

## **New studies on Kerala**

Young Scholars' Forum, GIFT

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### **Economics**

#### **Scopus Indexed**

Krishna, N. G., Alam, S., Prakash, S., Yadav, K., Ahmad, S., & Ojha, A. (2024). Understanding the spatio-temporal variation of urbanisation in Kerala, India. *GeoJournal*, 89(4), 126.

Urbanisation is indeed a global trend that is significantly transforming societies and landscapes. India, in particular, has been experiencing rapid urbanisation in recent years, and this is fundamentally changing the country's social and economic dynamics. However, the state of Kerala, located in the southwestern part of India, stands out for its unique pattern of urbanisation, which is closely aligned with its distinctive topography and socio-economic factors. This study offers a comprehensive examination of urbanisation in Kerala, focusing on its unique spatial and temporal characteristics. The spatial analysis of urbanisation in the state reveals that urban development is not concentrated solely within its major cities, but is widespread. These urban clusters align with Kerala's topographical diversity, with the majority concentrated along the coastal regions in the west, while the eastern highlands of the Western Ghats exhibit fewer urban centres. The state has witnessed a substantial surge in urbanisation rates, with projections anticipating that approximately 68 percent of the population will reside in urban areas by the middle of this century. Understanding

these temporal shifts and spatial variations is essential for policymakers and urban planners to effectively address the challenges and opportunities linked to increasing urbanisation.

Raqib, M., & Khandekar, A. (2024). Innovative Pathways to Social Transformation: Disruptive Maintenance Through Social Impact Start-ups in Kerala. *Science, Technology and Society*, 09717218241246358.

This article describes an emergent innovation ecosystem in the southern Indian state of Kerala. In contrast to a dominant national imagination of start-ups in India as spaces for the development of novel products with high economic potential, we suggest that start-ups in Kerala exhibit a tendency towards ‘social innovation’, that is, start-ups that are strongly oriented by the goal of addressing particular societal needs in addition to being successful on the market. Drawing on ethnographic interviews with start-up founders and other related stakeholders, as well as media and documentary analysis, we highlight in this essay key characteristics of social innovation in Kerala, including their reliance on tech-fix approaches. We also highlight the central role of the Kerala Start-up Mission (KSUM), a state-sponsored nodal agency, as a crucial enabler and shaper of the state’s innovation ecosystem. We further suggest that even as this innovation ecosystem is able to address important societal concerns, it nonetheless bypasses underlying social structures that produce them in the first place. Building on the work of sociologist Cornelius Schubert, we argue that it is analytically productive to interpret social innovation in Kerala as an instance of ‘disruptive maintenance’.

Cherian, A. P., & Rajan, S. I. (2024). Migrant Vulnerabilities: ‘Guest Workers’ in Kerala, India. *Indian Journal of Human Development*, 09737030241254254.

This article explores numerous socio-economic facets of internal migrants from West Bengal, including their subjective conceptions of their social standing and social class, and analyses how these facets are intimately tied to growth in Kerala. In Kerala, a sizeable portion of internal migrants come from North India. With approximately 2.5 million internal migrants in 2013 and a population growth of 235,000 annually, Kerala

is a preferred destination state for migrant labourers in India. Migrant workers from outside have grown to be a significant and essential component of the Kerala economy as a result of the state's demographic shifts and high rates of educated unemployment, which has led to a severe labour shortage for low-wage frontline jobs. Due to the extreme labour scarcity, the state's unorganised industries are seeing exceptionally high pay rates. Most migrants come from impoverished and marginalised communities and are employed in the state's unorganised sector. These migrants frequently find themselves on the periphery of society despite being essential to the economy. The onset of the COVID-19 pandemic led to job losses worsening the situation for migrant workers. The article examines the position of migrants in West Bengal, the source state, and Kerala, the destination state. Further, the article explores the governance of labour migration within the context of migration policies adopted in Kerala and examines how the term 'guest workers', which is used to describe internal migrants, can be seen as a distinct, complicated social dynamic in and of itself.

Praveen, A. (2024). International tourism and economic growth: Empirical evidence from Kerala. *International Journal of Tourism Research*, 26(3), e2647.

This study evaluates the trend and growth pattern of international tourism and analyzes the impact of tourism on the economic growth of Kerala for the past four decades from 1980 to 2019. The time series analysis employed in this study uses the secondary data on Net State Domestic Product (NSDP) of Kerala at constant prices, foreign tourist arrivals (FTA), and foreign exchange earnings (FEE) at constant prices, collected from various sources of the State and Central Government. The methodology of this study uses the Augmented Dickey Fuller (ADF) test for unit root, followed by the Johansen Cointegration test, the Vector Error Correction Model (VECM), and the Granger Causality test. The results of the analysis reveal the existence of a positive and significant unidirectional long-run causality running from tourism to the economic growth of Kerala and a bidirectional causal relationship between tourism development and the economic growth in the short run.

Salim, S. S., Sathianandan, T. V., Mohamed, K. S., Narayankumar, R., & Athira, N. R. (2024). A Fisher Development Index (FDI) for assessing Human Development in marine fishers of Kerala, India. *Environment, Development and Sustainability*, 1-20.

Growth and development are two different connotations in the context of fishers. Over the years, the fisher community in Kerala has had a Human Development Index (HDI) which are lower (by 16%) than the general population of Kerala State. Many development indices take into account the state of fishers in a community. However, the fisher community is intertwined with the complexities of the natural resource system, whose mismanagement, unsustainable practices and other intersectoral conflicts lead to situations wherein fishers are unable to get adequate returns. With this focus, an attempt was made to develop a Fisher Development Index (FDI) based on the fact that fisher well-being is dependent on resource sustainability, state of technology and infrastructure support; all of which lead to substantial externalities on the fisher development across the production and distribution domains. The study documents the fisher growth and development over years in terms of four components namely, social status, economic wellbeing, technological proficiency and resource sustainability. The results are a set of values comparable with the HDI. The study found that over the 15 years, the HDI scores were improved due to an increase in values for income and literacy. However, the FDI was improved by 74% due to very high improvements in technological proficiency and moderate improvement in the economic wellbeing of fishers. The wide use of communication and fishing aids has been attributed to the increased literacy rate of the fishers over time. There is also a positive relation between government expenditure on fisher welfare and the increase in FDI and HDI over the period pointing to an affirmative policy impact.

### **Other Journals**

Krishna, N. G., Alam, S., Scaria, R., & Yadav, K. (2024). From risks to resettlement: A study on development-induced displacement in the Cochin international airport project, Kerala. *National Geographical Journal of India*, 70(1).

Development-induced displacement presents a global challenge, with its effects particularly severe in developing countries where resettlement policies are often insufficiently managed. This paper delves into the socio-economic and cultural consequences of displacement resulting from the Cochin International Airport project, with a focus on the resettlement process and its effectiveness. The airport project required the acquisition of 1252 acres of land, leading to the displacement of approximately 830 families and, in the process, significantly impacting their livelihoods and social networks. This paper is based on primary data, gathered by engaging with resettled individuals through a carefully designed and structured questionnaire. The paper employs the Impoverishment Risk and Reconstruction (IRR) model to identify key risks linked to displacement and also to evaluate the effectiveness of the airport project's resettlement policy. It concludes that a comprehensive approach to resettlement is crucial to alleviate the negative impacts of displacement and foster long-term stability and inclusion among re-settlers. By prioritizing these key aspects, future resettlement policies can provide stronger support to displaced communities, leading to a more equitable recovery process.

## **Environment**

### **Scopus Indexed**

Krishna, B., & Achari, V. S. (2024). Groundwater for drinking and industrial purposes: A study of water stability and human health risk assessment from black sand mineral rich coastal region of Kerala, India. *Journal of Environmental Management*, 351, 119783.

The abstract presents a detailed analysis of groundwater quality and geochemical interactions in Alappad village, Kollam, Kerala, India, with a focus on its suitability for drinking and industrial purposes. This coastal village, rich in black sand minerals, is characterized by unique ecological features and interactions between alluvial soil

aquifers, saline water, and freshwater. These interactions significantly influence the region's hydrochemistry and groundwater quality, which vary seasonally.

The study assesses groundwater quality and health risks by analyzing various water quality parameters and using a health risk assessment model. The findings reveal potential health risks from ions such as Pb, Ni, Cu, Ba, Fe, Al, Mn, and Zn. Notably, children face low to medium non-carcinogenic risks from these trace metals but are at high carcinogenic risk from Ni due to long-term ingestion. The study underscores the importance of understanding the groundwater quality and health risks in coastal areas, particularly in light of increasing demand for rare earth minerals, which could destabilize the coastal hydrosphere. This comprehensive analysis aims to support sustainable development and human well-being by highlighting the drinking and industrial use of coastal groundwater based on quality criteria, corrosion proneness, water stability, and health risk factors.

### **Other Journals**

Anju, T., & Kumar, A. (2024). Traditional ecological knowledge and medicinal plant diversity usage among the Mullu Kuruman tribes of Wayanad district of Kerala, India and its implications for biodiversity conservation in the face of climate change. *Trees, Forests and People*, 100595.

Mullu Kuruman tribes majorly reside in the Wayanad district of Kerala, India. Their dietary practices and food systems are deeply intertwined with wild and underutilised plants, but modern interventions and globalisation have altered them. Therefore, understanding their traditional ecological knowledge regarding the plants used for food and medicine is important for biodiversity conservation and the sustainability of the resources. This study, therefore, explores traditional ecological knowledge of the diversity of wild plant use among 125 respondents from the Mullu Kuruman tribe. Data was collected through semi-structured interviews in Malayalam during household visits and walks in gardens and forests. This study documents 111 plant species across 85 genera and 42 botanical families. Most of these plants were used for food (66.66 %), while 26.13 % were used for medicinal purposes. *Bambusa bambos*

recorded the highest Use Report (281), Cultural Importance Index (2.248), Relative Importance Index (1), Use Value (2.248), and Cultural Value Index (1.327). This study shows the rich diversity of the plants used by the Mullu Kurumans, which is important for their food security and resilience. The agroecological diversity of climate-resilient crops such as *Eleusine coracana*, *Panicum sumatrense*, and *Sorghum bicolor* is suitable for dryland agriculture. Leafy vegetables such as *Alternanthera sessilis*, and *Basella rubra*, and fruits such as *Artocarpus incisus*, *Canavalia brasiliensis* and *Ziziphus oenopolia* which are rich in minerals and vitamins can enhance their health and well-being. Using carbohydrate-rich plants such as *Dioscorea* spp., *Amorphophallus paeonifolius*, and *Colocasia esculenta* contributes to their food security. These insights are crucial for sustainable species use and conservation. This and similar studies from other parts of the world offer new insights into the use of local agro-ecological diversity of plants by the tribal communities to deal with climate change and food security challenges.

Angel PA, S. (2024). Empowering change: The crucial role of civil society in climate change mitigation. *American Journal of Economics and Sociology*.

Climate change mitigation is a global imperative, necessitating multifaceted efforts from various sectors. This paper digs into civil society's critical role in mitigating climate change, focusing on the ways that civil society organizations empower communities, advocate for policy reforms, and implement grassroots projects. The goal of this study is to thoroughly examine civil society's various contributions to climate change mitigation and provide conclusions that can guide more effective collaboration strategies. The study's fundamental research topic is the need to understand the exact mechanisms by which civil society plays a crucial role in climate change mitigation. This includes their involvement in community empowerment, public awareness campaigns, legislative advocacy, and the of sustained programs. The study intends to offer light on the particular characteristics of civil society in stimulating climate action by exploring these aspects. This study adopts a mixed-methods approach in its methodology in Ernakulam district, Kerala. It entails doing a qualitative analysis of case studies to examine the numerous ways in which civil

society organizations work to mitigate climate change. Quantitative data are also collected to analyze the impact of their activities on policy reforms, community participation, and climate resilience. Civil society encourages communities to take ownership of climate action through education, capacity-building, and resource allocation, supporting sustainable practices at the grassroots level. The study further demonstrates that civil society plays a significant part in holding the government to account regarding their climate guarantees. Their activities, such as renewable energy projects and sustainable agriculture practices, generate community-led solutions that help to accomplish global climate targets while additionally enhancing local resilience. Furthermore, civil society promotes collaboration among the commercial sector, governments, and communities, leading to a more inclusive approach to climate change mitigation. These insights may assist policymakers, stakeholders, and civil society organizations develop more effective climate change mitigation strategies, thereby ensuring a sustainable and resilient future.

## **Agriculture and Rural Economy**

### **Scopus Indexed**

Rajan, S. I., Heller, A., & John, A. (2024). Food security among female migrant workers in Kerala returning from the Gulf Cooperation Council countries. *Global Food Security*, 41, 100773.

This paper seeks to enhance our comprehension of the interplay between COVID-19, international labour migration, and food security. The primary objective is to discern food security characteristics among female migrant workers (FMWs) returning to Kerala from Gulf countries, particularly under heightened social and economic uncertainties shared with male migrant workers (MMWs). This study conducted in the state of Kerala, India, examines the food security perceptions of Gulf migrants using the Household Food Insecurity Access Scale (HFIAS). Samples of both returning FMWs and MMWs were identified through snowball sampling from the latest Kerala



Migrant Survey (KMS) 2018 and Return migrant survey 2021. Oversampling was conducted for return FMWs, otherwise only constituting 20 per cent of the random sample. A total of 1154 samples were collected across all 14 districts in Kerala. The analysis indicates that food insecurity was not prevalent among the majority but was significant among a minority of surveyed migrant workers. The results also show that while FMWs experience food insecurity as a lack of access to food variety, MMWs experience food insecurity in the access to food varieties and the absolute quantity of food.

Kasim, C. M., & Harikumar, S. (2024). Determinants of Food Security Status of Agricultural Households: An Empirical Investigation from Kuttanad Wetland System in Kerala, India. *Studies in Microeconomics*, 23210222241247697.

Recent debates highlight that agriculture-based strategies can enhance food security. Thus, this article examined the incidence and determinants of food security of agricultural households in Kuttanad, a wetland region situated in the southern part of the state of Kerala in India. Towards this objective, we have collected food consumption data from households and converted them into an equivalent amount of calorie intake. Further, we define food security in terms of calorie adequacy using the minimum calorie norm of 1,800 kcal suggested by the Food and Agricultural Organization for India. The empirical results reveal that 37% of the sample households are food insecure. The incidence of food insecurity is higher among poor sections like labour households, Antyodaya Anna Yojana (AAY), and Scheduled Castes families. Results of Probit regression show that below poverty line and AAY families are less likely to be food secure than above poverty line families. The purchase of cereals from the Public Distribution System is found to have a positive impact on the food security status of the households. Both farm income and non-farm income positively influence the probability of food security. The study concludes that there are impediments to realizing the linkages between agriculture and food security.

## Other Journals

Nikhilraj, K., & Thomas, J. (2024). Textile Tourism and the Challenges of the Indigenous Handloom Sector in Northern Kerala. In *Examining Tourist Behaviors and Community Involvement in Destination Rejuvenation* (pp. 194-206). IGI Global.

This study investigates the functioning of indigenous handloom enterprises and their relationship with textile tourism. It also explores the regional textile industry and the challenges weavers encounter in promoting their goods to visitors and exporters. Data was collected using a purposive sampling method, and a structured questionnaire was administered to 120 weavers from four textile weaving centers in Kozhikode, Kerala. The most significant obstacle for weavers and independent producers is the lack of direct communication with customers and the limited access to information provided by manufacturers, corporations, and gallery owners. Firstly, handcrafted items are becoming more accessible and affordable; secondly, the interest of the younger generation is gradually fading, which reduces the number of skilled professionals. The result of this study provides insight into how Khadi Textiles has the potential to contribute positively to socioeconomic achievements and enhance weaver's and destination image.

## Banking

### Scopus Indexed

Sahadevan, M. S., & Mary, V. S. (2024). A Study on Knowledge Management Practice in Kerala Bank. *Boletín de Literatura Oral-The Literary Journal*, 11(1), 541-556.

The banking sector plays a crucial role in a nation's economy. In the modern banking landscape, there is a unanimous consensus on the significance of knowledge management as a fundamental business practice. Banks, insurance companies, and

other financial service providers have come to realize that knowledge is a powerful asset. Knowledge management serves as a vital tool for banks to unlock their full potential by harnessing global knowledge across the organization and assessing its impact on performance. This research paper aims to assess the level of knowledge management and awareness among employees at Kerala Bank. Additionally, it seeks to explore the knowledge management practices, knowledge Management Sharing (KMS), and the challenges faced by the bank's employees. The study focuses on a random sample of Kerala Bank employees. Primary data will be collected through personal visits and interactions with both public and Kerala Bank employees. Secondary data will be gathered from various sources that provide relevant information. The research will be conducted in the state of Kerala, India. A simple random sampling technique will be employed to select the sample. A questionnaire will be designed for the survey. The study concludes with recommendations based on the findings.

### **Other Journals**

Kumar, N. S., & Nirmala, M. M. (2024). Digital Financial Inclusion and Educated Service Pensioners. In *AI in Business: Opportunities and Limitations: Volume 2* (pp. 303-310). Cham: Springer Nature Switzerland.

Digital financial inclusion made revolutionary changes in the global as well as the Indian economy. The modern method of carrying out transactions with digitalization and technologies has transformed the conventional financial system into digital finance. The Young generation adopted and accepted it as the smartest way of financial development, but the senior citizen and their digital literacy are still a challenge for digital financial inclusion in the country. This study focuses on the digital financial inclusion of senior citizens in general and educated government service pensioners in particular. The study is based on primary data and it is collected from fifty government service pensioners with bank accounts and personal electronic gadgets, from the Kottayam District of Kerala. Factor analysis is the major statistical tool used for the analysis and the paper derived a conclusion due to different reasons

educated and economically sound senior citizens in the country are not an active part of the national digital financial transformation.

## **Health**

### **Scopus Indexed**

Sankar D, H., Benny, G., Jaya, S., & Nambiar, D. (2024). National Rural Health Mission reforms in light of decentralised planning in Kerala, India: a realist analysis of data from three witness seminars. *BMC Public Health*, 24(1), 678.

The People's Planning Campaign (PPC) in the southern Indian state of Kerala started in 1996, following which the state devolved functions, finances, and functionaries to Local Self-Governments (LSGs). The erstwhile National Rural Health Mission (NRHM), subsequently renamed the National Health Mission (NHM) was a large-scale, national architectural health reform launched in 2005. How decentralisation and NRHM interacted and played out at the ground level is understudied. This study aimed to fill this gap, privileging the voices and perspectives of those directly involved with this history.

### **Other Journals**

Sankar D, H., Joseph, J., Benny, G., Surendran, S., Sharma, S. K., & Nambiar, D. (2024). The role (s) of community health workers in primary health care reform in Kerala, before and during the COVID 19 pandemic: a qualitative study. *Frontiers in Health Services*, 4, 1321882.

Accredited Social Health Activists (ASHA) are Community Health Workers (CHWs) employed by the National Health Mission of the Government of India to link the population to health facilities and improve maternal and child health outcomes in the country. The government of Kerala launched primary health reform measures in 2016 whereby Primary Health Centres (PHCs) were upgraded to Family Health Centres (FHCs). The COVID-19 pandemic in 2020 impacted essential health service delivery,

including primary care services. The CHWs network of Kerala played a crucial role in implementing the primary care reforms and COVID-19 management efforts that followed. Authors carried out a study to understand the perspectives of the CHWs in Kerala about their role in the recent primary healthcare reforms and during the COVID-19 pandemic management efforts.