19 pandemic. There is sufficient evidence to suggest that the COVID-19 pandemic is likely to send the state economy into a deep depression and structural change in employment. This will also result in unprecedented increase in the unemployment rate of youth and educated. The degrees and other qualifications attained in general higher education for getting a white-collar job will become irrelevant in the post-COVID-19 labour market situation. And there is a need to effect a basic change in general higher education system to the changing labour situation in the post-COVID-19 period. Further, introducing vocational education and imparting skills to equip youth to engage in gainful employment are needed.

Table 14: Unemployment rate of educated in Kerala (2017--18) as per Usual Status (ps + ss) Rural + Urban (%)

Category	Kerala			India		
	Male	**Female**	**Person**	**Male**	**Female**	**Person**
Secondary	4.3	19.7	7.8	5.7	6.3	5.7
Higher secondary	10.5	46.6	22.6	9.4	15.4	10.3
Diploma/certificate course	18.6	27.1	21.6	18.8	24.6	19.8
Graduate	15.6	46.7	30.6	14.7	27.5	17.2
Post graduate and above	18.4	29.0	24.5	10.4	24.3	14.6
Secondary and above	11.0	35.3	19.8	9.9	18.5	11.4

Source: NSO (2019), *Periodic Labour Force Survey 2017—2018.*

3. Expansion of Activities under MGNREGS

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) provides a legal guarantee for one hundred days of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage. The Ministry of Rural Development (MRD), Government of India, is monitoring the entire implementation of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) under the Act in association with state governments. The Act was introduced with the aim of improving the purchasing power of the rural people by providing primarily semi or unskilled work to people living below the poverty line in rural India.

In the context of COVID-19 and acute unemployment of rural households in Kerala, it is suggested that the scheme should be expanded to improve the purchasing power of people. A study conducted on the performance of MGNREGS in Kerala based on a sample of 50 Grama Panchayats covering all districts of the state in 2013 found that of the total workers under the scheme 62 per cent were BPL household workers and 86 per cent are female workers (RGIDS, 2013).

The following suggestions are proposed to expand the activities of MGNREGS:

a) Immediately release payments pending under MGNREGS, including to workers deemed to be at work to the states

b) Effective and flexible implementation of MGNREGS including increasing budgetary allocation, on-spot registration of migrant workers, increase in the number of days of work per family from 100 to 150, option for smaller slots of work, flexible labour to material ratio within limits, immediate opening of worksites, and increase the wage rate
c) Empower Gram Panchayats to sanction work based on minimal documents, route payments through Gram Panchayats, and encourage work on individual landholdings
d) New categories of work should be permitted under MGNREGS, such as building hospitals, government collaboration with factories producing essential goods, creation of children's homes, creating jobs in sustainable development, water harvesting and rejuvenation of lakes, government buildings, redeveloping slums, sowing work, and other works which can be carried out during the monsoon as well
e) Take action to release the unemployment allowance permitted under MGNREGS and Building and Other Construction Workers' Act to the states
f) States may roll out short-term programmes until a national-level scheme can be implemented.
g) "One Nation One Ration Card" should be implemented across the country immediately, along with the provision of portable add-on ration cards.

VI. Return of Emigrants from Gulf and other Countries

Due to the spread of COVID-19, there was panic among the Keralite emigrants in the Gulf and other countries and a large number of them have registered with NORKA and other agencies for immediately returning to the state. The total foreign registrants, who want to return, including migrants, their dependents, persons on short visits, students, etc. was 4.13 lakh as on 3 May 2020. This included 61,009 emigrants who lost jobs, 41,236 visiting visa expired persons, 27,100 persons whose visa expired or was cancelled and 7276 students. Of this the share of Keralites in the six Gulf countries viz. UAE, Saudi Arabia, Kuwait, Bahrain, Oman and Qatar was about 3.2 lakh.

The increase in the number of deaths of Keralites due to COVID-19 (186 death as on 6 June 2020), the lack of facilities for treatment, lack of hospital beds to admit COVID-19 patients, inability to undergo costly treatment in private hospitals, lack of space and facilities for quarantine in labour camps, etc., compelled Keralite emigrants to return to their home state. The fall in the price of crude oil to an all-time low level and the economic shutdown created due to lockdown in the Gulf countries have resulted in huge loss of employment in the short run. However, it is expected that things may improve once the lockdown is lifted. It is likely that two to three lakh migrant workers may lose jobs and return to Kerala due to COVID-19 crisis.

During the last four decades, the large-scale emigration of contract workers from Kerala to Gulf countries and the continuous flow of large amount of remittances have been a major factor in the state’s economic development. Studies on economic impact of Gulf migration of Kerala’s economy came to the conclusion that since the mid-1970s the factor that had the greatest impact on the state’s economy – especially on labour market, consumption, savings, investment, poverty, income distribution and economic growth – has been the Gulf migration and migrant’s remittances. One of the pillars of the Kerala Model of development has been emigration and the remittances. The COVID-19 pandemic has started the process of destroying the pillar.

1. Emigration and Remittances

According to a migration survey of Centre for Development Studies, Kerala has 21.22 lakh emigrants (Table 15). Of them 18.94 lakh migrated to West Asian countries viz. UAE, Saudi Arabia, Oman, Kuwait, Bahrain and Qatar. The share of non-Gulf countries is only 11 per cent. USA, the UK, Australia, New Zealand, Canada, Singapore and Malaysia are the non-Gulf countries having sizable number of Keralite emigrants. A trend in the country wise emigration indicates that there has been a fall in the number of emigrants between 2013 and 2018 in all Gulf countries except, Qatar. This indicates that there has been a decline in emigration towards the Gulf.

Table 15: Country of Residence of Emigrants

Destination	2013	2018	Increase/ Decrease (%)	Emigrants in 2018 (Share %)
UAE	898,962	830,254	-7.6	39.1
Saudi Arabia	522,282	487,484	-6.7	23.0
Oman	189,224	182,168	-3.7	8.6
Kuwait	183,329	127,120	-30.7	6.0
Bahrain	149,729	81,153	-45.8	3.8
Qatar	106,107	185,573	74.9	8.7

Other West Asia	212,21	0	-	0.0
Total Gulf Countries	**20,70,854**	**18,93,752**	**-8.6**	**89.2**
USA	69,559	46,535	-33.1	2.2
Canada	11,200	15,323	26.9	0.7
United Kingdom	38,316	38,023	-0.8	1.8
Other Europe	19,453	0	-	0.0
Africa	15,327	5657	-63.1	0.3
Singapore	8842	12,485	41.2	0.6
The Maldives	2947	6243	111.9	0.3
Malaysia	9432	11,350	20.3	0.5
Other SE Asia	53,643	0	-	0.0
Australia/New Zealand	38,316	30,078	-21.5	1.4
Other Countries	62,485	62,441	-0.1	3.0
Total	**24,00,375**	**21,21,887**	**-11.6**	**100.0**

Source: Rajan, Irudaya S. and Zachariah, K C (2019), *Kerala Migration Survey*.

The recent trends in destination of emigrants, district-wise distribution of emigrants and trends in remittances have been analysed. The analysis of the intensity of emigration (emigrants per 100 households) shows Malappuram District has the highest intensity. The district-wise estimation on emigrants, its variations and emigrants per 100 households are given in the Table 16. The other districts having high intensity of emigration are Kannur, Kollam, Pathanamthitta, Kottayam and Thrissur. A disturbing development has been the fall in the rate of emigration in seven districts. The district, which has the lowest intensity of emigration, is Ernakulam. The economic effects of emigration are different among districts depending on the intensity of emigration.

Kerala has been receiving large amount of foreign remittances every year from the state's emigrants. It is estimated that the total remittances received in the state from the emigrants increased from Rs 13,652 crore in 1998 to Rs 85,092 crore in 2018 (Table 17). The annual remittances received in Kerala was higher than the annual total expenditure of the Government of Kerala, during the period except two years. Prior to the spread of COVID-19, the state has received about Rs 1 lakh crore a year as remittances. In the light of the current crisis, it is expected that the remittances in 2020 in the state will witness a fall of about Rs 10,000 to Rs 15,000 crore.

Table 16: Estimated Emigrants from Kerala, 2018

Sl. No.	District	No. of Emigrants 2013	No. of Emigrants 2018	Increase/ Decrease (%)	EMI* per 100 Households in 2018
1	Thiruvananthapuram	241,727	137,007	-43.32	15.2
2	Kollam	199,933	240,527	20.30	32.8
3	Pathanamthitta	141,343	109,836	-22.29	31.9
4	Alappuzha	93,096	136,857	47.01	23.6
5	Kottayam	107,931	166,625	54.38	31.3
6	Idukki	23,967	32,893	37.24	11.3
7	Ernakulam	191,373	53,418	-72.09	5.8
8	Thrissur	230,081	241,150	4.81	27.9
9	Palakkad	70,506	89,065	26.32	12.2
10	Malappuram	455,696	406,054	-10.89	42.1
11	Kozhikode	226,499	160,691	-29.05	19.7
12	Wayanad	22,568	30,650	35.81	14.5
13	Kannur	291,321	249,834	-14.24	38.8
14	Kasargod	104,334	67,281	-35.51	21.3
Kerala		**24,00,375**	**21,21,887**	**-11.60**	**24.0**

Note: * Emigrants. EMI: Equated monthly instalment
Source: Irudaya Rajan, S. and Zachariah, K C (2019), *Kerala Migration Survey*.

Table 17:

Remittances and Total Expenditure of Government of Kerala

Year	Remittances (Rs Crore)	Total Expenditure (TE)* of Govt.	Remittances as of TE (%)
1998	13,652	9880	138.2
2003	18,465	17,427	106.0
2008	43,288	30,904	140.1
2011	49,695	50,896	97.6
2013	71,142	66,244	107.4
2018	85,092	120,070	70.9

Note: *total expenditure for fiscal year ending March next year

Source: Rajan, Irudaya S. and Zachariah, K C (2019), *Kerala Migration Survey*.

The fall in remittances will adversely affect investment on land, construction of houses and other buildings, consumption, education, health, repayment of loans to banks in those districts, which have high intensity of emigration. It is likely that thousands of households, which solely depend on remittances for their survival, will face severe economic distress. There will be a recession in those districts with a high intensity of emigration. The districts, which are likely to face recession, are Malappuram, Kannur, Kasargod, Thrissur, Kottayam, Alappuzha, Pathanamthitta and Kollam. Among the returnee emigrants nearly half will be likely to be absorbed in the labour market in the state. A sizeable number will remain unemployed. The state government has to give financial and other support for a large number of returnee emigrants to help them find gainful self-employment.

2. Suggestions for an Economic Turnaround

In the context of large number of migrant workers leaving the state and Keralite returnee emigrants, some suggestions towards an economic turnaround of the state are given below:

a) Put in place a major project to replace guest workers with Gulf returnees

This project should have major components that include: a) Re-skilling or up-skilling or even down-skilling the Gulf returnee migrants to enable them to take up the jobs that have been done by guest workers in the past; b) Setting up counselling for the Gulf returnees that will help them to accept jobs here. which may have been infra-dig jobs for them earlier. Good psychological counselling will help our more reluctant returnees accept what they otherwise consider jobs beneath them; c) Training and counselling for trade union workers at the grassroot levels to help them understand and accept the new reality of a broken economy that might lead to lower wages for workers; and d) The reality is that Kerala will cease to be the high wage island that it was. It will become a medium-wage state. Counselling of the Gulf returnees and trade union leaders should be done to make them accept the new reality, that in such a scenario, strikes, go slows, lock outs, etc. will be highly counterproductive.

b) Developing Thozhil Bandham App

The App should have two sections: a) One section can enable employers to specify their requirement of workers, the skills and the job description of the work, whether it is unskilled, semi-skilled, skilled or high tech, the numbers they need, the wages that would be paid, the location of the job, the likely duration of the position, etc.; b) The other section of the App should enable a Gulf returnee to match his skills, his needs, etc. against the employment available and immediately send in his application to the employer through the App. This should be a very sophisticated App that is capable of real-time updation so that supply and demand are matched in real-time and employment opportunities reach job seekers and vice versa. The App will also enable the employers to determine if the wages they are offering and the conditions of work and stay, etc., are attractive enough and there by tweak the wages and emoluments, etc. they offer in real-time depending on demand and supply of the workforce. Like the Arogya Sethu App, the Thozhil Bandham App will, therefore, be able to carry out most of the work that over many decades our Employment Exchanges have not been able to do. This is an App that can be developed and used commercially by start-ups as well. However, it will succeed only as a government initiative.

c) Developing Shramik Bandhu App

A similar App for migrant workers, like the Thozhil Bandham App, named as Shramik Bandhu App, for migrant workers, who are now either back home in their states or in Kerala that works in real time, needs also to be developed. The Shramik Bandhu App is meant for those migrant workers who would like to get in touch with and be employed by local employers who need them. The basic principles and working of the App would be like the Thozhil Bandham App described above. One section of the App can enable employers to specify their requirement of workers, the skills and the job description of the work, whether it is unskilled, semi-skilled, skilled or high tech, the numbers they need, the wages that would be paid, the location of the job, the likely duration of the position, etc. The other section of the App should enable a migrant worker to match his/her skills, his/her needs, etc. against the employment available and immediately send in his/her application to the employer through the App. This should be a very sophisticated App that is capable of real-time updation so that supply and demand are matched in real-time and employment opportunities reach migrant workers and vice versa. The App will also enable the employers to determine if the wages they are offering and the conditions of work and stay, etc., are attractive enough so that they can tweak the wages and emoluments, etc. they offer in real-time depending on demand and supply of the workforce. The Shramik Bandhu App can be developed and used commercially by start-ups as well. However, it will succeed only as a government initiative. This App should be multilingual with options for Hindi, Odiya, Bengali, Assamese, etc. and of course English. In a way, though not wholly, the App would also be capable of keeping a rough count of the number of guest workers in the state, the locations and establishments where they are working, their wages, etc. In a way, therefore, the Shramik Bandhu App will also become a form of voluntary registration of migrant workers.

d) Policy initiative to promote self-employment among gulf returnees, and locally amongst the youngsters and the not so young in the state

While the state government has rightly placed a lot of emphasis over the last decade on start-ups, these start-ups seem to be largely restricted to software and digital ones. Over the years, starting up, sustaining and thriving have been made very easy and quick for such software and digital start-ups. Now there is a need to provide the same level-playing field for other self-employment ventures, like starting a micro or small industry or business in a village or town, or even opening a provision shop in a village, or a barber shop or a beauty parlour, a two-wheeler repair shop, or a painting shop or a mobile phone repair shop, or a micro manufacturing centre, etc. The main thrust of the Self-Employment Policy of the state government should be to make a self-employment venture of a Gulf returnee, a youngster in the state, or for that matter of an older entrepreneur easy to start up and run for three years. This would mean that all government rules and regulations should stand automatically waived for starting any small industry or business, for instance, of a total investment of up to Rs 25 lakh. All the multiple permits, licenses and permissions that such an entrepreneur is seeking should – through an ordinance or otherwise – be kept on hold for a period of say three years for such self-entrepreneurs. Government rules and laws should stand amended by an ordinance to make it possible for a small businessman/businesswoman starting a business or industry of a total investment of say up to Rs 25 lakh to start it without applying for or obtaining any permission or license or permit from any authority. Thus, a permit license holiday should be given to them for a period of three years. If upon the completion of three years, the business is still in existence the entrepreneur would have to obtain the necessary permits and licenses as applicable to him within a period of six months, thereafter.

VII. Impact on Sectors of Kerala Economy

1. Agriculture

The rapid spread of COVID-19 and the lockdown of economic activities have taken a severe hit on the agriculture sector in Kerala. The major impacts are the disruptions in agriculture supply chain, closure of agricultural markets and non-availability of farm labourers for various agricultural operations. Blockage of transport routes has resulted in reduced market access for farmers, especially for their perishable commodities like banana, pineapple, mango, papaya and other fruits and vegetables. Lockdown has affected harvesting operations during its first phase from 25 March 2020.

Small and marginal farmers are hardly hit with reduction in price of their produce varying from one-third of the normal price to complete loss. The price of cardamom has come down from Rs 2500 per kg during pre-lockdown period to Rs 1000 per kg during the lockdown period. Rubber, nutmeg, pineapple, mango, banana and other important horticulture crops also witnessed a price crash during the period. Small farmers in the tea sector faced a complete damage of their harvested crop. Vegetable farmers faced hardship in finding markets for their produce. COVID-19 spread and lockdown have also hit the processing and nursery activities.

The Association of Planters of Kerala (APK) has estimated the loss in the plantation sector in the state to be around Rs 500 crore. Rubber sector is the worst hit and it alone suffered a loss of Rs 300 crore. While the loss estimated in tea sector is Rs 125 crore, it is about Rs 20 crore for the cardamom sector. Cardamom auction centres have closed after the announcement of the lockdown. COVID-19 and lockdown have aggravated crisis of pepper farmers who were already hit by slump in prices due to cheaper imports from Vietnam and Sri Lanka. Small and marginal farmers in the state, who have not fully recovered from the two floods in 2018 and 2019 have suffered a loss of around Rs 1000 crore so far. This has pushed the small farmers and agricultural labourers to economic distress, indebtedness and poverty.

The Central Government has announced a stimulus package of Rs 1.63 lakh crore for the agricultural sector as part of the Atma Nirbhar Bharat package. The Kerala Government has announced Rs 3000 crore ‘Subhiksha’ package for cultivating fallow lands in the state with vegetables and food crops. These packages are highly insufficient to face the challenges faced by small and marginal farmers and agricultural labours.

In the light of the above, the following suggestions are proposed to address the crisis in agricultural sector:

a. The state government should take urgent steps to give compensation to farmers for the loss of crops due to flood, other natural calamities, pest attacks, attacks from wild animals, crop diseases, etc.

b. Impact of COVID-19 crisis in agricultural sector is likely to continue for the next two years. Moratorium for all loans availed by farmers may be extended up to 31 March 2022. The interest payable during moratorium period may be exempted.

c. According to the latest NAFIS (NABARD All India Rural Financial Inclusion Survey), 56 per cent of rural households in Kerala are indebted. In the background of COVID-19 crisis and the loss of income, a loan waiver scheme may be implemented for farmers and agricultural labourers, who obtained agricultural loans.

d. According to a report published by the Central Government, there are about 1000 rural agricultural markets in Kerala. Steps may be taken to strengthen and modernise rural agricultural markets in the state.

e. All forms of marketing of farm products such as direct marketing by farmers, farmer markets sponsored by farmer groups and farmer producer companies, marketing through mobile apps, electronic trading and online platforms, linking farmers with eNam (Electronic National Agricultural Market), etc., should be promoted.

f. Disruptions in supply chain should be avoided and supervised by appropriate government agencies. Develop cold storage and other supply chain infrastructure in agricultural production centres.

g. Steps should be taken for reviving and promoting farmer's producer companies, promoting lease farming to cultivate fallow lands, signing contract farming agreements, promoting micro food processing facilities at the local level, encouraging high tech agriculture, encourage the consumption of indigenous crops like cassava, yams, jackfruit etc.

h. Create a registry of all farmers, self-employed farmers and agricultural labourers who get their major source of income from agriculture in Krishi Bhavan of each Grama Panchayat.

2. Fisheries

Kerala with a coastline of 590 km enjoys an advantageous position in terms of fisheries. It is one of the leading fish producing states of India. During 2017-18, the total fish production of the state was 5.63 lakh tonnes, comprising 1.48 lakh tonnes inland fish and 4.14 lakh tonnes marine fish. The state has been the second-largest frozen shrimp and prawn, which is the top-most export item, producers among the states. The second major export item of India is frozen marine fish and the state stands third in production of the same. As many as 3.1 per cent of Kerala's population works in fishing and allied sectors. They reside in 222 marine fishing villages and 113 inland fishing villages of the state. The fish worker population of the state has estimated at around 2 million.

COVID-19 has created immense indirect impact in the fisheries sector. The informal daily wage earners have lost their jobs and income. The new sanitary measures, changing consumer demands, market access or logistical problems related to transportation and border restrictions are some of them. This in turn has a damaging effect on fishermen and fish farmer's livelihoods, as well as on food security and nutrition for populations that rely heavily on fish.

The trawling boats, which ventured into the sea before the restrictions were in place, had a tough time. When they returned after fishing, almost all the processing plants were shut. Besides fisher folks, workers in fish-landing centres, ice factories, vendors, etc. also faced the brunt. Due to lockdown there has been substantial reduction in fishing efforts with huge impact on exports. Limited supplies of items like ice--because suppliers being closed or unable to provide inputs on credit-also constrained fishing activities during lockdown. Even after lockdown relaxations, labour shortage has been a problem due to non-availability of migrant workers. Restrictions on market access and drop in demand will mean fish and fish products may be held in storage for longer. Given the migratory behaviour of many fishermen, there is potential for fishing communities to become “hotspots” for rapid spread of virus. In case the restrictive measures are not applied to the markets in a proper manner, women fish vendors can be exposed to a greater risk for infection, since markets see large number of people, and physical distancing is difficult to implement consistently.

In this context, the following suggestions are proposed to address the crisis:

a. Selling fish by carrying fish to houses is not a healthy thing. Instead fish can be sold through shops having freezers after cleaning, dressing under hygienic conditions.
b. Well-established seafood companies can be used to do this work in different places.
c. Nearly 27 per cent of the fish workers in Kerala are from Odisha. Adequate support including housing, etc. should be given to retain them in the fishing sector.
d. There is considerable scope for producing fish sauce**.** This enjoys a lucrative market in South East Asian countries.
e. There is considerable scope for producing quality dry fish using solar drying and add value to the unprocessed fish. Dry fish can be kept stored in room temperature up to one year.
f. Central government should be requested to declare fish farming equal to agro farming. Declaring aqua farming at par with agriculture will get a lot of benefit to fisheries, especially by means of subsidies.
g. As Kerala has the best water bodies suited for marine and brackish water farming, there is enormous scope for fish farming, and the potential should be exploited.
h. As things stand today, production, processing, export and marketing activities in the state’s seafood industry, including the ancillary industries are stagnant. Active support is required from the state government to revive the sector.
b) (f)All the fishermen who engage as full time fishermen, self-employed fishermen and casual labourers in fishing sector (marine and inland) should be asked to register with fisheries department (local offices). The subsidies and other financial support should be distributed to the registered fishermen.

3. Micro, Small and Medium Enterprises (MSME)

Industrial sector in Kerala comprises medium and large industries, micro, small and medium enterprises (MSME) and traditional industries. The MSME sector helps in industrialisation of rural and backward areas in the state, and provides employment to youth and socially disadvantaged groups such as SC, ST, women and physically challenged persons. Two new schemes, namely, ‘Assistance to Rebuild Flood affected MSMEs’ and ‘Interest Subvention to Flood affected MSME Units’ were introduced in 2019-20 for providing assistance to units affected by the floods.

The lockdown due to COVID-19 has substantially disrupted the operations of MSMEs in Kerala due to their dependence on the cash-economy that is severely hit by the lockdown, the physical non-availability of workers, and restrictions on the availability of raw materials and transport infrastructure. This will have substantial ramifications throughout the state economy. The state has the 12th largest number of MSMEs in India around 2.4 million units.

There are several ways the coronavirus pandemic affects the economy, especially MSMEs, on both the supply and demand sides. On the supply side, companies experience a reduction in the supply of labour, as workers are unwell or need to look after children or other dependents, while the schools are closed and movements of people are restricted. Measures to contain the disease by lockdowns and quarantines had led to further and more severe drops in capacity utilisation. Furthermore, supply chains are interrupted leading to shortages of parts and intermediate goods.

On the demand side, a dramatic and sudden loss of demand and revenue for MSMEs severely affect their ability to function, and/or causes severe liquidity shortages. Furthermore, consumers experience loss of income, fear of contagion and heightened uncertainty, which in turn reduces spending and consumption. These effects are compounded because workers are laid off and firms are not able to pay salaries. More generally, MSMEs are likely to be more vulnerable to ‘social distancing’ than other companies.

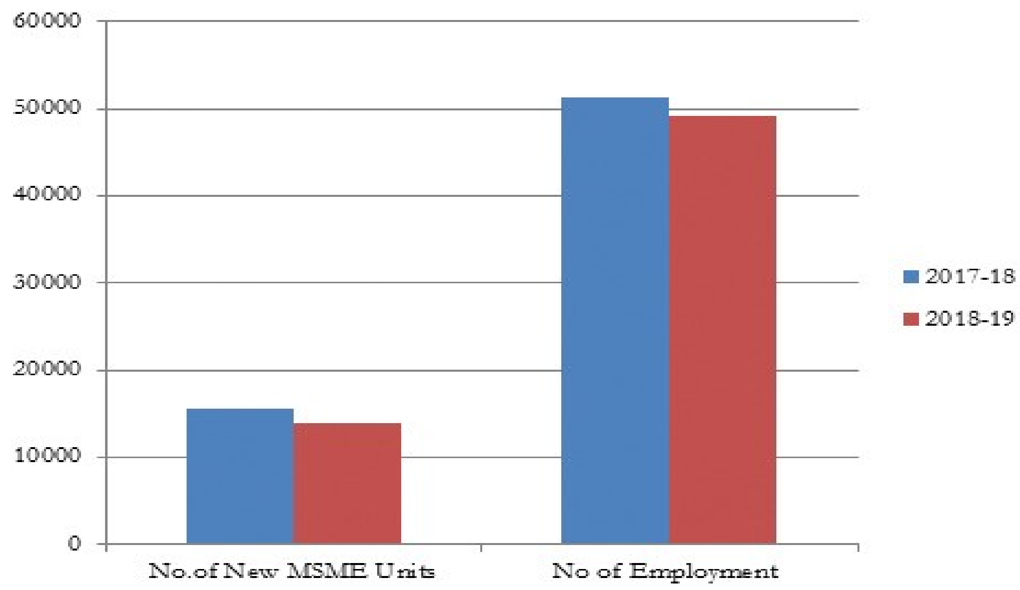
The impact of the virus could have potential spillovers into financial markets, with further reduced confidence and a reduction of credit. These various impacts are affecting both larger and smaller firms. However, the effect on MSMEs is especially severe, particularly because of higher levels of vulnerability and lower resilience related to their size.

MSMEs often have a more limited number of suppliers. In some cases, this may shelter them from the shock. They may have less resilience and flexibility in dealing with the costs these shocks entail. Costs for prevention as well as requested changes in work processes, such as the shift to teleworking, may be relatively higher for MSMEs given their smaller size, but also, in many instances, the low level of digitalisation and difficulties in accessing and adopting technologies.

Given the limited resources of MSMEs, and existing obstacles in accessing capital, the period over which SMEs can survive the shock is more restricted than for larger firms. Evidence on the COVID-19 crisis impacts on MSMEs from business surveys indicates severe disruptions and concerns among small businesses. It shows that more than half of MSMEs face severe losses in revenues. One-third of SMEs fear to be out of business without further support within one month, and up to 50 per cent within three months.

According to the Directorate of Industries and Commerce, 15,468 new MSME units were started in the state in 2017-18 with a total investment of Rs 1249.61 crore, and generated employment for 51,244 persons. In 2018-19, 13,826 new MSME units were started with an investment of Rs 1321.94 crore and generated employment for 49,068 persons. The number of new MSME units and employment created for the last two years is shown in Figure 1.

Figure 1: MSME Units and Employment Created (2017—18 and 2018--19).



Source: Directorate of Industries and Commerce, Government of Kerala.

A trend in the number of new MSME units started between 2015--16 and 2018--19 shows that there has been a decline in the number of units started (Table 18). The new units started per year declined from 15,859 in 2015--16 to 13,826 in 2018--19. Among the units, the large number of them are service units. Agro and food-based, textiles and garments, mechanical and light engineering are the other major category of units. The largest number of new units were started in Palakkad with 1991 units generating 7183 jobs, followed by Thrissur with 1676 new MSME units generating 4691 jobs and Ernakulam with 1531 MSME units with 6132 jobs. Kasargod had the lowest number with 223 new MSME units, generating employment for 940 persons.

Table 18: Status of New MSME Units Started in Kerala (2015--20)

Sl. No.	Subsectors	2015-16	2016-17	2017-18	2018-19	2019-20 (up to 30/09/19)	Total
1	Agro and food- based	2388	2395	2553	2712	1238	11,286
2	Textiles and garments	1910	1695	1947	1858	898	8308
3	General / mechanical/ light engineering	2003	1606	2001	1533	621	7764
4	Service	3134	3057	3679	3259	2009	15,138
5	Wood products	891	775	871	644	280	3461
6	Cement products	385	344	469	329	141	1668
7	Printing and allied	366	322	392	348	162	1590
8	Paper products	190	158	163	192	80	783
9	Information technology	349	263	316	294	116	1338
10	Others	4243	3098	3077	2657	1251	14,326
	Total	15,859	13,713	15,468	13,826	6796	65,662

Source: Directorate of Industries and Commerce, Government of Kerala.

The Udyog Aadhar Memorandum (UAM) in the State under the UAM scheme, which was notified in September 2015 under section 8 of the MSME Development Act 2006, MSME entrepreneurs need to file an online entrepreneurs' memorandum to instantly get a unique Udyog Aadhaar Number (UAN). UAN is a 12-digit unique identification number provided by the Ministry of Micro, Small and Medium Enterprises, Government of India, for micro, small and medium enterprises in the country. In Kerala, Directorate of Industries and Commerce (DIC) discontinued the practice of filing Entrepreneurs Memorandum Part II from 18 September 2015, and in its place, started online registration in Udyog Aadhar. As on 31 March 2019, the total number of Udyog Aadhar

Memorandums filed was 56,019 (all registered units are not functional), which included UAMs for micro, small, medium manufacturing units of 49,444; 6288 and 287 numbers, respectively (totalling 56,019 numbers, which represented a 1.65 per cent increase over the corresponding number for 2017-18). In addition, there were 40,465 UAMs filed in the service sector including 34,065, 6200 and 200 micro, small and medium units, respectively.

The government must adopt a three-pronged strategy to enable the MSME sector to survive, revive and thrive. This strategy can be refined further according to time horizons of immediate, 90 days, and longer durations such as a year. The government can adopt a sectoral approach, prioritising those MSMEs involved with supply chains for essential items over non-essential items. State government can take proactive role in facilitating working capital to MSMEs promised by the centre. Food micro-enterprises are offered `10,000 crore working capital support by the central government. In Kerala, Kudumbasree micro enterprises and others are engaged in the value addition of organic products and they make traditional delicacies of the state. Many enterprises are engaged with jackfruit- and coconut-based products, which are already internationally accredited as world class. Spices and spices-based value-added products attract global market from time immemorial. This is an opportunity for such units to become more competitive through technology upgradation.

In the context of the pandemic crisis, the following measures are suggested to protect the jobs in MSMEs:

a) Take urgent steps to ensure that MSMEs have access to finance to survive**,** thus saving businesses and jobs.
b) b) Help revive MSMEs by ensuring that supply chains become fully functional and their forward and backward linkages are restored.
c) Undertake structural reforms to remove obstacles (e.g., trade restrictions) that inhibit growth and enable MSMEs to thrive and seize opportunities in the post-COVID-19 economy.
d) Undertake a Payroll Protection Programme similar to the US. The US's Paycheck Protection Program is a loan that enables small businesses to keep their workers on the payroll. The US government "will forgive loans if all employees are kept on the payroll for eight weeks and the money is used for payroll, rent, mortgage interest, or utilities". The Indian government can initiate modified versions of this

programme. One version can be targeted at those companies which have their employees enrolled in the Employees Provident Fund Organisation (EPFO), thus encouraging companies to formalise their jobs and thus enhance workers' protection. Another version can be targeted at micro-entrepreneurs such as family owned businesses and those that operate in the informal sector.

In order to enhance access to capital the following suggestions are proposed:

a) The working capital support offered in the central government package to MSME sector may be facilitated as easy flow through state government intervention.
b) The Reserve Bank of India (RBI) announced policy measures for the banking system that were intended to provide relief to MSMEs through cheaper credit. Ensure that banks pass on these benefits to MSMEs. Announce an interest subvention scheme to further incentivise this.
c) Direct all government authorities to immediately clear pending bills of MSMEs and transfer funds to their accounts.
d) Announce a six-month moratorium on loan repayment and waiver of interest for that period. The Foundation of MSME Clusters (FMC) estimates Rs 45,000 crore may be needed to fund the waiver of interest.
e) Exempt MSMEs from capital gains tax to boost investment.
f) Clear all pending tax refunds that are due to MSMEs.
g) Provide support to Non-Banking Financial Companies (NBFCs), Microfinance Institutions (MFIs) and other entities to encourage them to lend to MSMEs. Their risk can be mitigated through government-provided guarantee mechanisms or other such innovations.
h) Encourage private sector-led financing mechanisms such as that initiated by the Confederation of Indian Industry (CII) to support MSMEs. Allow companies to fulfil some of their CSR obligations by contributing to a Save MSMEs Fund.
i) Explore ways by which unutilised funds in various central government cess accounts can be utilised for MSME relief as a special case.

Regarding special assistance to artisans and micro-entrepreneurs, and the tax holidays required, following suggestions are proposed:

a) Provide special assistance to artisans, weavers, and those engaged in handloom and other cottage industries.

b) FMC estimates that Rs 6000 crore will be needed to provide working capital loans to 20 lakh artisan units with an estimated average loan requirement of Rs 10,000/month, for three months. Assist them with marketing of their products. This is the time to work with the IT sector and start-ups to provide digital presence for artisans, and even for individuals, through websites. Connect artisans with e-commerce companies.
c) Launch a buy Indian products national promotion campaign, which can be subsidised.
d) A discount coupon mechanism Employ microfinance at a large scale to assist artisans and explore how they can form the equivalent of Self-Help Groups (SHGs)
e) Announce a tax holiday of six months for MSMEs.
f) Defer payment of Goods and Services Tax (GST) and other statutory dues by six months, and also waive interest on late payment.
g) Exempt MSMEs from payment of statutory dues like fixed electricity charges (for units completely shut), property taxes, rent, etc.

With regard to restarting the functioning of MSMEs, the following suggestions are made:

a) After consultation with all relevant stakeholders, devise a post-lockdown COVID-response-compliant Standard Operating Procedure (SOP) and allow all units that do not fall in hotspot zones to restart operations.
b) Announce targeted direct cash transfers for migrant workers ,who have stayed back at their workplace (as reported by their MSME employers), to halt reverse migration and provide additional support to them.
c) Formulate plans to bring back migrant workers to industrial clusters. This includes confidence-building measures such as a focus on safety at work and home, and transportation to reassure workers that it is safe to return to work.
d) Refurbish the Digital Employment Exchange for Industries, which had been launched in 2015. Its urgent focus should be to enable matching of supply and demand for skilled workers.
e) Prepare a "New Normal" for small businesses. Focus on creating a strong ecosystem/network that enables the resurrection of small businesses.

f) Create a separate Task Force to take a lead on resuming operations, examine the issues facing the sector, and oversee implementation of reform measures, building on the UK Sinha Committee Report.

Regarding reforming the GST, the following suggestions are proposed:

a) Rationalise tax rates and simplify the GST structure. Suggestions put forward by industry associations include moving towards a uniform GST structure.
b) Reduce non-uniformity in compliance burden and related easing measures. For instance, larger businesses (those having a turnover of more than Rs 5 crore) have not been exempted from interest payment on late filing, albeit the interest is imposed at a reduced rate.
c) Legislate regulatory forbearance on the lines of Rajasthan MSME (Facilitation Act) 2019 and allow new industries to be set-up without prior approvals, except those concerning pollution, minimum wages, and disaster management.
d) As proposed by the Federation of Indian Chambers of Commerce and Industry (FICCI), urge the Securities and Exchange Board of India (SEBI) to issue advisory to rating agencies to not downgrade the SME sector from March 2020 onwards till the scenario improves.

Finally, the following suggestions are made to transform the crisis into opportunity:

a) Amend the definition of MSMEs to be based on employment rather than on capital, as the current definition is biased against labour. Accordingly, a business employing 10 persons or less should be ‘micro;’ between 11 and 100 should be ‘small;’ and between 101 and 500 should be ‘medium”.
b) Revive stalled projects, as actively done by the United Progressive Government (UPA), from 2004 to 2014.
c) Support to micro and small enterprises that collectivise unorganised sector workers including waste pickers and scrap collectors. Rehabilitation plan for MSMEs that were badly hit by demonetisation and a flawed GST to help them revive and grow.
d) Ensure that threshold exemption for small businesses will not be affected by inter-state supply of goods or services.

4. Information Technology

Information and communication technology (ICT) sector have been playing an important role in the development of Kerala. According to the Internet & Mobile Association of India (IAMAI), Kerala's internet penetration rate is 54 per cent, the second-highest among states in India. Technopark, fully owned by the Government of Kerala, was set up to create global standard IT infrastructure. It has five campuses spread over 770 acres under various phases of development. According to the Kerala State Planning Board, Technopark has a turn-over of Rs 14,000 crore, export of Rs 7000 crore, investment of Rs 4979 crore and 60,000 workers and 410 companies in 2018-19. The massive outbreak of COVID-19 pandemic has done considerable damage to the IT industry in the state.

The GTech, an organisation of IT and ITES companies across Kerala, has conducted a study to assess the business impact of the pandemic among 200 IT companies in early April 2020. The study found that in 99 per cent of the companies, the employees are working from home; 85 per cent of the companies are small and medium and employ less than 200 workers. Apart from these, of the surveyed companies, 70 per cent anticipate an immediate business slump, 72 per cent anticipate delayed receipts resulting in cash flow problems, 75 per cent felt that they may force to opt delayed pay outs, while 52 per cent believe that they may be forced to resort to reduction of work force.

Another study was conducted by GTech in association with Nasscom and CII on business impact of COVID-19. The study projected a loss of Rs 4500 crore in revenue by December 2020 and a corresponding loss of over 26,000 direct jobs and 80,000 indirect jobs. This study covered 372 companies having 92,692 workers. The study found that large companies having an occupancy of more than 10,000 square foot account for 76 per cent of the total employment.

In the context of the recession faced in the IT sector, GTech has requested the state government to provide the following relief and assistance. Full rental waiver at the government and private IT parks for the next six months, abandoning 5 per cent yearly rental increase, subsidisation of electricity tariffs, subsidy on salary expenses to companies to retain jobs, credit support through state financial agencies like KSIDC, KSFE, KFC, etc, expediting GST refunds, declaration of a moratorium on the state and LSG taxes, etc.

The following suggestions are proposed to protect the ICT sector in the context of the pandemic:

a) The rent waiver, which was announced by the state government, may be extended to all the IT companies which work in IT parks owned by the government. The concession may be given for six months starting from April 2020.
b) The request of the IT companies to expedite the payment of pending arrears of state government and GST refunds may be accepted.
c) The state may take steps to maintain good internet connectivity and uninterrupted power to keep the work from home.
d) As most of the IT units come under MSMEs, they can also avail the assistance, support for workers, credit support, other measures, etc, in the economic revival package announced by the central government.

5. Construction

Construction is an important sector which accounts for 12 per cent of GSDP and 20 per cent of employment in Kerala. Construction-related activities such as real estate, ownership of dwelling and professional services, etc. account for another 15 per cent of the GSDP. In order to revive the economy from recession, the construction sector has a crucial role due to several factors. First, the sector is relatively labour intensive, its activities can be targeted at geographical areas with particular economic problems and the sector has a large share of local inputs. Second, it is able to absorb workers from other sectors easily. Third, the development of the sector is a pre-requisite for the development of other sectors like IT, tourism, healthcare, education, roads, MSMEs, etc. Fourth, a number of industries such as cement, steel, paint, bricks, m-sand, metal, etc. are depend on the sector. Hence, this sector can stimulate local production, generate income, provide more employment opportunities in times of recession as compared to other sectors. Hence, it important to give priority to revive the construction sector.

Currently, the construction sector is in recession and faces a number of serious problems. First, due to COVID-19 there has been disruption in production, transport and supply, and an increase in the price of all most all construction materials viz. bricks, m-sand, metal, steel, cement, ceramics, tiles, sanitary fittings, etc. Steps are required to remove these disruptions and ensure timely availability of materials. Second, currently we don’t have a rule-based and efficient system to give timely permits to construct buildings, including both houses and other structures. It takes about 8--10 months for getting permits to construct buildings especially flats. Further, frequent changes are made in building permit rules and regulations creating unexpected problems to the builders. One has to approach a number of offices, agencies, etc. with applications for getting permits. All these create a lot of delay in issue of building permits. Third, the municipalities and municipal corporations do not have a clear master plan with the current survey numbers, marking the spaces for different purposes like housing, establishment of commercial centres and other purposes. Due to the lack of clear master plan, the authorities face difficulty in issue of building permit for different purposes of construction.

Fourth, the government often freeze the transaction of land with the objective to take over for some public purposes. In many cases the freezing of land continues indefinitely and the owners are denied the right to construct building. Fifth, there is no clear guidelines for fixing the property tax and building tax (one-time tax). The assessment and collection of these taxes by two authorities namely the LGs and village office create a lot of hardships to the people, scope for corruption and unnecessary delay in issue of permits. Sixth, the unhealthy trade union practices and extractions of money from the builders are serious menace. The head load worker unions unnecessarily interfere in loading and unloading of materials in construction sites and collect exorbitant charges for the purpose. In some districts (Ernakulam), the trade unions are not allowing the builder to select a migrant worker of his choice. The trade unions allot a person to a builder of their choice and compel the builder to pay high wage rate and collect a portion of it as their commission.

6. Travel and Tourism

Kerala’s travel and tourism sector is noteworthy for free and confident movement of people as compared to other states in the country. Even as the tourism industry in the state was recovering from the dip in footfall following the 2018 flood and the Nipah virus scare, it has collapsed again with the COVID-19 outbreak. Most of the hotels and resorts have reported losses to the tune of crores. Every year, the month of May, the peak season for tourism industry, used to have thousands of travellers flocking to popular destinations in the state. However, with the world in the grip of a global pandemic and the resultant lockdown in the country, hotels, resorts, lodges and tour operators have been staring at an uncertain future with little or no business for months.

Since the lockdown was announced, almost all hotels, travel agencies and handicraft shops are having been shut down. March, April and May usually see a surge in weddings, conferences and other occasions. With all events cancelled or postponed, most of the hotels recorded zero occupancy this season. They have already incurred a huge revenue loss. Hotel owners also opined that they don’t expect the industry to revive anytime soon with social distancing norms in place. It is unsure when the situation will return to normalcy.

Travel and tourism sector, which provides employment for more than 10 lakh people in Kerala, suffered a loss more than 90 per cent due to lockdown. If this trend continues as the COVID-19 crisis progresses, it will be a huge setback for employment. Business has also slumped in all categories of the tourism industry including the government-run Kerala State Cooperative Tourism Federation Ltd (Tourfed), which had planned a slew of attractive packages for the summer.

In the current context scenario, the state government should convert resorts and hotels temporarily to paid quarantine centres. It should ensure that the regular employees in tourist units get half the pay till revival of tourism business by the owners, give more time for repayment of loans and interest to the borrowed funds from banks and financial institutions, change the focus from luxury tourism meant for the rich to affordable tourism for middle class domestic tourists, and also promote Kerala as a health tourism hub to attract foreign tourists.

Reports and experts suggest possible job loss across tourism and allied industries due to standstill caused by the COVID-19 pandemic across the world. “The Indian tourism and hospitality industry is staring at a potential job loss of around 38 million, which is 70% of the total workforce,” due to COVID-19, a report by KPMG, a financial services and business advisory firm, stated on 1 April.

Kerala is an internationally recognised tourist destination and one of the most popular tourist centres in India. It has a variety of tourist attractions viz. abundance of beaches, backwaters, hill stations, wild life, water falls, festivals, ayurveda resorts, monuments, art forms, etc. Besides foreign tourists, a large number of domestic tourists within and from other states too visit Kerala. The foreign tourists usually visit in large numbers during the tourist seasons between the months of November and March every year. On the other hand, domestic tourists visit the state throughout a year. According to the Department of Tourism, Government of Kerala, 10.96 lakh foreign tourists visited in the year 2018 and the foreign exchange earned in that year was Rs 8764 crore. The department estimated the number of domestic tourists as 156.04 lakh in 2018 and the earnings from them was Rs 19,474 crore.

Table 19: Status of Accommodation Units in Kerala

Sl. No	Category	No. of Units	No. of Rooms	No. of Rooms (%)
1	Ayurvedic Centres	129	1839	2.07
2	House Boats	928	-	-
3	Hotels/Others	3749	68076	76.68
4	Home Stays	1040	3532	3.98
5	Rest House	193	2144	2.42
6	Guest House	90	1179	1.33
7	Resorts	699	10963	12.35
8	Service Villa	180	906	1.02
9	Others	14	134	0.15
Total		**7022**	**88,773**	**100.00**

Source: KSPB (2020). *Economic Review 2019, Volume II*.

A variety of tourist accommodation is available in the state. They are ayurvedic centres, houseboats, hotels, home stays, rest and guest houses, resorts, etc. According to the Department of Tourism, the state has 7022 accommodation units and total number of rooms available is 88,773 (Table 19). Although foreign tourists visit all the districts in the state, the five districts, which account for 93 per cent of them, are Ernakulam, Thiruvananthapuram, Alappuzha, Idukki and Kottayam (Table 20). There has been a continuous growth in the number of foreign tourists in all districts between 2005 and 2018. In the case of domestic tourists, nearly 55 per cent of them visit in three districts viz. Ernakulam, Thiruvananthapuram and Thrissur. Except Kasargod and Pathanamthitta, all the districts have sizeable number of domestic tourists (Table 21).

Table 20: District-wise Foreign Tourist Arrivals in Kerala

Sl. No.	District	No of Foreign Tourists (2005)	No. of Foreign Tourists (2018)	Growth (2005-18) (%)	Share in 2018 (%)
1	Kasargod	1166	4122	253.52	0.38
2	Kannur	2090	5763	175.74	0.52
3	Wayanad	942	11,607	1132.17	1.06
4	Kozhikode	8420	18,388	118.38	1.68
5	Malappuram	5115	17,610	244.28	1.61
6	Palakkad	801	1967	145.57	0.18
7	Thrissur	2421	11,333	368.11	1.03
8	Ernakulam	108,773	488,175	348.80	44.52
9	Idukki	39,378	44,833	13.85	4.09
10	Kottayam	20,017	43,287	116.25	3.95
11	Alappuzha	30,274	95,522	215.52	8.71
12	Pathanamthitta	349	1953	459.60	0.18
13	Kollam	6813	9086	33.36	0.83
14	Thiruvananthapuram	119,940	342,761	185.78	31.26
Kerala		**346,499**	**10,96,407**	**216.42**	**100.00**

Source: KSPB (2020). *Economic Review 2019, Volume II.* DES (2009), *Statistics for Planning*.

Table 21: District-wise Domestic Tourist Arrivals in Kerala

Sl. No.	District	No. of Domestic Tourists (2005)	No. of Domestic Tourists (2018)	Growth (2005-18) (%)	Share in 2018 (%)
1	Kasargod	133,880	276,599	106.60	1.77
2	Kannur	333,855	768,038	130.05	4.92
3	Wayanad	191,184	888,141	364.55	5.69
4	Kozhikode	553,363	10,52,783	90.25	6.75
5	Malappuram	306,431	565,914	84.68	3.63
6	Palakkad	266,837	509,883	91.08	3.27
7	Thrissur	13,27,856	24,97,278	88.07	16.00
8	Ernakulam	10,25,944	34,46,889	235.97	22.09
9	Idukki	473,772	12,57,403	165.40	8.06
10	Kottayam	164,909	524,821	218.25	3.36
11	Alappuzha	173,626	511,490	194.59	3.28
12	Pathanamthitta	59,328	192,813	224.99	1.24
13	Kollam	98,277	400,222	307.24	2.56
14	Thiruvananthapuram	837,211	2,712,387	223.98	17.38
Kerala		**59,46,473**	**156,04,661**	**162.42**	**100.00**

Source: KSPB (2020). *Economic Review 2019, Volume II* ; DES (2009), *Statistics for Planning*.

Due to COVID-19, the first measure taken by the central and state governments is to impose total ban on movement of people. During the lockdown period, all public passenger motor transport, rail, domestic and international air transport were stopped. This has resulted in sudden stoppage of all activities connected with tourism and the tourism industry suffered an unprecedented loss. More than 10 lakh people who are employed in travel and tourism sector in Kerala lost their jobs. The hotels, resorts, houseboats, ayurvedic centres, and others which provided accommodations to tourists suffered a loss to the tune of 100 per cent.

The consequences of the COVID-19 on the travel and tourism industry are the following:

a) A large number of investors, especially small investors who invested in the industry by borrowing do not have income to repay the loans.
b) A large number of the tourist units have no business and incurred huge losses.
c) The workers employed in the industry have lost their jobs since the declaration of lockdown (hotel staff, house boats staff, performing artists, staff in ayurvedic resorts, travel agents, etc).
d) Another category of workers who lost their jobs are self-employed people connected with travel and tourism activities (taxi drivers, tourist guides, porters and others related to the sector).
e) A large number of self-employed categories of units such as small hotels, home stays, resorts, taxies, tourist bus operators, traders and street vendors in tourist places have also lost their jobs.

In the context of the above, the following suggestions are proposed:

a) Resorts and hotels may be temporarily converted to paid quarantine centres.
b) Change from buffet food to plated food. Restaurants may go in for personal serving spoons, contactless delivery promoting in-room-dining and designing menus in single portions rather than shared ones.
c) The tourist units (hotels, resorts, ayurvedic centres, house boats, etc), which have regular employees, may be encouraged to pay half the pay till revival of tourist business. The state/central governments may give appropriate tax concessions or incentives to such units.
d) All small-scale investors in hotels, houseboats, tourist vehicles, tourist accommodation centres, etc. who borrowed money from banks and financial

institutions may be given more time to repay their loans and interest (one to two years). Interest subsidy may be given for all self-employed categories of investors.

e) More time and concession may be given to the travel and tourism sector units on arrears of taxes, tax fines, penalties, etc. (taxes levied by the state and local governments).

f) Change focus from luxury tourism meant for rich to affordable tourism meant for middle class domestic tourists. Of the total domestic tourists of 156 lakhs in 2018, 63 per cent belonged to Kerala state. Hence, hotels, resorts and other accommodation units should charge an affordable rate for accommodating domestic tourists. It is important to follow a strategy of development of tourism meant for domestic tourists.

g) In the post-COVID-19 period there would be prospects for Kerala tourism. Foreign tourists who have undergone treatment of COVID-19 in Kerala have a very good opinion about the treatment facilities here. It created a good brand name for Kerala tourism.

h) Kerala has had so far made an excellent image abroad on controlling COVID-19. The image that state has created as a state with a very good health infrastructure, a responsible public health administration, etc. should be leveraged to make the state a health tourism hub. Ayurveda should also be made an important part of health tourism.

7. ENTERTAINMENT INDUSTRY

The pandemic has shattered the entertainment industry across the globe. With theatres under lockdown, film and television serial shootings stalled, advertisement and promotional events, interviews on hold due to the spread of coronavirus, the entire entertainment sector is facing huge losses in Kerala. The Malayalam film industry is staring at a bleak future.

When the lockdown was announced, nearly 30 Malayalam films were at the various stages of production, which included some big-budget movies. Most producers have borrowed huge amounts from private financiers in Chennai for their projects. Some of them are paying a monthly interest of Rs 3 lakh for every Rs 1 crore, according to a producer. Moreover, it is known that a good number of producers in Malayalam films are businessmen from the diaspora community. The pandemic being a global phenomenon, there are considerable concerns in the sector about their future involvement and investment in new films.

At present there are four blockbuster films, including films of superstars Mammootty and Mohanlal, which were set to be released. The total cost of production of these films is around Rs 200 crore. Besides there are around 26 films in various stages of production.

Exhibitors, who own around 625 theatres, are one of the major segments of the film industry in the state. Although it is hard to quantify exactly how much money is at stake, one can only estimate the losses based on average collections per day before the pandemic. On a normal day in Kerala, the average collection in all the movie halls was around Rs 1.30 crore, and achieving this figure again sometime soon seems to be a distant possibility. Exhibitors are in deep trouble as they have to pay very high electricity bill.

There is hardly any artistic and cultural activity, including drama and performing arts, happening in the state. Most of the performing artists depended on the entertainments sector for their livelihood, and the pandemic has made all of them inactive for the past few months.

Television industry is also facing problems. No new programme shooting is happening due to social distancing. Most of the business houses are facing financial crisis, and they are not in a position to spend money for advertisements and commercials. Due to that most of the television channels are facing huge revenue loss. Naturally this has affected the day-to-day functioning also.

Kerala has more than half a dozen amusement parks. There are nearly 10 such parks in the state, including the famous Wonderla in Kochi, which give direct employment to around 5000 people and indirectly provide livelihood to nearly 30,000. Their continued closure due to the pandemic has devastated them financially. There is 100 per cent loss in this segment.

The summer months of April and May are peak months for theme parks. These are the months when children have their summer break and families throng amusement parks. In this period, theme parks generate 35-40 per cent of their annual income. The lockdown, which began in late March, has resulted in huge losses to theme park owners. According to the Wonderla management, they have suffered a loss of Rs 4 crore per month. The Indian Association of Amusement Parks and Industries (IAAPI) pegs the losses incurred by the sector due to the lockdown at Rs 1100 crore.

The industry has lost its biggest peak season (summer), which generates approximately 45- 55 per cent EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortisation), and is usually followed by a long off season.

1. The government needs to step in to save the entire entertainment industry from the current crisis.
2. Government have to waive the fixed charges, as they are not hopeful about to see theatres in full occupancy.
3. The Indian Association of Amusement Parks and Industries (IAAPI) has already submitted the standard operating procedures (SOPs) to be followed to the Union Home and Health ministries, Prime Minister's Office (PMO), and the chief ministers of various states.
4. Gatherings can be easily controlled in the amusement parks and it is also possible to maintain social distancing.
5. Even the water parks are safe as chemicals are used to kill any kind of virus.
6. Sanitisation of employees and all individual units inside the parks will be undertaken with considerable vigil.
7. If the parks are allowed to reopen, at least they will generate some revenue despite low footfalls.
8. With no revenue, the park managements are giving salaries to the staff. If the situation remains unabated, they will not be able to manage.

VIII. Fiscal Situation and Economic Revival Packages

1. Fiscal Situation in Kerala

Sound finances of state government serve as a pre-condition for good administration, effective implementation of annual plans and major development projects, providing good quality public services such as public health, education, public utility services, etc., implementation of social welfare programmes, transfer of funds to LGs for their administration and development, and providing relief and assistance to natural disasters such as flood, etc . However, due to unsound fiscal policies and mismanagement of state finances by the successive governments, the state has been facing persistent fiscal crisis.

The Left Democratic Front (LDF) government published a white paper in 2016 and declared that the government is going to take steps to improve the state's finances. However, the data on state finances suggest that the fiscal situation witnessed a steady deterioration since 2016.

Due to acute shortage of funds, the state government has been implementing stringent treasury restrictions from 15 February 2019 onwards. For payment to contractors, accredited agencies, suppliers, the withdrawal ceiling is limited to Rs 1 lakh for each treasury bill or cheque. For mobilising funds for payment of salary and pension for a month, treasuries in the state stopped passing all non-salary and pension bills during the month of November 2019. These treasury restrictions have paralysed all plans, development activities of state and LGs, rebuild activities related to deluge and distribution of assistance to flood victims prior to the outbreak of COVID- 19. The budget has lost its relevance as a document meant for fiscal control and management. At present the amount allotted to a department in the budget for a financial year is spent in that year and subsequent years through a system of treasury queue for bills, Electronic Ledger Account Monitoring System (e-LAMS), shifting funds to Special Treasury Savings Bank (STSB) accounts, etc.

A review of fiscal performance using fiscal indicators gives an alarming fiscal situation. The revenue deficit (RD-GSDP ratio) is between 2 and 3.75 per cent (Table 22). The revenue deficit (RD) went up to Rs 25,820 in 2017-18. This includes the understatement of RD of Rs 8892 as pointed out by the Comptroller and Audit General of India (CAG). Although the target of RD stipulated by the Kerala Fiscal Responsibility (KFR) Act is zero, the state was not able to achieve it for the last six years. Fiscal deficit (FD), which denotes the borrowing required to meet the deficit to total expenditure, is also at high level (Table 23). Although the target of FD stipulated by KFR Act is 3 per cent, the state was not able to limit its expenditure to that level during the last seven years. RD and FD prevailing in Kerala is one of the highest in India. Manipulation of RD and FD accounts of 2017-18 to show a better fiscal situation is a serious lapse on the part of the state's Finance Department. Regarding the stock of public debt, the state is within the limit of prescribed by KFR Act (Table 24). However, the off-budget borrowing for Kerala Infrastructure Investment Fund Board (KIIFB) and repayment of debt burden using state resources are likely to increase the debt burden to unmanageable levels in the near future. KIIFBI, when it was conceived and approved by the previous government, was intended to take up self-sustaining schemes for which repayment will be made by returns from the schemes themselves. It was a wrong idea to put the entire repayment of KIIFB debt obligations on state budget.

Table 22: Trends in Revenue Deficit (RD)

Year	Revenue Deficit (Rs Crore)	RD as % of Revenue Expenditure	RD as % of GSDP	RD as per KFR Act (%)
2010-11	3,674	10.6	1.13	
2011-12	8,035	17.4	2.21	1.4
2012-13	9,352	17.5	2.27	0.9
2013-14	11,309	18.7	2.43	0.5
2014-15	13,796	19.2	2.69	0.0
2015-16	9,657	12.3	1.72	0.0
2016-17	15,484	17.0	2.51	0.0
2017-18 (Revised)	**25,820***	**23.7**	**3.75**	**0.0**
2018-19	17,462	15.8	2.23	0.0
2019-20 (RE)	17,474	15.0	2.01	0.0

Note: * Revised revenue deficit as per CAG's Finance Accounts 2017-18 (Vol I) (16928 crore + 8892 crore)

Source: CAG (2016), CAG (2018) and Budget in Brief 2020--21.

Table 23: Trends in Gross Fiscal Deficit (GFD)

Year	GFD (Rs crore)	GFD as % of Total Expenditure	GFD as % of GSDP	GFD Target as per KFR Act (%)
2010-11	7731	19.9	2.38	
2011-12	12,815	25.2	3.52	3.5
2012-13	15,002	25.3	3.64	3.5
2013-14	16,944	25.5	3.64	3.0
2014-15	18,642	24.2	3.64	3.0
2015-16	17,818	20.5	3.17	3.0
2016-17	26,448	25.8	4.29	3.0
2017-18 (Revised)	**36,215***	**30.3**	**5.27**	**3.0**
2018-19	26,958	22.5	3.45	3.0
2019-20 (RE)	26,186	20.8	3.00	3.0

Note: * Revised fiscal deficit as per CAG's Finance Accounts 2017-18 (Vol I) (26837 crore + 9378 crore)

Source: CAG (2016), CAG (2018) and Budget in Brief 2020-21.

Table 24: Trends in Public Debt

Year	Public Debt (Rs Crore)	Rate of Growth (%)	Debt/GSDP (%)	Target as per KFR Act (Debt-GSDP Ratio)
2010-11	78,673	10.9	24.24	
2011-12	89,418	13.7	24.56	32.2
2012-13	103,561	15.8	25.12	31.7
2013-14	119,009	14.9	25.59	30.7
2014-15	135,440	13.8	26.42	29.8
2015-16	157,370	16.2	28.00	31.3
2016-17	186,453	18.5	30.25	30.8
2017-18	210,762	13.03	30.69	30.4
2018-19	235,631	11.8	30.15	30.01
2019-20 (RE)	262,309	11.3	30.10	-

Source: CAG (2016), CAG (2018) and Budget in Brief 2020-21.

Kerala's fiscal crisis has four dimensions viz. slowdown of own resource mobilisation, excessive increase in non-plan revenue expenditure, steep fall in development expenditure and increased burden on debt repayments. However, the government is not prepared to address these issues in its fiscal policy. The pre-conditions required for improving the finances of the state are increasing own resources mobilisation through a number of measures, effecting drastic cut in non-plan revenue expenditure and restricting borrowings to a desired level and preparing budgets based on realistic appraisal of revenue receipts. However, the government has been taking steps in the opposite direction. Unrealistic forecasts are made in budget about the anticipated earnings from taxes (e.g., 30 per cent increase in GST revenue in 2019--20). Instead of effecting drastic cut in non-plan revenue expenditure, government promoted spurt in its growth. No steps have been taken to curtail unnecessary government establishments, bureaucracy, semi-government institutions, loss-making public sector undertakings, private aided institutions, etc. The LDF government has created more than 50,000 new posts, which include nearly 25,000 posts in private-aided schools. The rapid rise in three items of expenditure is a serious issue, which needs special attention. The total salary, pension and interest expenditure of Kerala was Rs 67,407 crores in 2017--18 and accounted for 81 per cent of revenue receipts and 67 per cent of revenue expenditure.

2. Impact of COVID-19 on Revenue Receipts

The outbreak of COVID-19 pandemic and the implementation of lockdown in the state for 69 days (24 March to 31 May) have paralysed most of the economic activities and resulted in unprecedented fall in tax and non-tax revenue receipts. As the state's tax and non-tax revenue are directly related to fluctuations in production and trade of goods and services, it is likely that the acute recession created due to the pandemic has resulted in unprecedented fall in revenue receipts. Except a few reports that appeared in the media, we do not have exact information about the magnitude of the loss in revenue.

The media reports suggest the following. According to one report the total tax receipts from GST, land revenue, registration, excise, sales tax, vehicle tax and others was Rs 346.78 crore in April 2020. This was in contrast to the Rs 3399.26 crore tax received for the same items in the previous year ending April 2019. The fall in tax revenue was Rs 3052.48 crore, showing 90 per cent fall (Table 25). The government borrowed Rs 5930 crore at interest rate ranging from 7.91 per cent and 8.96 per cent from the market in April 2020 to pay the pending bills of the previous financial year and to face the crisis. Further, the government borrowed another Rs 1000 crore on 5 May 2020 to meet the expenditure on the payment of salary and pension.

Table 25: Tax Revenue of State in April 2019 and April 2020

Sl. No.	Item	Amount in April 2020 (Rs crore)	Amount in April 2019 (Rs crore)	Fall in Amount (Rs crore)	Percentage Fall
1	GST	188	1951	1763	90.4
2	Land revenue	4	20	16	80.0
3	Registration	15	255	240	94.1
4	Excise	28	193	165	85.5
5	Sales tax	99	668	569	85.2
6	Motor vehicles	9	298	289	96.9
7	Others	3.78	14.26	10.48	73.5
	Total	**346.78**	**3399.26**	**3052.48**	**90.0**

Source: *Malayala Manorama Daily*, 6 May 2020.

According to another report, the total receipts of GST, both state and central share, was Rs 670.96 crore for May 2020 as compared to Rs 1574 received during the same period in the previous year, May 2019 (Mathrubhumi Daily, 5 June 2020). The state government borrowed Rs 1500 crore on 2 June 2020 to distribute the salary and pension. Currently the state treasuries are functioning with the receipts received from frequent borrowing, receipts of the revenue deficit grant from centre and GST arrears. A disruption in the above three items may lead to the collapse of state finances.

We may conclude the analysis as follows. Kerala is experiencing the worst fiscal crisis in its history. The state government has been making desperate attempts to meet the payment of essential items like salary, pension, interest and COVID-19 related public health expenditure. The state has completely lost its ability to spend money for economic revival packages. Due to paucity of funds, government is not conducting adequate tests to detect the COVID-19, institutional quarantine for persons return from hotspot places in other parts of India and abroad. Instead of institutional quarantine, government say that home quarantine is sufficient to contain the disease. The LGs, which have a crucial role in the containment of the spread of COVID-19 are facing acute fiscal crisis, due to steep fall in their tax and non-tax receipts and cut in funds received from state government. The LGs, which spent money for community kitchen, providing institutional quarantine facilities, providing food for the stranded migrant workers and took other preventive measures, have almost stopped their activities due to the lack of funds.

In this context the following suggestions are proposed:

a. Declare a plan holiday for one year and divert the available funds for the economic revival package and measures to contain the spread of COVID-19 and related public health activities.
b. The government should take urgent steps to curtail the fiscal extravagance of all the government departments, LGs, autonomous bodies, public sector undertakings and other state-funded institutions.
c. In the context of COVID-19 and shift in instruction from educational institutions to homes (online teaching), defer all proposals to start new educational institutions, new batches and creation of new posts in public and private-aided sector during the academic year 2020-21.

d. Reduce the government sector pay roll burden by abolishing unnecessary establishments and surplus staff.
e. It is suggested that the government should publish a white paper to present the facts on the loss on revenue due to COVID-19 crisis in the state and the fiscal situation in the post-COVID 19 period.
f. A public debate on the grim fiscal situation, the role of state in dealing the COVID-19 crisis and changes in the strategy and approach are needed.

3. Economic Revival Package

The following policy measures are needed to tackle the socio-economic impact of COVID-19 crisis:

a. Immediate stimulus packages are needed to strengthen the health sector, while mitigating the impact on economies and labour markets through the provision of financial relief for enterprises (particularly micro- and small enterprises) and of income support for workers.
b. Timely and coordinated implementation of fiscal and monetary policies are required to prevent people from losing jobs and incomes and companies from suffering bankruptcy, and to facilitate a sustainable recovery.
c. Use of available fiscal policy tools including higher spending and forgone revenues (e.g., through tax exemptions), public sector loans and equity injections, and loan guarantees. Fiscal support is also provided by "automatic stabilisers" – features of the tax and benefit system that stabilise incomes and consumption, such as progressive taxation and unemployment benefits.
d. Supporting enterprises, jobs and incomes through a number of measures such as providing various types of relief, including financial and tax relief, for enterprises.
e. Implement employment retention measures to provide incentives to employers to hold on to workers, even if a firm has to close or decrease its activity.
f. The crisis has drawn attention once again to the importance of ensuring universal access to social protection systems, including social protection floors, that provide comprehensive and adequate benefits meeting people's needs.
g. Strengthen occupational safety and health measures and promote the implementation of public health measures in workplaces.

A pre-condition for an economic revival package is the availability of resources or state's ability to mobilise funds through taxation, borrowing or other means. Kerala is facing the worst fiscal crisis in its history and has very little chance to mobilise additional funds for a revival package. In this context, we are not proposing a revival package.

IX. Conclusions and Recommendations

In the first phase of COVID-19, Kerala was able to contain the spread of the infection due to the effective measures taken. However, in the second phase (last week of April and May) the state reduced the number of testing of cases drastically, which was a wrong decision. There has been a continuous flow of Keralites from other states in India and also from abroad. The state government did not came up with a proper plan to address the health-related issues of returnee emigrants. It informed the union government that two lakh rooms for institutional quarantine of returnees are available, but hardly 20,000 were actually available. The current planning of infrastructure for COVID-19 treatment is highly insufficient to cater to a large number of cases. States such as Chhattisgarh, Odisha and Assam have managed the crisis equally well, or even better than Kerala, in the second phase. In the event of large-scale spread of COVID-19, the public sector hospitals and institutions do not have facilities to address the problem. A major error in the state policy is the non-participation of private sector hospitals and institutions in quarantining, testing and treating of COVID-19 patients. The policy of making the prevention of the spread of COVID-19 and its treatment the monopoly of public health institutions has been a colossal blunder.

In the backdrop of the pandemic and the resulting lockdown with huge impact on the life and livelihood of the people at large, and also the various sectors of the economy, the following are the suggestions and recommendation based on the study conducted:

1. Healthcare System

An efficient primary and preventive healthcare system is needed rather than the existing curative model. Increase in laboratory network and testing, improvement of health information system, utilisation of services of private health institutions in the prevention and treatment of COVID-19, enhancing the role of academic and research institutions, priority for skilled and efficient public health work force, engaging and communicating with communities are required. The urban local governments should give the highest priority for collection and disposal of solid waste, regulation of liquid waste, measures to prevent the spread of COVID-19, maintenance of environmental hygiene, implementation of programmes of immunisation, mosquito control, providing public toilets, control of stray dogs, etc. The LGIs may be assigned additional functions---taking preventive steps to contain the spread of COVID-19, providing relief to the people in the time of spread of infection, organising community kitchens and also providing other required measures with the co-operation of NGOs, voluntary organisations and resident associations.

2. Work Places

The following suggestions are proposed to address the problem of shift of activities from work place to home:

a) The electricity Board should take urgent steps to provide uninterrupted 24-hour supply of electricity with adequate voltage to all electrified households in Kerala

b) The Water Authority should take urgent steps to provide uninterrupted supply of water to all houses with water supply connection

c) The internet infrastructure should be expanded to enable all houses to get internet connection. The state government should take urgent steps with the public and private internet providers to expand such facilities. Banks and financial institutions should provide loans for purchasing computer, laptops and smart phones to the students/parents

d) House owners may be permitted to make minor alterations and construct additional rooms without the permission of GP, Municipalities, MCs (up to one or two rooms)

e) Banks, financial institutions of state, co-operative credit institutions, etc. should provide loans to those needy house owners to make the alterations of the houses

f) A COVID-19 reconstruction package should be formulated and implemented by the state government to address the above crucial issues.

3. Economy

The loss of GSDP is huge and the present crisis is likely to be transformed into depression in the near future. The state government should prepare an action plan to revive the economy and take urgent steps to revive each sector and sub sectors. It should effect substantial cut in its expenditure, including plan expenditure, to find resources for the revival package.

4. Employment

The employment structure is likely to witness an unprecedented change in the post-COVID-19 period. With the kind of degrees and other qualifications in higher general education sector becoming irrelevant, the state will have to prepare for a basic change in higher general education system.

It is suggested that all the migrant workers belonging to other states and working in Kerala should be asked to register in labour department (District, Taluk or sub offices) and should be issued an identity card.

In order to expand the activities of MGNREGS:

a) Immediately release payments pending under MGNREGS to the states, including to workers deemed to be at work
b) Effective and flexible implementation of MGNREGS, including increasing budgetary allocation, on-the-spot registration of migrant workers, increase in days of work per family from 100 to 150, option for smaller slots of work, flexible labour to material ratio within limits, immediate opening of worksites, and increase the wage rate
c) Empower Gram Panchayats to sanction work based on minimal documents, include new categories of work under MGNREGS, take action to release the unemployment allowance permitted under MGNREGS, roll out short-term employment programmes and implement 'One Nation One Ration Card' scheme.

Since nearly half of the returnee migrants, who are willing to work, will remain unemployed, the state government should prepare a package to address their problems. Further, in order to address the changes in labour market due to the return of migrant workers to their native states and incoming of Keralite workers from other states and abroad, and to generate more gainful employment a few suggestions are proposed. First, put in place a major project to replace migrant workers with gulf returnees. This project should have major components that include re-skilling or up-skilling, setting up counselling for gulf returnees, training and counselling for trade union workers at the grassroot levels and change the wage rate from high to medium rate. Second, developing a good App: Thozhil-Bandham App - that has two sections. One section can enable employers to specify their requirement of workers, the skills and the job description of the work, etc. The other section of the App should enable a worker to match his/her skills, his/her needs, etc. Third, develop and putting in place a similar App for migrant workers-to be named as Shramik Bandhu. Fourth, put in place a major policy initiative to promote self-employment among gulf returnees, and locally among the youngsters and the not so young in the state. Policy of the State Government should be to make a self-employment venture of a gulf returnee, a youngster in the state, or for that matter of an older entrepreneur easy to start up and run for three years (as discussed in detail in this study).

5. Sectors of the Economy

Agriculture

a. Compensation to farmers for the loss of crops due to flood and natural calamities
b. Moratorium for all loans availed by farmers; c) Introduction of a loan waiver scheme
c. Promotion of rural agricultural markets; e) promotion of marketing through several ways
d. Prevention of disruption in supply chain and promotion of lease and contract farming.
e. Encourage the consumption of indigenous crops like cassava, yams, jackfruit etc.
f. Create a registry of all farmers, self-employed farmers and agricultural labourers who get their major source of income from agriculture in Krishi Bhavan of each Grama Panchayat.

Fisheries

a. Sell fish through shops having freezers;
b. Prepare the fish dressing through sea food companies
c. Provide accommodation and other facilities for fishing workers from other states
d. Produce fish sauce for export and promote dry fish
e. Declare fish farming similar to agro farming for availing benefits from government, and promote fish farming in back waters, ponds, fish farms, etc.
f. All the fishermen who engage as full time fishermen, self-employed fishermen and casual labourers in fishing sector (marine and inland) should be asked to register

with fisheries department (local offices). The subsidies and other financial support should be distributed to the registered fishermen.

MSME

a. Implement a payroll protection programme
b. Enhance access to capital
c. Announce and implement a six-month moratorium on loan repayment and waiver of interest
d. Provide special assistance to artisans, weavers and those engaged in handloom and cottage industries
e. Declare a tax holiday for six months for MSMEs
f. Provide assistance to bring back migrant workers to industrial clusters
g. Rationalise GST rates and simplify the GST structure
h. Implement revival measures to boost MSMEs in the time of crisis.

Information technology (IT)

a. Rent waiver, which was announced by the state government, may be extended to all the IT companies working in IT Parks owned by the government. The concession may be given for six months starting from April 2020.
b. The request of the IT companies to expedite the payment of pending arrears of state government and GST refunds may be accepted.
c. The state may take steps to maintain good internet connectivity and uninterrupted power to keep the work from home.
d. As most of the IT units comes under MSMEs, they can also avail the assistance, support for workers, credit support, other measures, etc. announced in the economic revival package of central government.

Construction

a. Take steps to remove the disruptions in the production and transport of construction materials such as bricks, m-sand, metal, cement, steel and other items.
b. The system of issue of permits and the rules relating to it for constructing houses, flats and other categories of building should be amended to ensure quick issue of permits (within a time limit).

c. A single window system of permit for houses and other buildings, except flats and big non-residential buildings, should be introduced. The current practice of approaching a number of offices for a building permit should be stopped. For flats and other big buildings, which require the permission of more than one department, a committee comprising representatives all the relevant departments are formed in each local government to scrutinise the applications and give approval for permit.
d. Master plan of the municipalities and MCs should be prepared specifying the use of land for various purposes with current survey numbers.
e. The practice of indefinite freezing of land for acquisition for public purposes should be stopped.
f. The assessment and collection of property tax and building tax (one-time tax) collected by revenue department should be entrusted to local governments, instead of collection by multiple authorities.
g. The unnecessary interventions of all trade unions in construction sector (head load workers and others) should be prohibited. A builder, big or small, shall give full freedom to select a worker of his choice for any type of work including construction, loading and unloading of materials or other activities.

Travel and tourism

a) Convert resorts and hotels temporarily to paid quarantine centres
b) Avoid buffets in hotels
c) Pay the regular employees in tourist units half of the pay till revival of tourism business by the owners
d) Provide more time for repayment of loans and interest to the borrowed funds from banks and financial institutions, give tax concessions and allow more time to pay arrears of tax
e) Change the focus from luxury tourism meant for rich to affordable tourism meant for middle class domestic tourists to promote Kerala as a health tourism hub and attract foreign tourists.

Entertainment

a) The government needs to step in to save the entire entertainment industry from the current crisis.
b) Government have to waive the fixed charges, as they are not hopeful about to see theatres in full occupancy.

c) The Indian Association of Amusement Parks and Industries (IAAPI) has already submitted the standard operating procedures (SOPs) to be followed to the Union Home and Health ministries, Prime Minister's Office (PMO), and the chief ministers of various states.
d) Gatherings can be easily controlled in the amusement parks and it is also possible to maintain social distancing.
e) Even the water parks are safe as chemicals are used to kill any kind of virus.
f) Sanitisation of employees and all individual units inside the parks will be undertaken with considerable vigil.
g) If the parks are allowed to reopen, at least they will generate some revenue despite low footfalls.
h) With no revenue, the park managements are giving salaries to the staff. If the situation remains unabated, they will not be able to manage.

6. Fiscal Situation

a) Declare a plan holiday for one year and divert the available funds for the economic revival package and measures to contain the spread of COVID-19 and related public health activities.
b) The government should take urgent steps to curtail the fiscal extravagance of all the government departments, LGs, autonomous bodies, public sector undertakings and other state-funded institutions.
c) In the context of COVID-19 and shift in instruction from educational institutions to homes (online teaching), defer all proposals to start new educational institutions, new batches and creation of new posts in public and private-aided sector during the academic year 2020-21.
d) Reduce the government sector pay roll burden by abolishing unnecessary establishments and surplus staff.
e) The government should publish a white paper presenting the facts on the loss on revenue due to COVID-19 crisis in the state and the fiscal situation in the post COVID 19 period.
f) A public debate on the grim fiscal situation, the role of state in dealing the COVID-19 crisis and changes in the strategy and approach are needed.

Bibliography

Census of India (2011), *Provisional Population Totals, Paper 2, Volume 1 of 2011, Rural-Urban Distribution Kerala Series,* 33, Government of India, New Delhi.

Comptroller and Audit General of India (CAG) (2016), *Report of CAG on State Finances for the Year Ended March 2015 and March 2017*, Government of India, New Delhi.

Comptroller and Audit General of India (CAG) (2018), *Finance Accounts 2017-18 Volume I & II.* Government of India, New Delhi.

Department of Economics and Statistics (DES) (2009). *Statics for Planning 2009* , Government of Kerala, Thiruvananthapuram.

Gopinath, Gita (2020), "The Great Lockdown: Worst Economic Downturn Since the Great Depression", IMFBlog, 14 April 2020, International Monetary Fund (IMF), available at: https://blogs.imf.org/2020/04/14/the-great-lockdown-worst-economic-downturn-since-the-great-depression/

Government of Kerala (2020) *Budget in Brief 2020-21*, Government of Kerala, Thiruvananthapuram.

International Labour Organisation (ILO) (2020). *ILO Monitor: COVID-19 and the World of Work. Fourth edition, Updated Estimates and Analysis*, 27 May 2020, available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/ briefingnote/wcms_745963.pdf

Kerala State Planning Board (KSPB) (2014), *Perspective Plan 2030 – Kerala Vol I to IV*, Government of Kerala, Thiruvananthapuram.

Kerala State Planning Board (KSPB) (2020), *Economic Review 2019, Volume I & II*, Government of Kerala, Thiruvananthapuram.

National Statistical Office (NSO) (2019), *Annual Report – Periodic Labour Force Survey (PLFS), July 2017--June 2018*, New Delhi.

Prakash, B. A (2020), *Local Finance, Fiscal Decentralisation and Decentralised Planning: A Kerala Experience*, Sage Publications, New Delhi.

Prakash, B. A and Alwin, Jerry (ed.) (2018), *Kerala's Economic Development: Emerging Issues and Challenges*. Sage Publications, New Delhi.

Prakash, B. A (2013), "Return Emigration of Indian Emigrant Workers from the West Asia", *Report on a Survey of Return Emigrants in Kerala,* Rajiv Gandhi Institute of Development Studies (RGIDS), Thiruvananthapuram, and Ministry of Overseas Indian Affairs, New Delhi.

Prakash, B. A, Krishnakumar, P. Niyathi, N. and Nair, R P (2013), "Effectiveness of Service Delivery in Panchayat Raj Institutions", *Report on a Survey of Grama Panchayats in Kerala*, Rajiv Gandhi Institute of Development Studies (RGIDS), Thiruvananthapuram, and National Institute of Rural Development, Hyderabad.

Rajan, Irudaya S and Zachariah, K C (2019), "Emigration and Remittances: New Evidences from the Kerala Migration Survey, 2018", *Working Paper* 483, Centre for Development Studies, Thiruvananthapuram.

World Bank (2020), "Global Economic Prospects: Analytical Chapters", *A World bank Group Flagship Report*, June 2020, International Bank for Reconstruction and Development/The World Bank, Washington.

LIST OF PERSONS CONSULTED

1. AK Antony - Former Chief Minister
2. Oommen Chandy-Former Chief Minister
3. KC Venugopal-Member of Parliament &Former State Minister-Tourism)
4. Mullappally Ramachandran (Former Minister of State, Home)
5. MK Raghavan-Member of Parliament
6. VD Satheeshan-Member of Legislative Assembly, Kerala
7. CP John-Former Member, Planning Board
8. Prof. Mary George- Professor, Rajiv Gandhi Institute of Development Studies
9. Dr. Nagarajan Naidu, Former HOD, Department of Economics, Kerala University
10. Shaji Zachria, Ex-DGM, NABARD
11. Pranav Kumar Suresh -Founder of Start-up Village
12. Raghu Chandran Nair-President TCCI& Vice President, CREDAI
13. Renjith Balan, Former Director, Technopark
14. T.Biju Kumar, Former General Secretary, KSSAI
15. P.Antony Thomas, Global Strategy Consultant
16. Ujjwal Babu, Wholesale Distributor-FMCG