

Kerala -Potentials for economic and social development

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Abstract

As the mile stone to developed India, the concept of self-sustainability of Indian states have more relevance. The global scenario as especially post covid situation, generally countries promoting the localization of jobs for sustainable economy. In Indian scenario, the development as based on the agricultural and industrial growth. Due to competitive market, more value added and customised products, and its market potentials leads to the Industrial growth.

This paper focus on identifying development potentials in Kerala in the present scenario, as especially in Industry, agriculture and tourism areas. This paper discusses about the participation of various stake holders and agencies as Kudumbasree and various government agencies for the development of various sectors. All these efforts may lead to the path of economic growth of the state.

The paper suggests for further improvement opportunities and the probable ways for agriculture development, development with value added agriculture products, promotion of tourism and for development of Industry. Also provides certain inputs as to effectively manage the natural calamities for a stable economy.

Keywords: *Economy, MSME, Kudumbasree, Industry*

Introduction

The globalisation of economy and the liberalisation policy of India, has increased the direct foreign investments. India as considered to have good availability of labour force and with government policies as basic infrastructure development, the industrial scenario is improving. In Kerala with the presence of various suitable environment also, certain challenges are facing in the path of industrial and economical growth.

The Kerala Economical review 2023, Volume 1 in January 2024 includes details on performance, policies and programmes of various departments and the issues to be addressed. The structure of the economy and workforce culture in Kerala is perceptibly different from the rest of India.

The inputs of this paper as from ‘The Economical review 2023, Volume 1’ from various chapters as 3 Agriculture and Allied sectors as 3.1 Agriculture , 3.2 Cooperatives in Kerala 3.7 Environment, 3.8 Food Security and Public Distribution System, Chapter 4 as Manufacturing sector as 4.1 Kerala’s Industrialisation 4.2 Manufacturing Sector ,4.3 Public Sector Undertakings, 4.4 Micro Small and Medium Enterprises (MSMEs), 4.5 Food Processing, and 5.3 tourism. Also inputs from certain research papers associated with Kerala tourism, and about Kudumbasree units. Based on the inputs, certain points for practical implementation of improvement programmes are suggested in this paper.

2. Kerala – Sectoral review of certain sectors.

2.1. Agriculture and allied sectors:

The agriculture sector influences on employment generation, food security, supply of raw materials and livelihood generation and imparts resilience to the rural economy. The agriculture sector continues to be the primary source of livelihood in the State. The diverse agro-climatic conditions prevailing in the State favour the cultivation of a variety of crops, including plantation crops, cash crops, spices and food crops. Poor annual growth rate in the sector has been one of the challenges in the last decade. The State is on the path of group activities in production, value addition, and services through collectives of farmers. The economic review as suggest as production and marketing must be restructured, and interventions in marketing must use the strengths of the State’s cooperative sector. A strong crop specific value chain needs to be developed to strengthen agriculture and farmers income. The economic review suggests as the importance of soil test based management practises in

crop production and classification of soils based on its physical, chemical properties. The marketing of agricultural commodities is facilitated through a network of whole and retail markets functioning in rural and urban areas. The development of an organised market information system and market intelligence mechanism as well as an efficient supply chain for marketing of agricultural commodities especially the perishables are essential for strengthening the agricultural marketing scenario of the State. (Economic Review, 2023, page 77).

Kerala State Agricultural Mechanisation Mission constituted in the State in 2018, functions with the objective of ensuring proper coordination and monitoring of the activities of various services providers. Major Achievements of Department of Agriculture in 2022-23 was the introduction of farm plan-based approach as a strategy for the holistic development of individual farms to improve the income of the farmer and provide livelihood security on a long term perspective.

The Kerala Agro Business Company (KABCO) for marketing and value addition was established to function as an independent, professionally managed Special Purpose Vehicle to establish market linkage to farmers, facilitate transformation of agriculture to agri-business, promote value addition and to perform other related functions.

2.2. Cooperatives in Kerala — Cooperatives have a long term vision for sustainable growth, social development and environmental responsibility through self-help and empowerment, reinvesting in their communities and showing concern for the well-being of people. With 98% coverage in rural India, cooperatives are the mainstay of rural economy ensuring sustainable livelihoods and income for people in diverse sectors including agriculture, dairy, forestry, fisheries, credit and banking. Cooperatives in Kerala play a critical role in mobilising people and pooling their resources to meet the common needs of members and thereby the larger society. Through its wide reach, cooperatives have played a vital role in the economic development, particularly for the development of the weaker and marginalised people in rural areas. The State has an extensive network of co-operatives engaged in various activities, including agricultural credit, the public distribution system, distribution of agricultural commodities, health, education including professional education, housing, agro processing, development of scheduled caste and scheduled tribe, women's development and fisheries. The cooperative movement has to establish itself as an organisational form of the future, to attract and involve youth in large numbers. The cooperative sector should infuse

more technology and funds for new enterprises, including start-ups. (Economic Review , 2023, page 99).

2.3. Environment Climate change - The climate change as major threat to the environment, has a direct impact on the wellbeing of people around the world. The report ‘Global forest sector outlook 2050’ warns that threats to climate, biodiversity and healthy environment are mainly caused by the excessive use of non-renewable material. The World Bank Report, ‘Nature’s frontiers: achieving sustainability, efficiency, and prosperity with natural capital’ indicates, where and how nations can utilise natural resources more efficiently to achieve prosperity without damaging the environment or exceeding the limits of natural resources. Climate change poses a serious threat to Kerala’s environment and has become an agenda for development planning in recent years. Haritha Keralam mission was launched in December 2016 with the objective of ensuring hygiene, water abundance, water security, and production of safe food. Leadership is to be provided to ensure people’s participation and social inclusion for creating ‘Haritha Keralam’. It has three sub-missions, namely, (i) Sanitation and waste management, (ii) Water conservation and (iii) Agricultural development. The Mission is also involved in the preparation of a water budget, which is based on a thorough analysis of available water resources.

Energy management: Energy efficiency programs like Angan Jyothi, Chaithanyam, and Urjjayan significantly contributed to reducing carbon emissions. The establishment of clean energy tech, innovation and business incubation centre played a pivotal role in implementing the energy conservation. About 83 tourist destinations are being converted into green tourism destinations. Other major initiatives as Net Zero Carbon Efforts Under the Nava Keralam Karma Padhathi. The Haritha Keralam Mission is spearheading the “Net Zero Carbon Keralam” campaign, aimed at making Kerala carbon-neutral by 2050. This initiative focuses on reducing greenhouse gas emissions and achieving a carbon balance.

Tourist centres and their access routes need to adhere to the green code of conduct, as selected tourist destinations in Kerala into model green tourism destinations, focusing on environmental sustainability. It is through diverse and innovative projects, activities, and campaigns undertaken under these three sub-missions. Haritha Keralam Mission has been able to bring about positive and sustainable changes in agriculture and allied sectors, sanitation and waste management, and water conservation. It has been able to harness the activities of various agencies working in these sectors. (Economic Review , 2023 , page 153)

2.4. Food Security and Public Distribution System

The Public Distribution System in Kerala has one of the most effective and best run public distribution systems in India and has marked pioneering achievements in implementing the Universal Rationing System. The Department of Food and Civil Supplies discharges the important responsibilities of ensuring the availability of essential commodities through the network of PDS outlets, enforcing market discipline, promoting consumer awareness, and protecting their interests. (Economic Review, 2023, page 165)

2.5 Manufacturing sectors:

The industrial and manufacturing sector helps in promoting domestic production, enhancing exports, creating employment and generating income, as all of which are significant for all round economic development. The industrial sector is significant for the Indian economy, both in terms of its contribution to gross value added and employment generation. Over the years, Kerala has achieved substantial progress with respect to modernising and diversifying its industrial sector. This has resulted in the development of a vibrant industrial ecosystem in the State. The manufacturing sector in Kerala is relatively small in size.

The State strongly believes in having sound policy backing for efforts to develop industries in the State. Among others, the policy has initiatives and incentives for fostering entrepreneurship, developing enabling infrastructure, developing high tech industries, building futuristic employment skillsets for employment, nurturing business environment, creating sectoral ecosystem and enhancing ‘Kerala’ brand equity. Kerala Industrial Infrastructure Development (KINFRA) which has come up with a number of innovative schemes to facilitate industrial investment and ensure Ease of Doing Business.

Like elsewhere around the world, industries in India, especially manufacturing in particular are looked upon with great interest due to their potential to create jobs, generate income, make available goods for consumption and drive economic growth. Several factors including policy changes (like opening up to competition), changes in global supply chains, and advances in technology have facilitated India to develop greater engagements with international markets.

Digital transformation and use of latest technology are important to gain a competitive edge in the highly competitive manufacturing sector. The manufacturing sector in India is constantly moving towards technology upgradation, automation and process driven

manufacturing; which is expected to enhance efficiency and amplify production from the manufacturing sector.

PSUs in Kerala play the role of facilitators for the promotion of entrepreneurship, especially high technology entrepreneurship. Board for Public Sector Transformation (BPT) is functioning under the Industries Department, as a responsible agency for undertaking reform initiatives in State PSUs. Major responsibilities of the agency include performance planning and monitoring of PSUs, enterprise reconstruction, capacity building, and governance advisory support to State PSUs, industrial Promotion and Investment Facilitation.

Centre for Management Development (CMD) is an autonomous institution sponsored by the Government of Kerala and attached to the Department of Industries and Commerce, as a professional registered society with the objective of providing professional management support to public enterprises in the State. It provides support through consultancy, project management, Monitoring & Evaluation, Human Resource Management, Training, Education & Research and Public Private partnership (PPPs). Facilitation of industrial investment especially from the private sector, adoption of new technologies, application of research, continuous upskilling, use of strength in human resource and encouragement to innovation, are significant components of Kerala's strategy for industrial progress. (Economic Review, 2023, page 179)

2.6 Micro, Small & Medium Enterprises (MSMEs)

MSME are an essential force that drives entrepreneurial expansion through their innovative business practices. In India, MSME's are playing a critical role in providing large-scale employment opportunities. The Government of Kerala recognises the immense potential of this sector and has assigned it a high priority. MSME's also contributing significantly to the industrialisation of rural and backward areas, thereby reducing regional imbalances and ensuring a more equitable distribution of national income and wealth.

There is a need to nurture and support innovative business ideas and shape them into enterprises and create a favourable ecosystem for MSMEs as with support from entrepreneurial development and incubation centres. The State as given for the development of Common Facility Centres for specific industries, regions and clusters to involve steps for scaling up of enterprises and enhanced use of new technologies. It is enabled by knowledge and information flow, as to greater support for a culture of entrepreneurship, development of

new models of financing and close linkage with the education research (Economic Review, 2023 page 195).

2.7. Food processing

The food processing sector plays a crucial role in establishing strong linkages between the industry and the agriculture sector. It facilitates collaboration and integration, benefitting both sectors and boosting the overall agricultural value chain. A well-developed food processing sector with higher-level of processing helps in the reduction of wastage, improves value addition, promotes crop diversification, ensures better return to the farmers, promotes employment, as well as increases export earnings. This sector is also capable of addressing critical issues of food security, food inflation and providing wholesome, nutritious food to the masses. An abundant supply of raw materials, an increase in demand for food products and incentives offered by the Government of India have impacted food processing sector positively. The Food Processing Sector has also emerged as an important segment of the Indian economy in terms of its contribution to GDP, employment and investment. Food products industry employs largest number of persons as compared to other industries while generating the second highest output level as in other industries.

Major challenges in food processing sector as supply chain infra gap, lack of primary processing, lack of storage and distribution facilities, supply chain institutional gap, procurement dependence on market, inadequate link between production and processing, seasonality of operations and low capacity utilisation. Also inadequate focus on quality and safety standards, lack of product development and innovation, lack of access to credit and financing, inadequate storage and transport facilities.

The majority of businesses in this sector are small and micro units that lack the financial resources as needed to expand or invest in essential infrastructure. To overcome these challenges action required, including targeted incentives, infrastructure development, and investment in processing capacity. This will necessitate significant investment in various components of the supply chain, such as grading and packing centres, controlled atmosphere facilities, reefer vans, cold storage for perishable cargo at ports/ airports/ railway stations, testing laboratories, and other supporting infrastructure and services such as research and development, imparting skill training, and marketing support. There is a huge potential for exporting processed food items, as well as a significant demand for them in the domestic market. To realise this potential, it is important to connect agricultural production with the

market by bringing together farmers, processors, and retailers. This can be achieved through proper marketing strategies, the adoption of the latest technologies, and ensuring a steady flow of raw materials from farmers at stable prices that meet specific quality standards. By implementing these measures, we can expect to see better development of the agriculture sector and an increase in farmers' incomes. (Economic Review, 2023, page 205)

2.8 Tourism

Tourism creates employment and connects a society to the rest of the world and also promote ecologically sustainable growth of local communities, traditional industries, and interconnections with other spheres of development. Tourism in India has significant potential with the rich cultural and historical heritage, variety in ecology terrains and large employment generator besides being a large source of foreign exchange for the country. The impact of growth of tourism in Indian economy as spreading benefits across the country and providing employment and entrepreneurial opportunities to youth, women, marginalised sections of the society. Kerala is an internationally recognised tourist destination and one of India's most beautiful states with beaches, backwaters, hill stations, forests and wildlife.

Kerala Tourism is trying to attract the attention of national, international as well as the domestic markets with different strategies and currently exploiting the potential of Information Communication Technology in Marketing Tourism. The marketing activities of Kerala Tourism include international and national promotional campaigns, branding, partnerships and collaterals, and sponsorship for marketing events.

Responsible Tourism (RT) as major aims as making tourism a tool for the development of village and local communities, eradicating poverty and giving emphasis to women empowerment. The mission aspires to provide an additional income and a better livelihood to farmers, traditional artisans, and marginalised people along with creating a social and environmental equilibrium. Kerala Tourism should improve tourist centres, bring new facilities and products, ensure better livelihood and income for local people and maintain the natural and cultural heritage of Kerala, to bring the State to a world-class-level tourist destination. Tourism and hospitality industries need to embrace a customer-centric product management approach, sustainable tourism practices, technological integration, adaptability and resilience to changing trends. Comprehensive education system to be developed to address the gap in tourism skill development. State should prepare master Plan to practice economic, sociocultural and environmental sustainability in tourism. Efforts to be taken to

create environment for investment in tourism by the private sector. Kerala should focus on improved infrastructure, including better connectivity between destinations, transportation, and accommodation options in less visited areas. (Economic Review, 2023, page 271)

Kerala state is well known especially for its ecotourism projects and vast spread backwaters. The culture and traditions here is unique, along with varied demography, which made Kerala one of the most selected tourism destinations in the world. Beautiful beaches, sanctuaries and forests, hill stations, art forms, festivals and rituals, resorts, the inland waterbodies all as memorable holiday experience.

Tourism is the backbone of the economy of the state since 1980s and has recently widened access through implication of responsible and eco- tourism projects. The rich heritage, rich natural topology, backwaters, mountains and terrains, food and dressing style, art and culture, basic amenities, statistical indices as promotes tourism in the state. Sustainable tourism practices to be promoted and initiated in the state as that covers all aspects of tourism along with concern and protection of nature and environment. This initiates activities to preserve the environment and lead to environmentally conscious behaviour. It covers concern for economic, socio cultural and environmental issues as improving tourist's experiences with concern for environment. Sustainable tourism is based on the concept that the community living around the destination are best suited to protect it. Local people can run the businesses in the premises and they are responsible for promoting awareness and conservation to protect the environment through planning, development and management.

Sustainable tourism advocates, providing opportunities for local hosts to start businesses and work as guides and cleaning staffs in various tourist locations. It brings economic viability to our nation and state without harming environment by minimizing the pollution of air, water, land and the less generation of waste by tourism enterprises and visitors. Sustainable tourism model delivers quality tourism and delight in visitors. It provides satisfying, safe and mind fulfilling experience for all visitors without discrimination on the basis of language, race, gender, disability or in other ways. (George Sebastian) (2021)

Home stay as an innovative approach to manage sustainable tourism objectives as essentially a potential tool and the increased level of process control can result in providing environment friendly, sustainable model of development with consistency and improvements. The home stays add authentic socio-cultural richness to the tourists' experience as the environment friendly practices are vital for a homestay organization in Kerala. Economic growth with

protection of the environment is a challenge, which compelled to achieve development with focusing on the sustainable tourism. In Kerala, tourists mainly come to enjoy the exotic beaches, breathtaking hill stations, enchanting waterfalls, lagoons, houseboats, traditional festivals and feasts. The study found as need of training and development of a system in sustainable tourism. The development of a Sustainable tourism, through homestay system can be a valuable teambuilding exercise for any community. It can lead to improved education and awareness of staff towards sustainable tourism goals in the state. There is a positive relationship between sustainable tourism practices variables and homestay types. (Sushil Kumar Mishra & Sreekanth T. Nair) (2019)

Tourism development of Kerala describes the context and framework, as assessing destination attractiveness of the state. As an emerging tourism destination in a developing country, the strength as the importance of certain destination attraction elements like climate, backwaters, cuisine, and rest and relaxation environments, and local culture. Destination based promotional activities can be further reinforced as destination attractiveness gaps observed include beaches, art forms, and heritage attractions. These points need further emphasis on area specific development efforts as to enhance the tourists experience with these attractions.

The destination attractiveness assessment should done for domestic tourists visiting Kerala as this would help in identifying areas where can gain more customers with less spending. Tourism in Kerala has been thriving for some time, and the rate of change in terms of visitation and the amount spent is higher than any other state in India. The contrasting industrial backwardness turned out to be a perfect setting for promoting Kerala as an unspoiled destination with exotic characteristics. It gives employment to a lot of people and at the same time is an important reflection of the state.(Manoj Edward and Babu P. George) (2008)

2.9. Economic Participation of Women through Kudumbashree

Kudumbasree as a community organisation of Neighbourhood Groups (NHGs) of women. As setup in 1998, functioning under the Local Self Government Department, as the State Poverty Eradication Mission. Starting initially with thrift and loan activities, the NHGs focused on empowering women through income generation activities and micro-credit, besides engaging in a range of other activities such as health, nutrition, agriculture, and social development. Kudumbashree has played an important role with regard to financial inclusion of poor

women. It has enhanced the financial status of less privileged women through its thrift and credit programmes. (Economic Review, 2023)

‘Kudumbasree’ promoting the self-help group model of empowerment through woman entrepreneurship in Kerala. It aims to create human resources within the productive sector and to sustain for the further development process. Multi-dimensional approach led the government to form a female community intended poverty reduction project in the state, that resulted to the birth of “Kudumbashree”. The mission has set as self-help groups (SHG) model of women empowerment to encourage the wide range of female entrepreneurial activities (Dr. Ashutosh Kumar & Jasheena. C.J)

Kudumbasree empowers women to strengthen the economic backward people in village areas. The peculiar situation in Kerala is that the farmers increasingly move away from crop production and other agricultural activities for better paid jobs in the non-agricultural sectors. Kudumbasree aims at improving the productivity of women farmer groups. As Majority of these women are landless, the land is taken on lease for cultivation. The decline in farming hampers the food security of the state which is otherwise largely dependent on the neighbouring states for food produce. The promotion of agriculture by using self-helped groups is successful and with contribution from government it can make even better.(Amrit Kiran et.al.) (2018).

3. Recommendations :

Kerala has to adopt the vision for self sustainability, with using our resources by better planning and optimised usage of resources.

The financial status of Kerala is in alarming stage as the gap in revenue generation and expenses are increasing. For economic development, the simple formula is as to increase the revenue with the optimised use of resources and to control all outflows of money. The reports from media mentions that lakhs of migrant workers are engaged in the construction and in other service activities in Kerala and they are sending crores in every month to outside the states . Same time human resources in Kerala is under utilised. Some of the social factors are preventing Keralites from engaging certain hard core jobs.

3.1. Agriculture development with value added products, and supply chain improvement.

As mentioned in literature on Economic survey 2024 on Agriculture, strong crop specific value chain needs to be developed to strengthen agriculture and to improve farmers income. With the network of wholesale and retail markets functioning in rural and urban areas, the state has an extensive network of co-operatives engaged in various activities, including agricultural credit, the public distribution system, and distribution of agricultural commodities.

Regarding MSME, the State as given for the development of Common Facility Centers for specific industries, regions and clusters. The enhanced use of new technologies as enabled by knowledge and information flow, greater support for a culture of entrepreneurship, development of new models of financing, and close linkage with the education research etc as steps for scaling up of enterprises.

The challenges in food processing sector as includes as supply chain infra gap, lack of primary processing, storage and distribution facilities, supply chain institutional gap, procurement dependence on market, and inadequate link between production and processing, seasonality of operations and low capacity utilization. Also the factors as inadequate focus on quality and safety standards, lack of product development and innovation, lack of access to credit and financing, and inadequate storage and transport facilities.

Women empowerment as aims to create human resources within the productive sector and to sustain for the further development process.

Kudumbasree empowers women to strengthen the economic backward people in village areas as aims at improving the productivity of women farmer groups. Potential area is in agriculture development, as Kerala has plenty of fertile land which is at present not effectively utilised. This is due to high labour costs, non-availability of labour, as the issues in procurement of crops and marketing.

Group farming is an option for maximising the usage of land resources as , study have to be conducted for effective use of fertile land as by identifying proper crops for cultivation in each areas . Certain states as achieving high agriculture production as Eg. Andhra Pradesh practicing three crops per year, especially in water available areas.

Cooperative movements may be successful in group farming as by creating the common platform or groups of land owners, interested parties on agriculture and procurement agencies. Mechanization can be adopted for farming, cropping, processing of agriculture products. The value added products as example from rice, coconut etc. can be developed. The procurement of crops and processing can be done through the agencies as eg. Kudumbasree units. The marketing of food products can be done through state public distribution systems and association with canteens and other public food distribution centres. The seasonal products can be processed through the units and the marketing can also be done through the online platforms as potential for global markets. If it is successfully implemented, the human resources will be engaged and the revenue to their families will be improved. Presently Kerala procuring food grains and vegetables from other states. Government as in local body level can provide collection and storage centres with freezing storages facility to support farmers and the procurement agencies.. Also government and agencies can support the groups with periodical training on effective food processing, quality standards maintaining and the adoption of advanced technologies. Government of Sikkim has successfully implemented cooperative system in collection, processing and distribution of agriculture products as support to farmers.

Other potential area for implementation as promoting the genuine organic farming and promoting the products. If this can attain the trust in market, more income can be generated as value added products. Now the society have more awareness and attitude towards the organic farming and its products.

3.2 Tourism:

As you are aware, the tourism industry promising potential in the State with its world renowned brand, diverse products and presence of local entrepreneurs. Through Responsible Tourism (RT,) as making tourism as a tool for the development of village and local communities, can eradicate poverty and can emphasis to women empowerment. Scope for improved tourist centres, facilities and products, infrastructure, including better connectivity between destinations, transportation, and accommodation options in less visited areas, can ensure better livelihood and income for local people including farmers, traditional artisans, and marginalised people.

Through Sustainable tourism as with innovative approach of home stay, local people can run the businesses in the premises as it brings economic viability to our nation and state without

harming environment. Improved education and awareness of staff towards sustainable tourism goals is a valuable teambuilding exercise. Through destination attractiveness assessment as for domestic tourists can gain more customers with less spending.

Hence the important suggestions are the following, the tourism sector to be encouraged by local groups as Kudumbasree units, as at present mainly corporates are engaged in this sector. The local hosts can start the businesses and work as guides and sustainable tourism through homestay system can be a valuable team building to the community.

The kudumbasree units can promote tourism, as to target all class of people especially domestic tourists. It can be promoted through normal accommodation facilities including home stays and with Kerala's traditional food, as it should be affordable to people will all economy classes. Identification local tourist spots, pilgrim centres and arrangement for visiting the premises with economical transportation arrangements will be a good opportunity for attracting all economy class of people especially from other states. In Sabarimala season in Kerala, a good group of families are engaged in providing food and facilities in the route and this method can be adopted in year wise in all potential tourist spot areas. The promotional activities of these schemes and opportunities, to be done with good advertisement in country and in outside. These economic packages , may attract more tourists and it will lead to the economic development of society and the state.

3.3. Development of Infrastructure, Public sectors:

The performance of public sectors to be improved as with modernisation of technology and with updated management practices, The lean concepts implementation as eliminating all types of wastes , and to adopt the world class manufacturing practices, will lead to optimized use of all resources and lead to competitive advantage of their products and services. (S.M Sundara Raju (2001).

Public sector as Kerala state electricity board have the scope for using all small hydal projects which have reduced impact on environment and the power distribution can be decentralised. Also the non conventional power sources as solar power etc, as at present improving stage, can be maximised. The distribution can be monitored in microlevel to control the distribution loss. For safety and to use the scope of maintenance cost reduction, the overhead lines can be changed to underground cables in stage by stage in all possible areas.

The public transportation system is in big crisis as facing lot of issues. The scientific planning of routes as routes to be optimised by using the data on occupancy in each route with time. By using green energy, the fuel costs and carbon emission can be reduced. The minibus concept can be engaged in low occupancy routes. The individual bus wise monitoring can be done to monitor the life of spares to assure the efficient usage. The flexible planning of routes based on the customer volume and requirements can be done in depot level.

The waste disposal is a challenge to the society as proper collection, disposal systems to be adopted. In other states especially in Indore in Madhya Pradesh and in countries like Singapore, the plastic waste are collected and burned in proper way and generating power. In Kerala, these plants can be established in district or local level and scientific collection, storage, processing system can be adopted and the heat generated through incineration can be converted to the produce as electricity. Public private partnership option can also be adopted.

Similarly, the biological waste can be converted to bio fertilizers in local wise which leads to the environment friendly fertilizers.

3.4. Calamities and social issues:

Kerala, as due to the land structure, facing big threat of land slides and floods. By using the survey data, the potential affecting people in land slides area can provide housing in safe areas, as even in the risk period they can relocate to reduce the calamities. Similarly the local bodies with the participation of people in ward wise can do a survey especially before the monsoon season, as to identify the potential risks as tree falls, areas of potential flood and landslides, as to alert the people and to take preventive measures.

Also the data on the members in each family to be updated with support from local body members as each family the aged persons, disabled persons, differently abled persons details to be make available to the local people. As in case of any emergency, special attention can be given to the concerned. Kerala had the past experience as in 2018 flood situation, in certain areas as no body aware of the occupants details in neighbour houses.

The data to be collected from each family for improving the social welfare as for their physical and mental health improvements. The physical facility as house, good toilets, availability good water, waste disposal systems ,etc as to give more attention. Similarly, the members details as of any persons with health issues, dialysis persons, persons with mental depression, liquor and drug addicted people etc to be collected. The local bodies with the

support of community, lot of support can be provided for their survival. Presently the suicide incidents are reporting in higher level especially due to the above mentioned social issues. Some action plan with the support of community can be implemented.

4. Conclusion :

In this paper certain potentials for economic and social development are mentioned, based on the inputs from Kerala economic review and other certain research papers. The strength of Kerala includes the good natural resources including rivers and fertile lands, beautiful state with beaches, backwaters, hill stations, forests and wildlife, administrative systems as well established public distribution system, strong women empowerment groups as including Kudumbasree units, and cooperative movements etc. Responsible Tourism (RT) is an opportunity for the development of village and local communities. At present the economic situation in Kerala is alarming, as steps to be taken for revenue generation in the state and to give opportunity for the creative engagement of human resources. The potential opportunities as includes as to improve the agriculture production with group farming, development of more food processing units as to produce value added products, and to identify the marketing opportunities with the involvement of supply chain systems. Also there are tourism development opportunities as in all local tourism spots, pilgrim centres etc, with the adoption of responsible tourism concept, as potential for growth with active involvement of women empowerment groups including Kudumbasree units. The potential for efficiency improvement of public sectors, and for clean Kerala concept, the processing of the wastes in local level, as opportunities for conversion of waste to value added products are mentioned. A scientific approach for efficiently manage the natural calamities , with the use of past data and experience also briefly discussed. The above mentioned points are certain indications as it may lead to overall economic and social development of the state. Considering the present economic and social situation in Kerala certain actions are essential for the implementation of these aspects suitable for the overall development of the state.

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