

**DEVELOPMENT-INDUCED LAND ACQUISITION,  
DISPLACEMENT AND RESETTLEMENT: A STUDY ON  
AIRPORT PROJECTS IN KERALA**

**THESIS**

*Submitted to the University of Calicut  
for the award of the degree of*

**DOCTOR OF PHILOSOPHY IN ECONOMICS**

By

**NOUSHAD CHENGODAN**

*Under the Supervision of*

**Dr. VIMALA M**




**DEPARTMENT OF ECONOMICS  
UNIVERSITY OF CALICUT  
Dr. JOHN MATTHAI CENTRE  
ARANATTUKARA, THRISSUR - 680618**

**NOVEMBER 2022**



## *Declaration*

I, NOUSHAD CHENGODAN, do hereby declare that the thesis entitled “Development-Induced Land Acquisition, Displacement and Resettlement: A Study on Airport Projects in Kerala” submitted to the University of Calicut for the award of the Degree of Philosophy in Economics is a bonafide record of research work. I carry it out under the guidance and supervision of Dr. VIMALA M, Assistant Professor and Head, Department of Economics, Vimala College, Thrissur and Dr. ZABEENA HAMEED P, Assistant Professor and Head, Department of Economics, Dr. John Matthai Centre, University of Calicut. I also affirm that no part of this thesis has been presented for the award of any degree, diploma, fellowship, or other similar title or recognition of any University / Institution before. Due acknowledgements have been made wherever anything has been borrowed from other sources.



**Noushad Chengodan**

Thrissur

2<sup>nd</sup> November, 2022



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Certified that the thesis entitled "Development-Induced Land Acquisition, Displacement and Resettlement: A Study on Airport Projects in Kerala" is a record of bonafide research work done independently by Noushad Chengodan under our guidance and supervision at the Department of Economics, University of Calicut, Dr. John Matthai Centre, Thrissur. No part of the thesis has been submitted for the award of any degree, diploma, fellowship or other similar title or recognition before. Plagiarism is checked and found within the permitted limits. He is permitted to submit the thesis.



**Supervising Teacher**

**Dr. VIMALA M**

Assistant Professor & Head  
Department of Economics  
Vimala College (Autonomous)  
Ramavarmapuram, Thrissur



**Co-Guide**

**Dr. ZABEENA HAMEED P**

Assistant Professor & Head  
Department of Economics  
Calicut University  
Dr. John Matthai Centre, Thrissur

Thrissur

2<sup>nd</sup> November, 2022





# Certificate

This is to certify that the revisions are made in the thesis entitled "Development-Induced Land Acquisition, Displacement and Resettlement: A Study on Airport Projects in Kerala" as per the suggestions made by the adjudicators and the contents in the thesis and the softcopy are one and the same of the thesis.



**Supervising Teacher**

**Dr. VIMALA M**  
Assistant Professor & Head  
Department of Economics  
Vimala College (Autonomous)  
Ramavarmapuram, Thrissur



**Co-Guide**

**Dr. ZABEENA HAMEED P**  
Assistant Professor & Head  
Department of Economics  
Calicut University  
Dr. John Matthai Centre, Thrissur

Thrissur

2<sup>nd</sup> November, 2022







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## ABBREVIATIONS

AAI	:	Airports Authority of India
ACI	:	Airports Council International
ANOVA	:	Analysis of Variance
APL	:	Above Poverty Line
ASQ	:	Airport Service Quality
BPKM	:	Billion Passenger-Kilometre
BPL	:	Below Poverty Line
CAGR	:	Compound Annual Growth Rate
CCJ	:	Calicut International Airport Ltd.
CIAL	:	Cochin International Airport Ltd.
CSR	:	Corporate Social Responsibility
DGCA	:	Director General of Civil Aviation
DIDR	:	Development-Induced Displacement and Resettlement
DPs	:	Displaced Persons
EIA	:	Environmental Impact Assessment
FAO	:	Food and Agriculture Organization
FGD	:	Focus Group Discussion
FWFPR	:	Female Work Force Participation Rate
GCI	:	Global Competitiveness Index
GDP	:	Gross Domestic Product
GNH	:	Gross National Happiness
HCI	:	Human Capital Index
HDI	:	Human Development Index
HDR	:	Human Development Report
IAAI	:	International Airports Authority of India
ICTT	:	International Container Transshipment Terminal
IDP	:	Internally Displaced Persons
IFC	:	International Finance Corporation
ILO	:	International Labour Organisation
IRR	:	Impoverishment Risks and Reconstruction
KIAL	:	Kannur International Airport Ltd.
KIIFB	:	Kerala Infrastructure Investment Fund Board
KINFRA	:	Kerala Industrial Infrastructure Development Corporation
KRDCL	:	Kerala Rail Development Corporation

KRFB	: Kerala Road Fund Board
KSBB	: Kerala State Biodiversity Board
KSTP	: Kerala State Transport Project
LAA	: Land Acquisition Act
LSGs	: Local Self-Governments
MADAC	: Malabar Airport Development Action Committee
MCA	: Ministry of Corporate Affairs
MDGs	: Millennium Development Goals
MoRTH	: Ministry of Road Transport & Highways
MWFPR	: Male Work Force Participation Rate
NCAP	: National Civil Aviation Policy
NGOs	: Non-Governmental Organizations
NIP	: National Infrastructure Pipeline
NRI	: Non-Resident Indians
NRPP	: National Rehabilitation and Resettlement Policy
NTDPC	: National Transport Development Policy Committee
ODF	: Open Defecation Free
PAPs	: Project Affected Persons
PQLI	: Physical Quality of Life Index
PPP	: Public-Private-Partnership
QLI	: Quality of Life Index
RBDCK	: Roads and Bridges Development Corporation of Kerala
RCS	: Regional Connectivity Scheme
RESA	: Runway End Safety Area
SDGs	: Sustainable Development Goals
SEZs	: Special Economic Zones
SIA	: Social Impact Assessment
TIAL	: Thiruvananthapuram International Airport Ltd.
UN	: United Nations
UNDP	: United Nations Development Programme
UNHCR	: United Nations High Commissioner for Refugees
UNIDO	: United Nations Industrial Development Organization
WCD	: World Commission on Dams
WEF	: World Economic Forum
WFPR	: Work Force Participation Rate

## **ABSTRACT**

### **Development-Induced Land Acquisition, Displacement and Resettlement: A Study on Airport Projects in Kerala**

The primary objective of the present study has been to analyse the socio-economic ramifications of airport-induced land acquisition and displacement on project-impacted households. The affected segments include physical evictees as well as economic displacees. The basic tenet of the problem is the analysis of the capability of airport projects to ensure a two-way relationship between the progress of the projects and the betterment of the life of the DPs and PAPs. How far these airport projects succeeded to ameliorate the living conditions of DPs and PAPs who were forced to surrender their properties to the authority for materialising these developmental projects. If there is deterioration in the life prospects of affected persons in relation to the advancement of airports, the system would fail to utilise the compensation money as well as additional resources generated by the projects in the expansion of quality of life of the DPs / PAPs.

Another major aspect of the problem is the search of nature and composition of airport-induced displacement, rehabilitation and resettlement between different airport models such as public sector and PPP led airport projects. It is easy to generalise the problem but here the attempt is made to explore the different dimensions of DIDR in public led airports and PPP led airports. The research design of the present study is descriptive in nature and to some extent, it is prescriptive format as it provides implications and suggestions for future developmental projects and their related companions such as land acquisition, displacement, compensation, rehabilitation and resettlement. This study is conducted by using both primary and secondary data. Thus, in this study, CCJ represents public led project and KIAL reflects PPP led airport. The researcher has identified the total number of displaced households which marked 406 households during the reference period (1<sup>st</sup> January 1995 to December 2010), of which, 214 and 192 households from CCJ and KIAL projects respectively. The researcher has selected 121 PAPs, 67 and 54 project affected households from CCJ and KIAL respectively, from 364 aggregate economic displacees who are living very close to the airport and an acquisition in future may displace them.

It is, however, a painful fact that a new section generally known as “the evacuated” is formed in the society after railway, airport or other developmental projects are planned and executed by the authorities. The study effectively incorporates an index called as ‘Quality of Life Index’ (QLI). There are five categories of households formed based on this QLI score., viz., extreme poor status; poor status, fair status; good status and very good situation.

This index, indeed, is effective to trace out the impacts of airport-induced displacement on inhabitants which clearly shows either improvement or impoverishment. Besides, the technique of FGD is adopted to obtain qualitative responses from PAPs.

The analyses of the sampled data revealed a dramatic decline in the land-man ratio among displaced households after displacement when compared to the average size of land area possessed by them before displacement. It was 57.04 cents of land per family in the pre-evacuation phase which had drastically declined to 27.52 cents in the post-displacement phase. More specifically, the land man ratio has steeply decreased to 4.03 cents after displacement from 8.36 cents of land before displacement. The study also found that the most difficult phase of the displaced households is the transition stage which marks a period immediately after their displacement and their resettlement in new places.

The evictees' workforce participation rate (WFPR) has dwindled to 45.51% in the post-eviction phase when compared to the rate of pre-eviction phase (55.67%). Another grave concern pertinent to the Airport-induced land acquisition and displacement is the incidence of double or multiple displacements. The bank-notes thrown to them may not be sufficient to mitigate their mental strains when they lose the loving bonds, their close contacts with their neighbours and their life-long attachment which they have been keeping for years in their society. These compensatory packages won't be sufficient to make them glad.

Most of the promises given to the people at the time of acquiring land for Kannur Airport and evicting residents were fulfilled. The authorities gave 10 cents of land to each evicted family of the locality. They gave jobs to the members of the project affected families also. The rehabilitation package of KIAL was in conformity with the demands of the people. These humanitarian measures were absent in the site of Calicut Airport. The average time period taken in the distribution of monetary compensation was approximately 13 months in Calicut Airport site which was higher when compared to Kannur Airport site (10 months). Similarly, there was a striking discrepancy between CCJ and KIAL sites in the average years taken by the displaced households for their resettlement. It was 4.3 years among displacees from Calicut Airport site while this period is only 2.7 among evictees from Kannur Airport site.

The study also incorporates a few of constructive measures in policy implications to mitigate the concerns of affected people which include Evictees' Stock Option in Airport, impose one time levy - special assessment upon capital gainers, Evictees' Welfare Cess on air tickets and cargo movements, create a Displacees Support Fund and so on. A tendency to treat the evicted people as mere victims of developmental projects should be stopped and sincere attempts should be made to bring them to the mainstream of the society by offering them an opportunity to become part and parcel of such developmental projects.

Key words: Developmental Projects, Land Acquisition, Project Affected Persons, Displacement and Resettlement, Airport Projects

# CHAPTER I

## INTRODUCTION

### 1.1 Introduction

Indeed, the embedded strategic aim of economic policies designed by the Government, either the Central, State or Local, is to accelerate economic growth which is paramount for the socio-economic development of the country. Economists and policy-makers unanimously agree upon the indispensable role of infrastructural developments in the enhancement of Gross Domestic Product (GDP) of the nation which is the single most practised yardstick for measuring the well-being of her citizens. Infrastructure, whether it is airports, sea ports, expressways, railways, mono-rails, metro rails or even flyovers, is considered as the backbone of any country's advancement and very instrumental for enhancing quality of life. The Government of India is doing everything to accelerate the pace of infrastructure development of the country and thereby trying to attain remarkable transformative gains (Interim Budget, 2019-2020).<sup>1</sup> Not surprisingly, the present economic system invariably demands greenfield as well as brownfield developmental projects in the form of well-developed transportation networks, dams, industrial parks, techno-parks, special economic zones (SEZs), international container transshipment terminal (ICTT) and so on. The task of transforming the plan of setting up of the projects into ground level reality is vested with the developers which involves either the Government / private or joint-venture initiatives like public-private-partnership (PPP) entity. Additionally, the ongoing visible neo-liberal policies always attract the active involvement of foreign investors in developmental projects of India.

The acquisition of land by the concerned authority or developer resulting in the displacement of local people is inevitable in the course of development. That is, for enhancing developmental activities and setting up new infrastructural facilities, the government has to acquire land. This definitely leads to displacement and growing protests from the inhabitants. Acquisition of land for the said purpose is inevitable. The oft-quoted saying,

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<sup>1</sup> Budget Speech of Piyush Goyal, Union Finance Minister, Government of India. The Interim Budget speech has been delivered in the Parliament on 1<sup>st</sup> February, 2019, for the financial year, 2019-2020.

“No one can make omelettes without breaking the eggs” is applicable to this context when we discuss the unavoidable need of acquiring land for the country’s developmental projects. It is very easy to break eggs but the equitable distribution of omelettes among the different stakeholders of the project including displaced and affected people is complex. It is also shameful and unjustifiable when the system breaks eggs frequently and recurrently in the name of development (Oliver-Smith, 2010). The significant question here is that who will take the care of displaced persons and project affected persons and help them restore their normal life. The inhabitants who are thrown out of their land must be rehabilitated to redress their grievances and proper compensation must be disbursed to them in time. The resentment of the victims can be lessened if rehabilitation is properly arranged and the people are made friendly and cooperative with the new economic projects (Cernea, 2003). It would also be worth recalling the oft-quoted statement of Wolfensohn, “We must act so that poverty will be alleviated, our environment protected, social justice extended, human rights strengthened. Social injustice can destroy economic and political advances.”<sup>2</sup>

The airport sector of India shows a tremendous growth in the number of annual passengers as well as cargo businesses. A growth rate of 30% in annual passengers in the domestic flight was reported in 2016 compared to the previous years’ growth rate of 10% (23<sup>rd</sup> Annual Report, 2017-18, AAI). This trend manifests the requirement of more investment in the aviation sector of India which invariably demands additional land acquisition which also results in massive displacement of inhabitants and associated issues. The airport sector in India is being operated under the Aviation Ministry in which the Airports Authority of India (AAI) is entrusted to manage the entire airports of India since 1995. The AAI is managing 137 airports which consist of 23 international airports, 10 custom airports, 81 domestic airports and 23 civil enclaves in defence or customs airports at various air fields.<sup>3</sup> More interestingly, there are only two states in India - Kerala and Tamil Nadu - having four international airports. TIAL (Trivandrum), CCJ (Malappuram), CIAL (Ernakulam) and KIAL (Kannur) are the four international airports operating in the state of Kerala. Additionally, the Government is planning to construct more new airports in the State to enhance connectivity and flourish tourism and cargo business. It is the responsibility of the concerned State Government to acquire and allocate the required land area free of cost for the purpose of the construction and the expansion of airports as per the National Civil Aviation Policy of 2016.

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2 Voice for the World’s Poor: Selected Speeches and Writings of World Bank President James D. Wolfensohn, 1995–2005, the World Bank, Washington, D.C, 2005.

3 Annual Report, 2018-19, Airport Authority of India (AAI).

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The State of Kerala needs a huge investment in the transportation sector in general and the airport sector in particular. Kerala's four international airports, of which, Cochin and Kannur International airports have already retained more than 1000 acres of land and the remaining two airports – Trivandrum and Calicut – have less than 1000 acres of land. A norm of minimum 1000 acres of land is highly desirable for an international airport. TIAL (Thiruvananthapuram International Airport Ltd.) has only 600 acres of land (Thomas, Pillai & Franklin, 2018) and the CCJ (Calicut International Airport Ltd.) holds only 380 acres of land.<sup>4</sup> It manifests the requirement of the expansion of TIAL and CCJ. In addition to this, there would be more rush in cargo movements that will require larger cargo space in TIAL, especially after commissioning the Vizhinjam project in the state. The Government of Kerala has issued new notification for the acquisition of additional land for the expansion of KIAL's runway from 3050 meters to 4000 meters.<sup>5</sup> On the other hand, the length of runway of CCJ airport is only 2700 meters, the shortest in Kerala, and the AAI designed a new proposal of the extension of it to 3500 meters. In essence, all these trends indicate one fact that additional land acquisition is indispensable for the development of the aviation sector in Kerala. Many developmental projects are pending in Kerala and facing unusual delay in acquiring land by resolving the issues related to development-induced displacement and resettlement (DIDR) (Siddiqui, 2012).

The empirical studies conducted by social scientists across the world have figured out the magnitude of development-induced displacement and its socio-economic impact on inhabitants. The infrastructural advancement in different countries resulted in the huge displacement of local residents which was estimated at approximately 10 million people across the global level since 1990 (Cernea, 2000); 25 million inhabitants were evacuated from their homeland to commission various developmental projects in India during the last 50 years (Mahapatra, 1999) and around 40 million people were dislocated in China for the same cause during the similar period (Shaojun & Guoqing, 2006). The striking magnitude of forced displacement of inhabitants on account of developmental projects is estimated at 10 million per annum globally during the last twenty years of the 20<sup>th</sup> century. The aggregate figure is 200 million during this period and it is believed that this alarming figure is an exaggerated one but actually it is an under estimated figure computed by the World Bank (Cernea, 2000; Fernandes, 2006). Interestingly, in India the dam-induced displacement alone represents a figure between 21 million and 40 million (Taneja & Thakkar, 2000).

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4 The Hindu, 4<sup>th</sup> November, 2018.

5 Administrative sanction has been granted by the Govt. of Kerala, vide No. 46/2016/Trans dated 03-02-2016, G.O. (Rt) No. 58/2016/Trans dated 08-09-2016 and G.O. (Ms) No. 78/2016/TRANS dated 27-12-2016.

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The core attribute of inclusive growth strategy is the consideration of all segments of the society in the distribution of the fruits of development of the country. The infrastructural enhancements of the country definitely assure employment opportunities, tourism development, flourished trade, rapid GDP growth and other positive multiplier effects. At the same time, the fulfilment of the afore-mentioned projects produces ill-effects in the form of land acquisition, involuntary displacement, poor compensation, unfair rehabilitation and unjust resettlement which largely imposes pains, sacrifices, stress, disintegration and impoverishment (Fernandes & Asif, 1997; Mahapatra, 1999; Cernea, 2000) on particular sections of the society. The capitalist mode of production which aims at mass production for the market and thereby harvesting maximum profit by a few and the cost of expansion of means of production borne by the poor and marginalised people who are excluded from enjoying the benefits of development (Lobo & Kumar, 2009). The process results in livelihood loss, land loss and disarticulation of social networks which is manifested in the wide range of human rights violations and encroachment by the State (Smith, 2010). This type of infrastructural development/industrial advancement and GDP growth is not termed as inclusive as it guarantees benefits for some sections at the expenses of others.

Obviously, the true development occurs in a region or nation-wide when it upholds values, freedom, creativity and happiness and brings smiles on the faces of all sections of the society – Scheduled Tribes (STs), Scheduled Castes (SCs), minorities, women, children, the downtrodden, the displaced and project-affected persons. Real development empowers the people and additionally entitles them to enjoy the real freedom which is widening with the passage of time (Sen, 1999). The infinite enlargement of the range of human choice is intrinsically embodied in the holistic objective of development (Lewis, 1984). The popularity of Gross National Happiness (GNH) of Bhutan is the typical example for giving due weightage to human capital, natural capital and social capital. Inclusion, conservation and sustainability are essential for attaining overall development of the country (Stiglitz, 2010; Krugman, 2011; Drèze & Sen, 2013). Certainly, development-induced displacement of inhabitants or often denoted as forced displacement is not only a crisis or concern in terms of humanitarian aspect but also a challenge in the way of development of the country or simply it is a development challenge as well (World Bank, 1994).

Development-induced Displacement and Resettlement (DIDR) refers to a situation in which the inhabitants, who possessed the land, homestead and livelihood source, are directed to move from their original place to new settlement areas which is designed either by the

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authority or displaced person himself/herself for the national course, say developmental projects and the actions of the authority is legally and institutionally backed which contains compensation and rehabilitation packages. No Government can initiate developmental projects without acquiring land and eject people from it. The DIDR is a global phenomenon in which each and every country experiences it irrespective of the stages of development that it has attained. Displacement is the very close companion of development. The incidence of forced land acquisition and its by-products have created long-lasting impacts on multi-dimensional spheres including social, economic, environmental, political, psychological and spiritual aspects which ultimately result in the deterioration of living standards of project-affected persons (Scudder, 1981; Cernea, 1988; Mahapatra, 1999). In this regard, Michael M. Cernea averred, “Compulsory displacements that occur for development reasons embody a perverse and intrinsic contradiction in the context of development. They raise major ethical questions because they reflect an inequitable distribution of development’s benefits and losses.”<sup>6</sup>

## **1.2 Statement of the Problem**

A thickly populated state like Kerala has been experiencing most of the issues linked to development-induced land acquisition and displacement which include forced land acquisition, unfair rehabilitation packages, incidence of multiple displacements and loss of social capital in the name of developmental projects. All these burning issues pave the way for mass protests organized by evictees as well as project affected persons against the project. The socio-economic ramifications of airport-induced displacement on inhabitants (physical displacement) are the problem in general and their impacts on project-affected persons (economic displacement) who experience both positive and negative sides from the project without physical displacement, in particular. The basic tenet of the problem is the analysis of the capability of airport projects to ensure a two-way relationship between the progress of the projects and the betterment of the life of the displacees and project-affected persons (PAPs). That is, the vital part of this problem is how far these airport projects succeeded to ameliorate the living conditions of displaced persons (DPs) and PAPs who were forced to surrender their properties to the authority for materialising these developmental projects. If there is deterioration in the life prospects of affected persons in relation to the advancement of airports, the system would fail to utilise the compensation money as well as additional resources generated by the projects in the expansion of quality of life of the DPs / PAPs.

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<sup>6</sup> Impoverishment Risks and Reconstruction: A Model for Population Displacement and Resettlement, Michael M. Cernea, The World Bank, 2002, p. 1-2

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The holistic mobilization and analyses of socio-economic profile of affected persons, which include physical displacement as well as economic displacement, are indispensable for understanding the real prospects and problems associated with the airport developmental projects in Kerala. The important question under the problem is whether the DPs/PAPs are fully satisfied with the actions or measures designed by the concerned authority in matters of land acquisition, compensation and rehabilitation packages. Are there any remarkable changes in the quality of life of DPs/PAPs during the transition period between pre-displacement and post-displacement phases? Indeed, the airport project acquired the land, homestead and livelihood of the local people and the authority strongly claimed that the project was successful and beneficial to all stakeholders including PAPs. Undoubtedly, developmental projects have generated enormous benefits to the economy and, surprisingly, the less benefitted segments are DPs and PAPs who surrendered their valuables to the authority for realising these projects (Fernandes & Asif, 1997).

The airport sector stimulated both the product and job markets, paved the way for commencing new business activities in the local economy, developed the tourism sector and allied fields. It also paved the way for flourishing cargo business. All these factors helped very much for accelerating capital formation in the region and immensely contributed to the growth of GDP of the state. It is, however, a painful fact that a new section generally known as “the evacuated” is formed in the society after railway, airport or other developmental projects are planned and executed by the authorities. However, the project designers and implementing authority conveniently forgot their responsibility to improve the living standards of DPs / PAPs who surrendered their land, shelter, livelihood, community life and everything for the projects and the same attitude is still continuing. It is interesting to analyse whether the PAPs are enjoying any benefits from the airport projects or not. If yes, what types of benefits are they absorbing? How many DPs / PAPs have equipped themselves or through job training as a part of rehabilitation packages for a seamless absorption into the jobs offered by the concerned airport or allied sectors. It is not an exaggeration to state that these people are one of the primary stakeholders of it. It seeks whether the DPs / PAPs are able to restore their previous life or improve their life after displacement or experience marginalization and impoverishment.

Double displacement or multiple displacement (revictimization) is another grave issue in which the same persons are asked to surrender their land and other assets more than one time. Were there any additional benefits and relief assured to this section of the DPs? The ardent supporters of the airport-induced land acquisition and displacement even without proper

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rehabilitation packages in the name of development justify the actions of the authority by stating that some people should bear the costs, sacrifice and pain for the benefits for the large number of the society. This argument reflects the utilitarian concept of “greatest happiness for the largest number.” Undoubtedly, it is against ethics and equality principles as one section bears the costs for the benefits of others.

The DIDR is a sensational issue in the state of Kerala which is known for its high density of population (851 per s.q. k.m) and ranks the 3<sup>rd</sup> among the Indian states only next to Bihar (1102 per s.q. k.m) and West Bengal (1029 per s.q. k.m).<sup>7</sup> The plain truth is that even a small developmental project in the state requires mass displacement. The forced land acquisition resulted in severe mass protest and agitations from the side of property owners, local people, environmental activists and social scientists. National Highway expansion, Kannur, Calicut and Trivandrum International Airports expansions and the proposed greenfield investments like airport projects at Aranmula in Pathanamthitta district, Sabarimala Airport at Erumely in Kottayam district and Silverline (K-rail) project<sup>8</sup> are crowning examples to the aforesaid incidents in Kerala. That is, development-induced land acquisition resulting in displacement is a hot topic these days for many reasons.

Another major aspect of the problem is the search of nature and composition of airport-induced displacement, rehabilitation and resettlement between different airport models such as public sector, PPP and private sector led airport projects. It is easy to generalise the problem but here the attempt is made to explore the different dimensions of DIDR in public led airports and PPP led airports. Why do DPs and PAPs organise a strong agitation against some airport projects and less resistance against others? The responses and anticipations of PAPs are given special consideration in the problem because the authority has decided to expand many existing airports as well as set up new airports as a part of NABH (NextGen Airports for Bharat) and Ude Desh Ka Aam Nagrik (UDAAN) or Regional Connectivity Scheme (RCS) of the Central Government (Union Budget, 2016-17). Additionally, these PAPs are living in the adjacent places and would be the next victims of the projects when the Government give green signal to expand them.

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<sup>7</sup> Census Report, 2011, Government of India.

<sup>8</sup> A dream project of the Government of Kerala under the aegis of Kerala Rail Development Corporation Limited (K-Rail), a collaborative entity between the Govt. of Kerala and the Ministry of Railways, Govt. of India which targeted to build a 529.45 KM greenfield rail project – Thiruvananthapuram – Kasaragod Semi High-Speed Rail (SilverLine) Project. This big project in the state aimed at reducing travel time considerably between north and south ends of the state. The K-Rail project alone needs 1,383 hectares of land in which 1,198 hectares belong to the private sector. The said project may evacuate 30,000 households. An anti-land acquisition movement has been initiated by the local people and green activists under the banner of “K-Rail SilverLine Virudha Janakeeya Samithi.”

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In essence, the given problem delves into the changes happened to the structure of homestead, households' land use and its distribution, basic amenities, the ownership of cattle, employment pattern, work force participation rate (WFPR) of both males and females between different models of airport projects as well as between pre-displacement and post-displacement periods. The adequacy of compensation distributed by the authority, the pattern of spending of it on major items and the adverse impacts of social capital disarticulation are another core part of the problem. The million-dollar question in this context is that how can a system convert the airport-impacted persons from the group of victims or losers to the group of survivors or gainers. What type of fiscal support and monetary packages should be incorporated into the rehabilitation measures to accelerate the pace of their transformation from losers to gainers?

### **1.3 Significance of the Study**

The empirical studies and data are available in plenty at global level which highlighted the pivotal role of developmental projects in enhancing efficiency and advancement of economy. Everyone is talking more about the benevolent side of the projects including airports and less about the negative side of them like displacement-induced impoverishment, environmental concerns and so on. The country obviously needs additional infrastructure advancement in the form of expressways, four-line roads, airports, thermal / hydro power plants, dams, industrial parks and nuclear reactors for the rapid growth of the country. Moreover, the introduction of new economic policies in the early 1990s and neo-liberal strategies of the latter part of the first decade of the 21<sup>st</sup> century accelerated the pace of developmental projects and there will be no chances of reversal or set-backs in the initiation of new projects (greenfield investment) or the expansion and modernisation of existing projects (brownfield investment). All these developments invariably require additional land acquisition. The availability of land is finite and fixed in supply and thereby every project initiation will lead to involuntary displacement and related issues.

The study is noteworthy in the sense that the deficiency of reliable data about the adverse impacts of development-induced displacement on inhabitants may prevent the policy-makers and the Government to design effective measures in favour of them. The truth is that the nature of displacement, rehabilitation and resettlement, type of people affected and their broad profile including both economic and social matters are essential to frame suitable policies to improve the living standards of already affected people. Hence, the Authority may think twice before giving green signal to acquire land and one can expect no more

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land acquisition and displacement without proper and just rehabilitation packages. Policy-makers have recommended a particular project and the Government has given approval for the initiation of the project based on the gains expected from it and has justified the sacrifice of project-affected persons by saying that there are no possible alternatives. The vital matter before the developer or policy-maker is that how many inhabitants will have to be evacuated to install the developmental project in the region. However, the reverse is also significant in this regard, according to social scientists and environmentalists. To put it in another way, how many developmental projects, say airport, should be dropped on account of the mass displacement, multiple evacuation, environmental concerns and mass protests?

Indeed, the paucity of scientific empirical studies on airport-induced displacement, rehabilitation and resettlement enhances the significance of this present thesis. Moreover, the present study is an attempt to trace out the consequences of DIDR in airport projects developed under two models – public and PPP - rather than entirely different projects as done in many of the empirical works. More clearly, the study is more relevant as its focus is not only on airports related forced land acquisition and allied issues but also on the multi-faceted ramifications of airport models like public sector led airport projects and PPP led airports on inhabitants. It is unanimously agreed that the existing laws and customs impart absolute power for the Government to acquire private land in the name of large national interest or strategic concerns by announcing rehabilitation packages. This power is visibly embodied in the principle of ‘Eminent Domain,’ which is elaborated in the second chapter. The existing studies are focused largely on dams, industrial projects and others which show pathetic conditions of the majority of DPs / PAPs who surrendered their monetary assets as well as social capital to the developers for the realisation of the projects. Are we expecting the same deterioration and impoverishment in the living standards of the DPs who are evacuated from the airport project areas? It highlights the significance of this study to give a valid answer to this question which demands a scientific study on airport-induced displacement and resettlement.

The expansion of brownfield airport projects like Calicut International Airport’s new proposal for the acquisition of around 485.3 acres of land<sup>9</sup> will affect thousands of people living in the adjacent places of the airport. More interestingly, the acquisition plan of the Calicut Airport (CCJ) is the 13<sup>th</sup> one in a row and there is a high chance for multiple displacement and revictimization. During the last twenty years, there have been a number of land acquisition notifications issued and revised by the State Government. It is pivotal

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<sup>9</sup> The Hindu, 1<sup>st</sup> November, 2016.

to make a holistic study on the anticipations and responses of these affected people as there has been a great agitation against the 13<sup>th</sup> acquisition proposal for the expansion of Calicut Airport. The Samara Samithi strengthened the slogan of “Not an inch of land for further development of Calicut International Airport.” Unfortunately, there is no significant study on Calicut Airport-induced displacement, rehabilitation and resettlement. In this context the present study is worthy of careful consideration.

The popularity of PPP model of airport development all over the country makes this study more significant and meaningful as the present thesis consists of different aspects of DIDR between public and PPP led airports projects. The analysis of pattern of land acquisition, compensation and resettlement between these two models is of great concern because it helps the concerned authority to select a model for further infrastructure development of the state. The holistic analysis of expectations of PAPs and their socio-economic and demographic profile will give more insight into the realities of land acquisition and its impact on the inhabitants. This work will give an exceptional insight into the adequacy of compensation and rehabilitation measures to improve the quality of life of the DPs whose land and other properties including homestead acquired by the CCJ and KIAL also measure the social costs borne by these people. The implications of this study may help the Government, the Airport Authority and the policy-makers to design new airport models with minimum number of displacement and frame fair and humane rehabilitation packages to prevent displacement-induced impoverishment.

The discussion on the ways and means of incorporation of physical displacees and economic evictees as participants in the framework of rehabilitation packages and further consideration of them as one of the primary stake-holders of airport projects in the light of new Legislation, Right to Fair Compensation, Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 are meaningful and a highly significant matter in terms of academic arena and pragmatic fields. The study holistically covers both airport-induced physical displacement and economic displacement. In this study, the economic displacement manifests those families who are residing at the very close vicinity of Calicut and Kannur airports. Generally, these people may experience previous displacement, either physical or economic displacement, and presently, these people are facing another phase of airport expansion-induced land acquisition and physical displacement. The social scientists and global lenders (Cernea & McDowell, 2000; World Bank, 2004; Fernandes & Bharali, 2006) categorised the physical displacement and economic displacement into project affected persons (PAPs).



The study is investigating about the types and nature of the benefits derived from the airport projects by affected residents (both DPs and PAPs) and also analysing whether these positive effects (benefits) helped them to outweigh the negatives (damages / problems) experienced from the airport projects. That is, the investigator is attempting to discuss whether the airport projects in the state of Kerala results in development or impoverishment in the perspectives / experiences of only DPs and PAPs. It is worthy of making comparative analyses of socio-economic impacts of airport projects located in different districts of the state working under different models such as public sector and Public-Private-Partnership (PPP) frameworks, a joint venture model.

#### **1.4 Objectives of the Study**

The present study retains the following three objectives and each of the objectives will be analysed in a separate chapter.

1. To trace out the socio-economic impact of airport projects on the displaced inhabitants in the region.
2. To make a comparative study on the nature of compensation, resettlement and rehabilitation packages between Calicut Airport, a public sector led project and Kannur Airport, a PPP (public-private-partnership) led project.
3. To investigate into the socio-economic profile of project-affected persons (PAPs) and also their approach towards the extension of airport projects in the region.

#### **1.5 Hypotheses**

The hypotheses set in this study will help to test the variables and help the researcher to make inferences. There are two hypotheses set in this study which are listed below:

1.  $H_0$ : There is no significant difference in the socio-economic conditions and living standards of evicted households between pre-displacement and post-displacement phases.
2.  $H_0$ : There are no significant differences in compensation and rehabilitation packages offered to the displaced inhabitants by the Kannur Airport (PPP-led project) when compared to the Calicut Airport (public sector-led project) in the State.

#### **1.6 Data Base and Research Methodology**

This vital part imparts each and every step associated with the study which ranges from the size of population to research design, sample framework, tools of data collection and statistical tools used to analyse data. The study, entitled “Development-Induced Land Acquisition, Displacement and Resettlement: A Study on Airport Projects in Kerala,” is

conducted by using both primary and secondary data. The research design is descriptive in nature and to some extent, it is prescriptive format as it provides implications and suggestions for future developmental projects and their related companions such as land acquisition, displacement, compensation, rehabilitation and resettlement.

The airport sector is the central point of this study and, therefore, the sample selection is purely based on the airport projects of Kerala. Currently, there are four civilian airports operating in the state; namely: Trivandrum International Airport Limited (TIAL), Calicut International Airport Limited (CCJ), Cochin International Airport Limited (CIAL) and Kannur International Airport Limited (KIAL). The former two airports belong to the category of public sector led airports and the latter two airports come under the joint venture model, that is, public-private-partnership (PPP) led airports. The researcher has selected two airports for the present study, each one from two categories – public led and PPP led airports. Thus, in this study, CCJ represents public led airport and KIAL reflects PPP led airport, both the projects retained table top runways. The former airport is located at Karipur in the district of Malappuram and the latter one is situated at Mattannur in Kannur district. Both of them acquired land and evacuated the local people and received green signal again and again from the Government in the form of notification for further land acquisition for their expansions.

### **1.6.1 The Sample Design**

The researcher selected a period of fifteen years between 1<sup>st</sup> January 1995 and 31<sup>st</sup> December 2010 for mobilising the required data on DPs who are relocated from the sites of CCJ and KIAL, for the purpose of comparison of two airport models in the state. The researcher has identified the total number of displaced households which marked 406 households during this reference period, of which, 214 and 192 households from CCJ and KIAL projects respectively. The technique of simple random sampling is used to identify 135 displaced households. The pre-tested scientific interview schedule is used to collect the required information from the selected respondents which include 71 households that were displaced by the CCJ and the remaining 64 households were evacuated by the KIAL.

Undoubtedly, special efforts are required to trace out the post-displacement location of evacuated persons as these people were scattered especially in the case of CCJ which had no land-based resettlement. The researcher made a rapport with the local people and it resulted in intimate discussions with the relatives, neighbours and Samara Samithi convenors. The senior citizens helped the researcher to identify the address including phone numbers of selected 135 displaced households. The secondary data about the notification of land

acquisition, actual date of land acquisition, compensation and rehabilitation measures were mobilised by using the technique of Right to Information Act, 2005, visiting the land acquisition office, revenue departments, referring to Government's Gazette, records and websites, social impact assessment surveys, existing research publications and books. Besides, the secondary data is also collected from the reports of the World Bank, World Economic Forum and also from Economic Survey, Kerala Economic Review and so on.

The sampled 71 Calicut Airport-induced displaced households are scattered in three districts; namely: Wayanad, Kozhikode and Malappuram. Thirteen households each from Pallikkal Bazar, Kodyamparamba and Kanjiraparamba, eight households from Koottalungal, four from Karuvankallu, three each from Areekode, Musliyarangadi, Tharayittal, Kadappadi and two households from Palathingal. All the aforementioned places belonged to the district of Malappuram. There is only one spot from Wayanad, that is, 3 households from Kalpetta. The Kozhikode district covers Kaithakonda and Ramanattukara, both of them contribute two and one displaced households respectively. However, the majority of selected 64 Kannur Airport-induced displaced families are living in the resettlement plots allotted in the Mattannur Municipality (Elannur, Keechery, Kara and Mattannur) by the Authority which accommodate around 38 of the samples. Keezhallur place contributes 12 households, 8 by Thalasseri and 6 by Pazhassi Panchayats.

The data on PAPs have been collected by the researcher from the households who are currently residing at the adjacent places of the two airports and expecting their evacuation by the Authority in near future. Moreover, these PAPs experienced the loss of lands, jobs, dairy farms and other forms of damages in the previous land acquisitions especially in the reference period of aforementioned fifteen years. However, they didn't experience the incidence of physical displacement. That is, the incident that happened to them is termed as economic displacement as far as the PAPs are concerned. The researcher has decided to use the tool of simple random techniques to select 121 project affected households from 364 aggregate economic displacees. This sample size includes 67 and 54 project affected households from CCJ and KIAL respectively.

The 67 samples (project affected households) selected are in relation to CCJ from a Panchayat - Pallikkal - and from a Municipality, Kondotty which includes two villages, Nediyruppu and Kondotty. The 37 project affected families come from five wards; namely: Airport (6<sup>th</sup>); Kumminiparamb (7<sup>th</sup>); Kodyamparamb (8<sup>th</sup>); Tharayittal (9<sup>th</sup>) and Koottalungal (10<sup>th</sup>). The remaining 30 PAPs come from Kondotty Municipality in which five wards are marked; namely: Kaithakkode (27<sup>th</sup>); Palakkapparambu (30<sup>th</sup>); Mekkadu (31<sup>st</sup>); High School Padi (34<sup>th</sup>) and Kumminippara (39<sup>th</sup>). The largest number of affected people are located in the

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Pallikkal Panchayat so that we take proportionally more samples, say 37 households from it. In the case of KIAL, the 54 project affected households are spread over Keezhallur Panchayat which give 30 households and the remaining 24 are collected from Mattannur Municipality (formerly known as Pazhassi Panchayat). Altogether the study includes 256 households, that is, 135 of displaced households and 121 of project affected households.

The table given below reflects the size of population and sample size of both physically displaced households (DPs) and economically displaced households (PAPs) which derived on the basis of Krejcie-Morgan formula.<sup>10</sup>

$$n = \frac{X^2 N P (1-P)}{e^2 (N-1) + X^2 P (1-P)}$$

where,

n = required sample size.

$X^2$  = the table value of chi-square for 1 degree of freedom at the desired confidence level (0.05 = 3.841).

N = the population size.

P = the population proportion (assumed to be 0.50 since this would provide the maximum sample size).

e = the degree of accuracy expressed as proportion (0.05).

In this study, the sample size derived scientifically by using Krejcie-Morgan formula as follows:

$$n = \frac{(3.841 \times 770)(0.5)(1-0.5)}{(0.05)^2 (770-1) + 3.841 \times 0.5(1-0.5)}$$

$$n = \frac{3.841 \times 385 \times 0.5}{0.0025 \times 769 + 1.9205(0.5)}$$

$$n = \frac{739.3925}{1.9225 + 0.96025}$$

$$n = \frac{739.3925}{2.88275}$$

$$n = 256.48$$

$$n = 256$$

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<sup>10</sup> Robert V. Krejcie & Daryle W. Morgan, 1970, Determining Sample Size for Research Activities, Educational and Psychological Measurement, 30, 607-610.

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**Table 1.1: The Sample Size of both Displaced and Project-Affected Households in the Selected Airport Projects of KIAL and CCJ**

Airport Projects	Land Acquired (acres)	Total number of affected families	No. of Displaced Families (Physical Displacees)	% of Physical Displacees to the total	Project affected Families (Economic Displacees)	% of PAPs to total	Sample size for DPs	Sample size for PAPs	Total sample size (DPs + PAPs)
Calicut Airport	151.8586	416	214	27.80	202	26.23	71	67	138
Kannur Airport	338.2710	354	192	24.94	162	21.03	64	54	118
Total	490.1296	770	406	52.74	364	47.26	135	121	256

Sources: Office of the Special Tahsildar LA (Calicut Airport), Tirurangadi, Malappuram

Office of the Special Tahsildar LA (Kannur Airport), Mattannur, Kannur

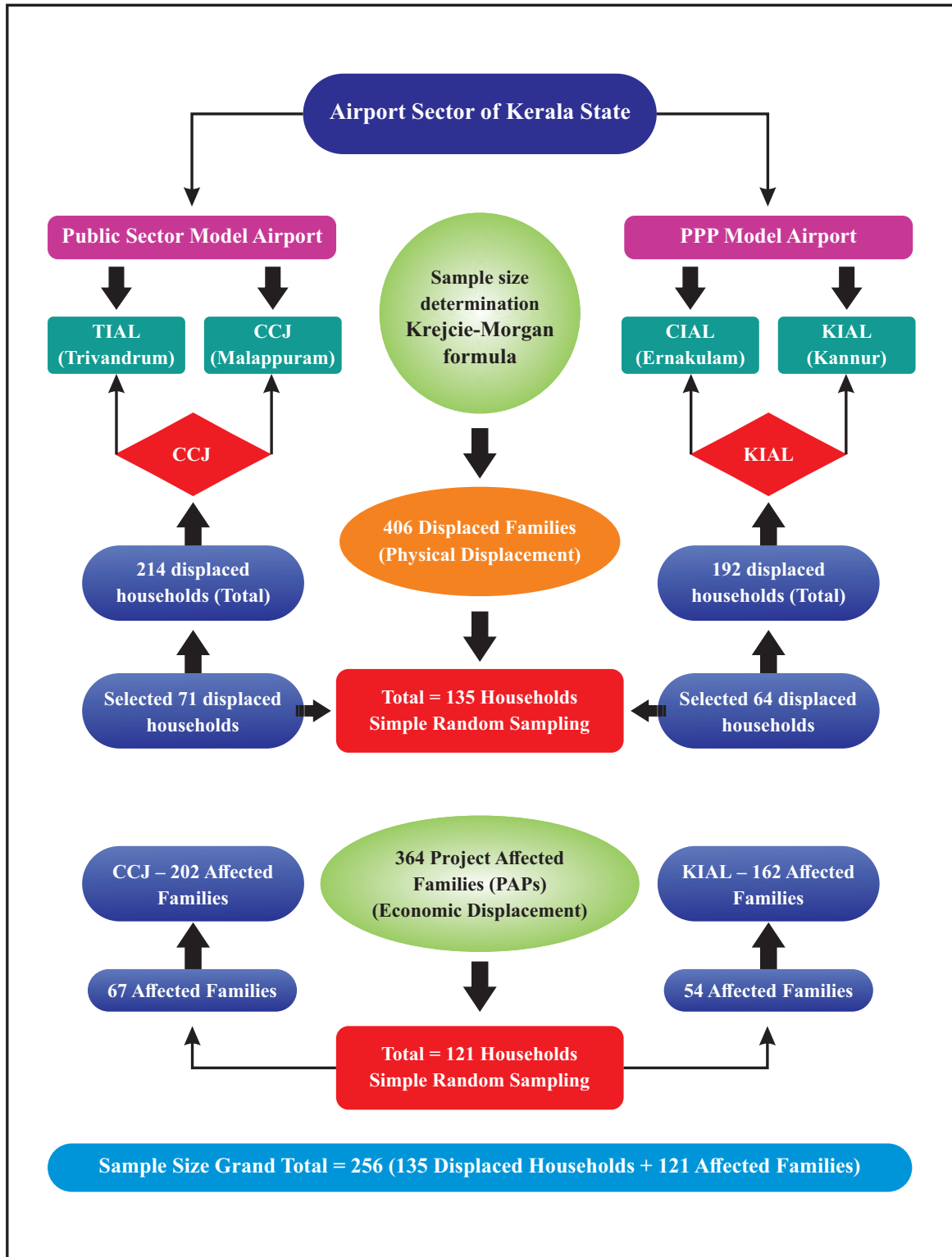
Note: DPs stands for Displaced Households & PAPs stands for Project Affected Households

In essence, the total project-affected persons under whom both physical and economic displacements come up to 770 households. The sampling technique under the research methodology of the study is portrayed in chart 1.1.

### 1.6.2 Analytical Methods

The careful analysis of data through coding, tabulation, cross sectional analysis, pie-diagram, histogram, bar diagram, trend lines and so on gave required inputs for the study. The tool of SPSS is extensively used in the analytical part of the study. Likert Scale, quartiles, non-parametric tests like Pearson's Chi-square test, Mann-Whitney U test and Wilcoxon Signed Ranks test, t-tests (independent samples test and paired samples test), ANOVA, post hoc test like Tukey's Honest Significant Difference (HSD) and other suitable techniques were used in this part. The inferences were made based on the statistical tests. Besides, the technique of Focus Group Discussion (FGD) is adopted to obtain qualitative responses from PAPs. The writing part of the research consists of seven chapters which are listed in the scheme of the chapters in the subsequent section of this chapter. The researcher has designed two separate interview schedules – one for the displaced households and the second one for the project affected households. The interview schedule is prepared after a thorough discussion with the academicians, DPs, PAPs, concerned officials, Tahsildars, NGOs and other related bodies. The researcher has conducted a pilot study by collecting some data from CCJ and KIAL and tested the viability of the data for analysing the stated objectives and hypotheses. The actual data collection took around four months, that is, exactly from April, May, August and September of 2019.

Chart 1.1: Major Steps Involved in Deciding the Optimum Sample Size



The study effectively incorporates an index called as ‘Quality of Life Index (QLI)’<sup>11</sup> which involves ten parameters; namely: homestead status; availability of land; livelihood status; annual income; food security; health status; access to education; access to infrastructure; kinship status and community life / social life. Each indicator of this index commands a maximum mark of 10 and minimum mark of zero. The aggregate score of ten parameters is fixed at 100. Its parameters include both economic and social variables. The QLI is constructed for each and every selected displaced household by making a demarcation between pre-displacement and post-displacement periods. It is very easy to compare the living standards of two periods of the households with this QLI - pre-displacement and post-displacement era since it frames separate scores for both the periods.

There are five categories of households formed based on this QLI score. These groups include the bottom level, that is, extreme poor status whose score is below 30. The QLI score of the next groups is between 30 and 49 which manifests poor status, between 50 and 74 reflects fair status / satisfactory level, between 75 and 89 shows good status and between 90 and 100 commands very good situation. The details of QLI are attached to the appendix part of this thesis. This index, indeed, is effective to trace out the impact of airport-induced displacement on inhabitants which clearly shows either improvement or impoverishment. Additionally, this index is highly useful for the purpose of comparison of the living conditions of DPs in the post relocation phase between CCJ and KIAL projects.

### 1.6.3 Key Words: Meaning and Definition

The researcher is attempting to give a clear-cut definition of key words used in the present study.

- ✎ **Displaced Persons (DPs):** This group of people are forced to move from their native place to a new area as their homestead which is acquired by the Government for airport developmental projects. In most cases, the displaced persons lose their dwellings and even their means of achieving livelihood. That is, they are physically expelled from their original place to initiate the projects. As Murickan (2003) observes: Displaced persons are forced to move out of their home when their homestead is acquired by the project.
- ✎ **Project Affected Persons (PAPs):** This segment has resulted in the loss of livelihood and some portions of land on account of the airport project, however, not confronted with

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<sup>11</sup> The UNDPs’ Human Development Index (HDI) and writings of A.K. Sen and Michael Cernea have immensely contributed in designing the index. The study adopted the method of the construction of QLI based on different studies conducted by experts including Manjula’s Major Research Project (UGC F-No.5-121/2010 (HRP) on “Impact of Land Acquisition for Development on the Lives and Livelihoods of Displaced Land Owners in Kerala.” In addition to these, the scoring pattern of the Physical Quality of Life Index (PQLI) is followed in this index.

any forms of physical displacement. At the same time, any further expansion of existing project in future may evacuate these people from their present location. Murickan (2003) rightly articulates that the project affected persons are deprived of their livelihood fully or partially without being physically displaced. In some cases, their individual land may be acquired but not their homestead. Generally, PAPs belong to the category of economic displacement.

- ✎ **Development-induced Displacement:** It is the forcing of communities and individuals out of their homes, and their homelands for the purpose of economic development. Here, the displacement of inhabitants is caused by the extension of airport projects. That is, airport-induced land acquisition and displacement of local people.
- ✎ **Resettlement:** It refers to one-time relocation with or without other economic, social and cultural support (Murickan, 2003). It indicates the process of moving displaced persons to new areas to lead their life in the post-evacuation period.
- ✎ **Rehabilitation,** a broad concept, is defined as “grafting a community at a new place and nurturing it to ensure its steady and balanced growth” (Joshi, 1997).
- ✎ **Host Population:** As per the literature review, wider considerations of project impacted persons have been advocated. For instance, Scudder (1996) suggests that our understanding of project impacted persons must include not only those directly or physically displaced by loss of home, but also the host population who are forced to accommodate displaced persons; all others who are neither directly displaced nor are hosts, yet who live in the vicinity of the projects; and project immigrants.

### **1.7 Theoretical Framework of the Study**

The present study thoroughly scrutinises the prominent existing theories and models associated with DIDR and made a sincere attempt to understand an analytical model to analyse the collected data and thereby arrive at inferences. It is important to understand the implications of one of the important theories of microeconomics – “Pareto Optimality” or “Pareto Efficiency,” propounded by Vilfredo Pareto, an Italian economist. It clearly articulates that a policy designed by the authority is incomplete as long as a particular individual benefit / gain is enlarged at the expense of another individual. In this context, it is also very prominent to incorporate the ideology, popularly known as “Kaldor-Hicks Compensation Criteria” which distinctly asserts that a change that brings into the society on account of a policy or project becomes positive when the gainers from the project can compensate the losers and still there is net gain existed in the system (Koutsoyiannis, 1979).



The popular model of Impoverishment Risk and Reconstruction Model developed by the renowned social scientist, Michael Cernea help the policy makers as well as the researchers to identify, quantify and evaluate the potential risks associated with development-induced displacement and also put forward the measures to prevent those risks and thereby restore the normal life or even better the life of the project affected persons (Robinson, 2003). Michael Cernea's "Impoverishment Risk and Reconstruction Model" is absolutely conducive to apply in the context of India's developmental project-induced displacement, rehabilitation and resettlement. Moreover, various studies on resettlement experiences of India profoundly accepted the basic tenets of the model such as risk and reconstruction which is extensively applied as descriptive, empirical and also as a sagacious tool for analyzing all the aforesaid parameters (Mahapatra, 1999).

Lakshman Mahapatra, renowned social scientist, had conducted a comprehensive empirical study on DIDR in India and enumerated that between 1947 and 1997 there were around 25 million people displaced or relocated as a part of installation of developmental projects in the country. The study holistically adopted the model of Michael Cernea, "Impoverishment Risk and Reconstruction Model" for analyzing challenges associated with DIDR (Mahapatra, 1999). Let us examine the popular theories - The Scudder-Colson Model and Impoverishment Risks and Reconstruction (IRR) Model.

### **1.7.1 The Scudder-Colson Model (1996)**

This model had appeared in the early 1980s which retained four stages of resettlement mechanisms ranging from recruitment, transition and potential development to handing over or incorporation. This model clearly looks at the displaced persons' socio-economic and cultural components which are responsible for resettlement. The first phase is called as 'recruitment' where the development and resettlement plans are designed by the authority/policy-makers and the displaced persons may not participate in this process or even they may not be informed of the matter.

The second stage is known as 'transition' in which the inhabitants are confronted with fear, stress, and tension as people come to know about the possible and inevitable displacement later. The movement of people from their original or native place into a new settlement area occurs in the third stage which refers to 'potential development.' Here happens a physical relocation. The displaced people start to rebuild their homes, livelihood, economic status and social capital. The last and the fourth stage is represented by 'handing over/incorporation' which manifests the transmission stage where the current generation hands

over reconstructed economic setup and social fabrics to their next generation. As per this model, the resettlement mechanism is regarded as successful when the fourth stage is realised.

To a large extent, one of the major limitations of this model is that the original version of it is designed for voluntary displacements and this model itself proves a failure as majority of the DIDR cases is involuntary or forced in nature and there is a big contrast with its four stages of resettlement process. The inventors of this model later incorporate the elements of successful involuntary resettlements but fail to maintain the broadness for further analysis on unsuccessful DIDR as noted by many researchers (de Wet, 1988; Partridge, 1989).

It is highly essential to discuss the holistic and comprehensive model and analyse and portray the culminated complex issues / risks associated with the DIDR as most of it resembles unsuccessful rehabilitation and resettlement. It was at this stage that the idea of searching for a new model struck to Michael Cernea's mind and the result was the development of a popular model known as Impoverishment Risks and Reconstruction (IRR) model which extensively used in the World Bank funded projects' assessment and other project fields as well.

### **1.7.2 Impoverishment Risks and Reconstruction Model (IRR Model)**

The period of 1990s marked a golden era when we consider a theoretical model for involuntary displacement, resettlement and rehabilitation developed by Michael Cernea, renowned sociologist who worked for the World Bank as Research Officer on DIDR for a long period whose treatise is entitled as "Impoverishment Risks and Reconstruction (IRR) Model." The multi-faceted dimensions and attributes of the IRR Model are widely examined and illuminated in his series of writings during the 1990s (Cernea, 1990, 1995, 1996, 1998, 1999 and 2000). Of course, the striking fact is that all the studies on DIDR invariably reviewed and adopted the IRR Model in general and with some modifications like addition or omission of some risk factors of the model in particular.

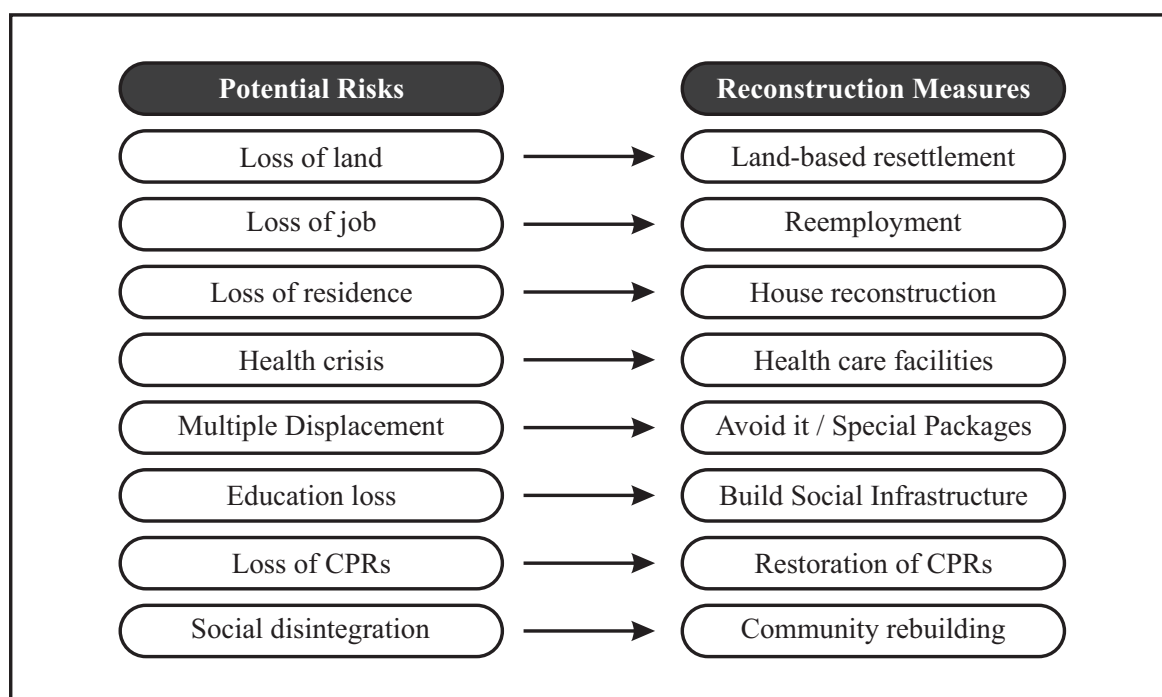
Cernea's studies have opened up new vistas of research and designed a new door on risk, impoverishment and reconstruction – the fundamental tenets of the IRR Model. Cernea visibly articulates eight interrelated factors which are well-connected and reinforcing each other which manifested the potential risks for impoverishment of displaced inhabitants. The eight potential risks to forced displacement include loss of land, loss of job, loss of residence, marginalization, poverty, malnutrition, increased morbidity and mortality, loss of access to collective/community property resources and social disintegration or stigmatization. However, there is enough flexibility in the model guaranteed (Cernea, 1998) to integrate related variables into the model which is necessary for some studies on particular area as

done by Downing (1996) who added two variables; namely: loss of access to community services and violation of human rights and Mathur (2008) effectively attached the education loss to it. The present study gives special attention on the impact of multiple displacement on these listed potential risks as the airport projects in Kerala caused double or multiple displacements of local people.

More interestingly, in his model, Cernea identified not only eight potential risks to displacement but also possibilities of reversal of these factors for the fair resettlement of project affected persons. It is economically viable to prevent the predictable deterioration of living standards of DPs/PAPs and practically improve their life during the post-displacement period by envisaging constructive policies and effective rehabilitation packages.

The IRR Model is extensively applied in a number of studies at global level. The studies on DIDR in India are strategically incorporated in the IRR Model and systematically scrutinized with the eight potential risks to displacement and resettlement by comparing the two distinct periods – pre-displacement era and post-displacement era (Mahapatra, 1999). The two dream projects of India – the upper Indravati Hydro-electric project and the Orissa Water Resources Consolidation project used the IRR Model for analysing the resettlement of displaced persons (Thangaraj, 1996). Interestingly, the eviction or dislocation of people as by-product of war, natural calamities, refugee studies is examined by applying the IRR Model (Gizachew, 2017).

**Chart 1.2: Impoverishment Risks and Reconstruction Measures**



In essence, there is development if the airport project imparts more gains to DPs which are capable of offsetting the adverse impacts (loss) emanated from the development of the projects. It offers better living standards for the project affected persons in the post-relocation phase when we compare it with the pre-evacuation phase. Michael P. Todaro and Stephen C. Smith rightly articulate that: “Development indicates the process of improving the quality of all human lives and capabilities by raising people’s levels of living, self-esteem, and freedom.”<sup>12</sup> Similarly, there is impoverishment if the living conditions of DPs/PAPs are deteriorating after displacement and the rehabilitation packages are ineffective to restore even their previous normal life.

At the same time, the IRR Model is not against developmental projects but recognises that the infrastructure led development is indispensable for overall development of the country – to generate job opportunities, enhance regional connectivity, rapid GDP growth rate, speedy industrialization, modernization, stimulate capital formation and so on. It necessitates land acquisition which displaces inhabitants from their native places and resettle in the new areas. The model not only identifies the potential risks, their impacts on displacees and predicts the impoverishment but also measures to restore the life of PAPs/DPs and thereby attempts to bring out a comprehensive alternative way of development in which it is possible to ameliorate the life of displaced persons. Hence, this model clearly discards the principle of zero-sum game, gains of one segment leads to the loss of another segment.

Cernea’s Model vehemently opposes those projects which massively displace people without proper rehabilitation packages. He argues very strongly for designing policies and legal frameworks for reversing the identified eight inter-related potential risks by ensuring minimum displacement with humane resettlement packages and guarantee the life of the DPs who contribute immeasurable things for the development of the projects, improving in all dimensions when compared to pre-displacement period. The IRR Model recommends a resettlement package filled with eight variables which reverse the aforementioned potential risks-induced impoverishment and transform the life of the affected persons. Its main features are land-based resettlement, reemployment, house reconstruction, social inclusion, improved health care, adequate nutrition, restoration of common property resources and finally community rebuilding. The present study attempts to add the variable of educational loss to the list of eight potential risks.

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<sup>12</sup> Todaro, Michael P and Smith, Stephen C, “Economic Development” Pearson Education Ltd, Noida, UP, India, 2019, p.7.

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The researcher can measure all the aforementioned eight variables of Cernea's IRR Model quantitatively as well as objectively to some extent. They can improve the lifestyle of displaced persons with strong political will, appropriate laws, honest bureaucrats, proper funding and thereby reassuring them of becoming part and parcel of progress (de Wet, 2006). In literature, lots of studies are available which manifest the involuntary displacement / forced eviction and resettlement in the name of development resulting in the impoverishment of DPs and dispossession rather than augmenting their living standards (Koenig, 2001; de Wet, 2005; Manjula, 2013; Mathur, 2013; Das, 2017; Bhaduri, 2018).

The factors like lack of planning and long-sightedness, poor compensation and delay in payment of compensation amount and involuntary displacement are responsible for marginalization of urban poor in the name of urban development and modernization (Mathur, 1995). Vast majority of the displaced people are not in a position to rebuild / restore their livelihood and look after their family-members and become further impoverished in the post displacement period. These writers strongly recommend for extending the helping hand of the authority / Government / NGOs to rebuild the socio-economic fabric of the displaced persons who are the real victims of development (Cernea, 1996; Mahapatra, 1999).

Design project plan and give green light to commence the project if it demands minimum displacement of people and give adequate provisions for reconstruction of material as well as social wellbeing of the project affected persons (Smith, 2010). The development projects are deemed to be good if there are good rehabilitation packages which consider DPs / PAPs as part of it and redress immediately the grievances associated with the land acquisition and displacement. The affected persons' active involvement is inevitable because DIDR is a complex phenomenon which involves social, economic, cultural, political, environmental, psychological and spiritual elements (de Wet, 2005).

The important point noted by the policy-makers is that how it is possible to reverse the potential risks to displacement and thereby restore the livelihood of the displaced persons in a better way rather than identifying the hindrances to the realisation of the project (de Wet, 2006). The endeavour to frame good policies and laws become futile unless there is ground level effective implementation by the concerned authority. Both policies and their implementation are treated as a single process which essentially requires well coordination and communication among various arms of the concerned departments (Rew, Fisher & Pandey, 2000). The economic or material impoverishment is the main reason for raising resistance and displeasure among the displaced persons. The frustration is aggravated

when they are confronted with low level basic facilities including water, power, roads and sanitation. Another reason is associated with the host population who call them strangers and are always unwilling to cooperate with the newcomers (Koenig, 2001).

The social scientists effectively distinguish capital loss from income loss on account of developmental projects and argue for ensuring fair compensation to displaced inhabitants. The income loss is invisible and not included in the determination of compensation. Moreover, the assessment of capital loss is inadequate as it offers only for restoring the same capital assets at the time of displacement in terms of existing market rate and not in replacement cost. The fair and equitable compensation holistically includes the values of capital loss based on replacement cost and also considers income loss to the affected persons (Cernea, 1996).

The rehabilitation packages ignore the sacrifice, agony and stress faced by the evicted people in the form of alienation of social capital. It includes mutual trust, social coordination, mutual help, neighbours, sentiments and emotions, relatives and kinship. They bitterly experience loneliness, stigmatization, isolation and cultural breakups especially in the host areas. No technique is available to measure the values of all these social capital loss exactly as they are beyond monetary measurement. Undoubtedly, the social dislocation and loss of social capital aggravate the disutility or distress among the displaced people (Cernea, 1996).

## **1.8 Chapter Scheme**

Chapter I covers the introductory part of the thesis which holistically covers the design of the study. It includes objectives, hypotheses, conceptual and theoretical framework of the topic, statement of the problem, relevance of the study, sample design, research methodology, pilot study, limitations of the study and so on.

A detailed review of related literature is given in the second chapter which covers important empirical, theoretical and policy level studies linked to DIDR. The researcher has categorised the available reviews on the broad areas of development-induced displacement and resettlement into three major heads; namely: empirical studies on socio-economic impacts of developmental projects, land acquisition and displacement; rehabilitation and resettlement of evictees and institutional and legal framework on DIDR. The holistic review of literature, of course, helps the researcher to identify the existing research gap and thereby design the subsequent chapters to fill the aforementioned gap through a sagacious research work.

The third chapter, entitled, “An Overview of Transport Infrastructure Advancement in India” covers a brief history of sectors of roads, aviation, railways, shipping and inland waterways of India in general and Kerala in particular. A special attention is given to analyse the history, traffic movements and recent trends of Kerala’s airport sector in a detailed manner. This chapter has been designed by the researcher on the basis of secondary data. A brief profile of four civilian airports of Kerala State which is added to this chapter gives an insight into the aviation sector of the state.

A detailed analysis of socio-economic impact of airport-induced displacements on inhabitants is given in the fourth chapter. The chapter, entitled, “Socio-Economic Impact of Airport-Induced Displacements on Inhabitants”, is entirely based on the analysis of primary data which are collected from the group of displaced households who were evacuated by the authority during the reference period from 1995 to 2010 to build and expand Calicut Airport and Kannur Airport. It includes demographic profile of the displaced inhabitants and their socio-economic status before and after displacement.

The fifth chapter, titled, “Rehabilitation and Resettlement of Evicted Families: A Comparison between Calicut and Kannur Airport Projects”, holistically covers the nature and pattern of rehabilitation and resettlement of displaced inhabitants that had been done under the aegis of Kerala State Government. This chapter gives an insight about R&R with respect to intra-airport developmental projects in the state. This chapter is also based on primary data analyses and inferences are given based on a tool known as quality-of-life index (QLI).

The sixth chapter, framed under the title of “Airport-Induced Land-Acquisition and Project Affected Persons: The Way Forward,” imparts the socio-economic profile of project-affected persons and their responses about the possible land acquisition and displacement for further expansion of the airport projects in the coming days. The primary data were collected from 121 households who are living in the adjacent places of Calicut and Kannur airports and they are anticipating further notification for their land acquisition by the government for airport projects. The technique of Focus Group Discussion is extensively used to gather qualitative data from PAPs.

The last chapter, titled as “Findings, Policy Implications and Conclusion”, gives the overall view of the study and makes inferences on airport-induced displacement and resettlement. This chapter also covers the detailed findings and observations which are compiled based on the analyses of primary as well as secondary data and focus group discussion that are done in the previous chapters. The implications part of the chapter adds the views and experiences of the researcher and also the guidelines for future research, policy-makers and government.

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### **1.9 Limitations of the Study**

The researcher did all possible things to maintain the quality of the work. However, the thesis may not be free from shortcomings. The present study involves only two airports and it is a little bit irrational to make a general conclusion about the whole developmental projects-induced displacement, rehabilitation and resettlement in general or about the whole airport projects of the state in particular, based on the results of it. Even the two airport projects show the differences in the nature of land acquisition, compensation and rehabilitation. More interestingly, the anticipations of PAPs are different between these two selected airport projects.

Special difficulties arose in the identification of the proper residence of the displaced persons, especially in the case of Calicut Airport site. Sometimes we fixed the date and time of interview with them but when we reached there, we missed the expected persons. Hence, we repeatedly contacted them and mobilized the required data. The local people strongly prevented the data collection by misunderstanding that the researcher belonged to the Airport Authority and was trying to conduct a social impact assessment survey on their behalf. The researcher spent enough time to convince them that this data collection is basically for his PhD purpose.

All the shortcomings of empirical studies, sampling techniques and statistical packages are equally applicable to this study as well. The inferences are made based on the selected samples of 256 households. Anyhow, the present study will be very useful in terms of academic as well as practical dimensions. The work will insist others to do much research in this field especially in the areas of environmental impacts on account of airport projects. It is a stimulus for designing future developmental projects model with minimum displacement, environment friendly and human friendly.



## CHAPTER II

### DIDR: REVIEW OF LITERATURE

#### 2.1 Introduction

Development-Induced Displacement and Resettlement (DIDR), a broad concept, has different forms based on the nature of the projects or events that eventually lead to land acquisition and displacement of native people. Suppose, the authority or developer forces local people to leave their valuable assets including homestead for a proposed project like airport, national highway, railway, dam, mining, atomic plant and so on, that will come under the category of project-induced displacement and resettlement. Here, the two popular segments are dam-induced displacement and resettlement and mining-induced displacement and resettlement (Cernea, 2007; Kumar & Mishra, 2018). Another category of DIDR is conservation-induced displacement and resettlement as the land use pattern has been changed to build a national park, biodiversity reserve and so on (Mishra, Badola & Bhardwaj, 2007). Thomson (2014) urges that land is needed for large-scale agricultural projects also which results in land acquisition and displacement, broadly known as land-grab-induced displacement and resettlement. Besides, Faas (2017) articulates that people are relocated from their native place to new places to save people from catastrophic natural disasters like earthquakes, tycoon, volcanic eruption, landslides, etc., popularly known as disaster-induced displacement and resettlement. Holtzman (2004) discusses the problems arising from evacuation of inhabitants created by conflicts in his book, 'Living in Limbo: Conflict-induced displacement in Europe and Central Asia.' That is, sometimes, the authority including international watchdogs shift people from one area to another on account of revolt, conflicts, genocide, etc., which is called as conflict-induced displacement and resettlement.

Systematically, the present chapter, entitled, DIDR: Review of Literature, classified into three parts; namely: empirical studies on DIDR; pattern of rehabilitation and resettlement; and policy responses to DIDR in India which further categorised into multiple sections such as land acquisition legislations during the British administration in India; judicial interventions, observations and policies in the post-independence era and major policy initiatives on DIDR in the recent decades (2010 onwards). There is enormous literature

available on DIDR which ranges from theoretical and conceptual framework to empirical studies, perspectives of human rights, social activists, Non-Governmental Organizations (NGOs) and environmentalist's involvement in the areas focusing on human rights violations, ecological imbalances, ethical and efficiency issues. The existing thesis and studies may be categorised as international, national, state and regional levels analysis of land acquisition, involuntary displacement, compensation and resettlement. The extensive literature review definitely helps us to trace out the research gap in this field and enables the researcher to frame suitable hypotheses.

## **2.2 Empirical Studies on Project-Induced Land Acquisition and Displacement**

Millions of people were displaced on account of infrastructural / developmental projects (Cernea, 2003; Terminski, 2014). Majority of project-induced displaced persons are confronted with multi-dimensional stress – mentally, economically and socially, observes in a study conducted by Oliver & Smith (1991) – and they are leading a deplorable life in the post-displacement period (Bisht, 2009; Downing, 2009; McDonald-Wilmsen & Webber, 2010). The striking fact is that there was no proper estimation and documentation of the exact number of project-induced displaced persons, both at global and national levels (Fernandes, 2001; Mohanty, 2005). Hoshour and Kalafut (2010) argued that the DIDR is a global phenomenon and more interestingly, two nations from Asian continent - China and India - have experienced large scale displacement of local people for developmental projects. The majority of displaced people experience impoverishment catastrophically and they have miserably failed to return to their former normal course of life (Mahapatra, 1999).

The existing literature in Economics underscores the decisive role of both the greenfield and brownfield developmental projects and their positive multiplier effects in a country like India. The country is known for its infrastructural deficit and these projects are the prerequisites for further development. The positive effects of these projects and their favourable externalities are highlighted by the Government, policy-makers and beneficiaries. There is little attention given to the malevolent sides of the projects and their negative externalities in the form of water contamination, air-pollution, noise pollution, environmental degradation and ecological imbalances. The GDP centric point of view of analysis is always not good when we talk about sustainable development and inclusive growth (Stiglitz, 2010; Dreze & Sen, 2013).

Indeed, no one can undermine the positive role of developmental projects in accelerating growth of the country by highlighting the malevolent side of DIDR. As a strategy to reduce poverty the World Bank (2014) has strongly recommended large scale land acquisition

for agricultural development with mechanization which will generate jobs and income, especially among vulnerable segments of the society. The incidence of relocation of local residence on account of developmental projects, such as dam construction, and the urban and transportation development sectors, is increasing as shown by the studies, which was around 10 million people each year during the last two decades of the 20<sup>th</sup> century and, surprisingly, this figure has increased to 15 million people yearly in the first decade of the present century, the 21<sup>st</sup> century (World Bank, 2004; Cernea, 2007). However, the figure of displacement will be much higher if we consider all forms of developmental projects-induced displacement. The victims of developmental projects include a majority of vulnerable sections of the society. It is estimated that 8.5 million people who belonged to the category of Scheduled Tribes (STs) were dislocated during the period between 1951 and 1990; it reflected, approximately, 40 percent of total displaced persons, and more sadly, only 25 percent of them were resettled (Stanley, 2004).

Not surprisingly, there is consensus among social scientists, academicians and policy makers that the years during the 1980s are denoted as ‘the decade of displacement.’ Mathur (2011) highlights that the previous century, that is, the 20<sup>th</sup> century, is best known for massive displacement, which is induced by developmental projects, of households, peasants, workers and the marginalized and forced them to find out alternative livelihoods, homesteads elsewhere. Guggenheim and Cernea (1993) emphasise that the inadequate compensation, unscientific rehabilitation packages and unjust resettlement measures are exacerbating problems in their life further and deteriorating their living standards day-by-day. In addition to these, there are sentimental aspects associated with DIDR and strongly linked with emotional ailments, stress and other social effects on PAPs (Das & Shukla, 2011; Bennett & McDowell, 2012). The studies strongly argue for adequate and fair compensation, better rehabilitation and humane resettlement for displaced and affected persons. However, the empirical data gives very horrible information about the poor compensation and inhuman rehabilitation packages. For example, 75 percent of the total 20 million displaced persons that happened in the last 40 years of the previous century have not been resettled in the proper ways (Fernandes, Das & Rao, 1989; Fernandes, 1991).

Fernandes (2006) argued that roughly, 50 million acres of land area were acquired and converted for infrastructure advancement in post-independent India. Millions of people, approximately 50 million persons, were uprooted from their native places and they were forced to surrender everything for projects like large dams and irrigation plans in Bhakra Nangal, Hirakud, Damodar valley, Narmada valley, large scale steel plants and their allied

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townships in Rourkela, Durgapur, Bhilai, and Bokaro, new towns and housing complexes, numerous defense establishments across the country, greenfield and brownfield airports and runways, multiple line highways, expressways, new ports, thermal power plants, coal mines, aluminum plants and bauxite mines, fertilizer plants and so on. The fact is that hectares of agricultural land were converted to commission many of the aforementioned projects in India (Chakravorty, 2013). The green signal from the Government to enhance infrastructural facilities, build industrial corridors, techno parks, airports, etc. under the aegis of private developers shows that there is an unprecedented tendency of procuring land by the authority from marginalized land owners in the country (Murikkan, 2003). The process of Land acquisition from private land owners for developmental projects is complex as it involves economic, social, political and sentimental aspects.

It is estimated that around 100000 local people were displaced for building the Aswan High Dam in Egypt (Cernea, 1997); approximately, 700000 persons were evacuated for commissioning Merowe dam in Sudan (Robinson, 2003). The mechanism of land acquisition for developmental projects by the authority is based on expropriation channels rather than a fruitful discussion or negotiation with the project-affected persons. Vanclay (2017) observes that the empirical studies reveal a pathetic living condition led by the majority of these people in the resettled areas. Apart from project-induced displacement and resettlement there is mega-sports event-induced displacement and resettlement, most recently, for example, the London Olympic Games in 2012 (Bender, 2008), FIFA Football World Cup in 2014 and Olympic Games in 2016, both events were held at Brazil (Sánchez & Broudehoux, 2013; Butler & Aicher, 2015).

Displacement on account of developmental projects may be either in the form of physical displacement, which reflects a physical movement of project affected persons from native place to new location, or economic displacement (Downing, 2002; IFC, 2010) as the project adversely affect their life in the ways of loss of livelihood or force them to find out alternative income generating activities and also other development-induced socio-economic impacts up on them. The authority or developer of the project gives only compensation to affected households and ignores all other socio-economic aspects (Cernea, 1999; Varia, 2013). Undoubtedly, the asset in the form of land is considered as life itself by many land-holders (Colchester et al., 2007; Wickeri, 2010) and obviously, every inhabitant is to attached a place where he or she was born or has been living for many years with a sense of belongingness or emotional attachment with the place (Vanclay, 2017). The social scientists vehemently discard the arguments mainly raised by the project developers and

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policy-makers that displacement and related pain and sacrifices are indispensable part of economic development and must be regarded as a necessary evil to materialize cherished public goals (Cernea, 2007; Mathur, 2011; Bugalski, 2016).

Lobo and Kumar (2009) clearly revealed that the modern complex world is in need of a very large area of land for developmental activities. At the same time, one of the complicated factors in the way of fulfilling the task of commissioning a developmental project is land acquisition and related matters like compensation, resettlement and rehabilitation (Singh, Kothari & Amin, 1992). The developmental projects have both pros and cons. The benefits of a project should outweigh its costs. This criterion should be taken into account before accepting a project. This measurement of gain and loss should consider both material and human capital. If the Government's intervention in matters regarding land acquisition fails to recognise human capital properly and undermines the capability of the affected persons to enjoy the freedom and willow their choice is the apparent violation of human rights (Dreze & Sen, 1999).

Vithayathil and Sunny (2009) stated that the international airport project in Kerala, Cochin International Airport Limited (CIAL), confronted the issues related to land acquisition and compensation packages apart from the issue of mobilising funds from NRIs. The state Government had applied the Land Acquisition Act of 1894 as the yardstick law for acquiring land for CIAL and also for other projects till the enactment of new Act in 2013. The authority had conducted various rounds of negotiations with the primary stakeholders of the project including land owners to find out amicable solutions with respect to the price of land, reservation of jobs for displaced families inside the project and so on. The land acquisition for CIAL displaced around 872 households and 1300 acres of required land were procured from 2300 land owners. Moreover, the authority had designed a comprehensive rehabilitation package for the persons affected by the project. Varkkey and Raghuram (2001) added that the main attraction of this rehabilitation package was land-based resettlement of affected families who lost houses, that is, 6 cents of land were provided to each family irrespective of the extent of land acquired by the government for the project. The authority had identified three locations from the adjacent places and allocated six cents of land to affected families which was popularly known as "Six Cent Colonies."

In India, a comprehensive empirical study related to DIDR at national level was led by Indian Social Institute (ISI), Delhi which systematically examined all major developmental projects envisaged in the different states during the period between 1951 and 1995. The

study was conducted under the leadership of Walter Fernandes, the then Director of ISI along with other renowned social scientists. The important studies included the state of Orissa (Fernandes & Asif, 1997), Andhra Pradesh (Fernandes, 2001), Goa (Fernandes & Naik, 1999), Jharkhand (Ekka & Asif, 2000), Gujarat (Lobo & Kumar, 2009) and Kerala (Murikkan et al., 2003). The study revealed the awful fact that 75 percent of the total displaced persons who constituted around 20 million were not properly rehabilitated and their life became more pathetic after the displacement and resettlement. A deep study about the existing socio-economic problems is inevitable along with the studies about the different aspects involved in the developmental activities. They cannot be consoled by offering them attractive compensatory packages or a residential building to live in just before they are evicted from their precious possessions.

The projects acquired around 6 percent of the total land area of the country. The area came to 15 to 20 million hectares in India as whole, around half of it being common property resources including 25 percent of forest land. The largest number of persons were displaced in India on account of dam construction, according to Fernandes (1998); this figure was calculated at 1.64 million during the period between 1951- 1995, 25 lakhs by mines, 12.5 lakhs by industries and 6 lakhs by wildlife sanctuaries. The tribal population consisted of around 8 percent of the total population of India but the percent of project-induced displacement of tribals came to 40 (Fernandes, 1998). In the state of Kerala, during the same period 1.55 lakh hectares were acquired which constituted 4 percent of the state's total land territory (Lobo & Kumar 2009).

There wasn't much resistance during the early period of independent India as patriotic, generous and philanthropic people were ready to surrender their land and other assets for developmental projects and were satisfied in the sense that they were going to become part and parcel of the nation-building process. The study revealed the large number of displacements on account of 3300 dams which figured at 21 to 33 million and discussed the factors responsible for less resistance from the part of DPs / PAPs. The situation has changed in the present scenario as the land becomes expensive and projects even demand high densely populated regions and subsequently resistance against the project becomes a common phenomenon in the country. Das and Shukla (2011) observe in their study that the segment of women belonged to the worst victim's group as far as the DIDR is concerned. The authority always tries to evacuate inhabitants speedily from the proposed project site to materialize the projects plan of the private and foreign investors. The project affected people are forced to resettle in the new settlement area fixed by the Government which

often paves the way for the formation of slums and associated serious problems. The people, who contribute everything for the development of the project, are forced to live together by sharing minimum basic amenities (Patel, d'Cruz & Burra, 2002).

The challenge of displacement of inhabitants for developmental projects like construction of dams, railways, airports and roads is often regarded as a necessary evil for attaining modernization, renovation and development of the country because a section of people is displaced involuntarily or even forcefully for ensuring greater good for the public or simply there is public purpose behind the developmental project. The involuntary displacement of inhabitants results in a lot of socio-economic impacts on project-affected persons (Siddiqui, 2012). Higher economic growth, of course, demands more energy, sophisticated technologies, infrastructural advancement and so on which invariably needs more land and thereby displacement of people as supply of land is fixed. In India, between 1950 and 1990, 2.55 million people were displaced for mining projects. In a study conducted by Downing (2002) estimates that the number of mining-induced displacement is 15000 for Freeport mine, 30000 for Tarkwa mine and 37000 in Indonesia, Ghana and South Africa over five years, respectively. The problems which they faced and which they are still facing cannot be solved only by way of resorting to evictions and such other programmes.

Presently, the State of Kerala is confronting a difficult situation in which the concerned authority is struggling to acquire land at reasonable rate from the local people for developmental projects. The issue becomes serious as the State is known for high density of population – 859 persons when compared to the national average of 382 persons per sq.km. (Census, 2011) - which results in large-scale displacement of natives on one hand and the high demand for additional land for infrastructure advancement on the other hand. Actually, the paucity of available land with the government or public forced the authority to acquire land from private parties. Land acquisition, payment of compensation, speedy rehabilitation and humane resettlement are the leading hot topics when we consider the matter of developmental projects in the State. Of course, this complex situation has created delay in realizing many projects like expansion of existing airport projects and has increased pending cases with multi-level courts, serious agitations against the projects by PAPs and so on (Kumar, 2013).

Acquisition of even a small area of land in Kerala invariably leads to mass displacement of inhabitants in the affected area. Kerala is one of the most thickly populated states in India. Many infrastructural developments in some states of India are possible without much

displacement and protests from local people because of the low density of population and the availability of vast areas of land. Contrary to this, even a small project in Kerala often adversely affects many people. A number of families are displaced by such projects. The recent notification for acquiring 18 acres of land for the development of Terminal II – Phase II of Trivandrum International Airport Ltd (TIAL) would displace around 73 families in a stretch and the loss of land to another 32 families who are living in the adjacent places of it. Undoubtedly, the renovation of this project affects around 444 persons directly. An extent of 18 acres of land proposed for the project is marked from Thiruvananthapuram Taluk, that is, Pettah Village and the ward of Chakai, Trivandrum Corporation and the area of Vayyamoola (Thomas, Pillai & Franklin, 2018).

Obviously, the aviation industry is one of the growing sectors of India which handles a large number of passengers and manages tonnes of cargo every year. The Government is committed to enhance the quality of air service and ensure the affordability of air travel by setting up of more regional airports in the country and enhancing the capacity of existing airports under the scheme of UDAN. The Ministry of Civil Aviation has designed another novel scheme called NABH (NextGen Airports for BHarat) Nirman initiative. Actually, the scheme, announced in the Union Budget, 2018-19, upholds a target of creating 100 greenfield airports in the country in the coming 10 years by investing Rs. 2 trillion. It also endeavors to augment the capacity of the airport more than five times to manage one billion trips annually (Union Budget, 2018-19). The scheme retains mainly three attributes. Firstly, the acquisition of land from the local people for airport development should follow the principles of equity, fairness and justice. There will be minimum disturbance to land owners by ensuring the participation of project-affected people in designing the format of land acquisition plan, rehabilitation and resettlement guidelines. Secondly, ample weightage is given to regional connectivity and development through framing a long-term master plan for airport projects; both for greenfield and brownfield. Thirdly, the interests of all stakeholders in the project should be protected.

The secondary data-based analysis of Kerala with respect to the reference period from 2000 to 2010 shows that the State Government had acquired the total land area of 4424.46 hectares from private persons for major, medium and minor developmental projects. The Kannur district comes top in this parameter where 23.63 percent of the land acquired, that is, 1045.63 hectares resulted in the displacement of 1288 households. Kannur International Airport Limited (KIAL), two KSTP link roads, Centre for Industrial Development, national highway expansion, a power project and such other infrastructures are situated in this district.

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The districts of Trivandrum and Ernakulam ranked the 2<sup>nd</sup> and 3<sup>rd</sup> in this analysis which acquired 649.41 hectares and caused the displacement of 122 households and 433.13 hectares resulted in the eviction of 600 households respectively (Manjula, 2013). The alienation of land from its owners in the name of economic development by the Authority is the single most heavy blow to affected persons which cause their impoverishment and deterioration in the quality of life (Cernea, 1995). The land as one of the factors of production becomes a scarce asset and more expensive which increases the number of victims of developmental projects (Mahapatra,1999).

Fernandes (2001) admitted in his study that the Kerala Government Gazettes notifications are one of the vital sources for getting information regarding the time, extent and nature of land acquisition, compensation and resettlement packages. However, many of the notifications were not realised at the ground level and required re-notifications. Additionally, the exact number of displaced persons are not available with the land acquisition office. The investigators/researchers were forced to depend on other sources including the Right to Information Act (RTI Act), 2005 for mobilising adequate information on displaced persons and related variables (Muricken, 2003; Manjula 2013). Airport-induced displacement caused serious damage to the deprived people in general and impoverished the poor, marginalized and politically and socially-economically weaker sections of the society. The displaced persons are heavily depending upon the Government's aid / intervention in the form of fair compensation and better rehabilitation packages. Perera (2006) underscores that the processes of land acquisition and displacement have deteriorated the life prospects of the displaced inhabitants physically, socially, economically and mentally.

Manjula, Kumar and Aneesh (2013) have underlined the adverse socio-economic ramifications of DIDR in their study, entitled "Impact of Development Induced Displacement in Kerala." The International Container Transshipment Terminal (ICTT) at Vallarpadam, Kochi, is one of the largest single operator container transshipment terminals in India, acquired 53.41 hectares of land which resulted in the displacement of 316 households. In the initial stage of this project, the developer guaranteed fair compensation and better rehabilitation packages. The ground reality is that it is the worst rehabilitation package extended by any project in Kerala. The displaced were extremely dissatisfied with the packages and majority of them were reluctant to build homes at allotted land area because of poor basic facilities like safe and clean drinking water, road-accessibility, supply of power and so on. The displaced persons having alternative lands or financial setup had opted another place for building new residence. The State Government and the Port Trust, the acquisition agency, were not actively involved in redressing the genuine grievances raised by the displacees.

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George and Rajan (2015) stated that the Government, very often, uses the stringent measures like sending police force to evict families who resist land acquisition for project by leading agitations against it. These victims are denied even the announced rehabilitation packages and automatically their life becomes more pathetic when they are labelled as traitors, anti-nationalists and anti-developmental activists. The concerned authority is not ready to redress their grievances and the system behaves in an autocratic way denying the basic human rights laid by International Labour Organization (ILO) and the United Nations (UN). A clear-cut example of this can be seen in the acquisition of land for ICTT project in Moolampilly in which ten families refused to accept the packages and disagreed to leave their possessions. The Government's adamant decision to demolish their dwellings by using JCBs and driving away the inhabitants was a typical example of continuing havocs. The police force imprisoned the protesters. Children who had been to school in the morning were really shocked to see only the remnants of their dilapidated habitats. The context compelled them to give up everything including their books and study materials. It is advised to focus on negotiations and arbitrations rather than forced eviction as the affected persons are the real victims of development and no one can assess their losses (de Wet, 2006).

Sameena (2018) reiterated that the continuous protests led by displaced housewife-turned social activists against the authority resulted in the announcement of special rehabilitation packages including land, basic amenities like water, electricity, road connectivity, job in the project to a member per affected family, a lump-sum amount of Rs. 70000 and the payment of rent including arrears during the interim period. The government machinery cannot compensate for their loss in different walks of life like neighbourhood, close relationships and emotional attachment with their friends and relatives. Fujikura and Nakayama (2015) substantiated their argument in their study that the bank-notes thrown to them may not be sufficient to mitigate their mental strains when they lose the loving bonds, their close contacts with their neighbours and their life-long attachment which they have been keeping for years in their society. These compensatory packages won't be sufficient to make them glad.

Kothari (1996) observed that the very sad part of the expansion of developmental projects is the double or multiple displacement of inhabitants. It manifests a situation in which an individual or a family had been displaced once for the project earlier and was facing double or multiple displacement for the expansion of the same project later. These incidences are the typical example for revictimization. Recently, the expansion of TIAL would displace 72 families in which 14 of them are going to experience physical displacement for a second time. The previous expansion of TIAL ejected these families who had settled in the adjacent

places of the airport in the post-displacement period with the expectation that there would be no further acquisition for the said project (Thomas, Pillai & Franklin, 2018). Till now 162 families have been evacuated from the vicinity of Keezhallur Village of Thalasseri Taluk, where KIAL has submitted to the State Government to acquire 245.35 acres (99.3235 hectare) of land for the expansion of its runway to 4000 meters.<sup>1</sup> The land acquisition of the 20<sup>th</sup> century was not a serious socio-economic and political issue at least for some projects (Mathur, 2008).

### **2.2.1 DIDR and its Ramifications on Project-Affected Persons**

The discussions of economic development manifested that displacement is an analogue or equivalent word or simply synonym of development (Pattnaik, 2013). The post-displacement life of evicted households become worse and more particularly, women experience severe agony and discomfort in their lives in the new resettled area (Sweetman, 1998; Parasuraman, 1999; Scudder, 2011). Scoones (1998) adds that the livelihood loss, one of the major negative impacts of DIDR on project affected persons, consists of dismantling of both material and social resource base of individuals, households and communities which creates a sense of insecurity among them. Actually, livelihood involves social fabrics, income generating activities, local knowledge, mutual cooperation, self-dignity, mutual trust, capacities, assets and capitals which are unavoidable to lead a decent life. Downing (1996) pointed out that the infrastructure development induced-displacement paves the way for prosperity of one section at the cost of another section who sacrifices a lot in the form of livelihood insecurity, loss of land, homestead and social fabric and also experienced impoverishment and social exclusion.

Fernandes (2006) states that the tribal people, women and children suffer a lot, both physically and mentally from involuntary displacement and resettlement. The tribal population experience the loss of their traditional sources of livelihood and habitats. The women additionally face increased biasedness in the disbursement of compensation and jobs in the projects which are heavily set aside for male parts. The mental trauma and stress are adversely affected more on the women and children. The visible gender discrimination can be seen from the rehabilitation packages and their implementations. The weaker sections also fail to organize a mass protest against the acquisition and unjust rehabilitation packages and they just passively accept the provisions, terms and conditions set by the acquisition authority.

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<sup>1</sup> Centre for Management Development, Thiruvananthapuram, 07-02-2019, SIA, Draft report submitted to District Collector.

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It is lamentable when we understand from the analyses of empirical studies on the discourse of DIDR that the disaster experienced by the PAPs/DPs as many of them are not settled properly after their displacement for state sponsored developmental projects (Berger, 1993). The study identified a serious risk associated with DIDR, that is, land acquisition and displacement increased the rate of drop out of students from the school and many of them entered into the labour market very early (Cernea & McDowell, 2000). It is imperative to note the findings of empirical studies conducted by the social scientists that females were more adversely affected on account of development-induced displacement than the males' part. The fact is that the majority of women is heavily depending upon the informal economy that may be devastated by the intervention of the Government in the form of land acquisition for developmental projects (Fernandes, 2001). Each eviction drives an individual and his family back to many years. By the time an evicted individual establishes an identity in the society he would have become tired of many unfavourable circumstances and would have been completely exhausted, mentally, physically and in all other respects.

The legal exercise of Government to acquire land for public purposes, say, widening infrastructural facilities, resulted in the considerable loss confronted by the affected persons in the form of access to traditional resource base or properties, derailment from their own conducive livelihood activities, cultural and environmental set up (National Rehabilitation and Resettlement Policy, 2007). Involuntary displacement of natives caused by development projects, of course, has generated multifaceted problems related to equity, ethics and justice in the perspectives of socio-economic and political domains. The affected persons from the Hirakud Dam, located in Odisha (the state was previously named as Orissa) which is constructed across the Mahanadi River, have lost their economic assets like livelihood, homestead, other immovable properties as well as social goods such as mutual trust, cooperation, neighborhood, dignity and self-respect (Nayak, 2013). The existing mechanism of land acquisition for public purpose under the LAA, 1894 exposes the obscene inequalities between the land acquirer and the landowner as the provisions under the colonial legislation culminate in favouring one segment of stakeholders over another and moreover, its regressive approach generates more harm than good. In the course of development, that is, DIDR, the need of the hour is to bring "fairness" which is equal to justice for a liberal society, according to John Rawls, a renowned philosopher, in his magnum opus, "A Theory of Justice."

The protests led by affected persons, sometimes, trigger violence and clashes with police force. For instance, in 2007, the agitation happened in Nandigram in West Bengal state

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against the approval of land acquisition of 25000 acres of land area for Special Economic Zone (SEZ) project of Indonesian Salem Chemicals as per the LAA, 1894 resulted in clashes with the authority and fourteen persons were assassinated (Patnaik, 2007). Another example is the ongoing rigorous protests against the movement of Chhattisgarh government to conduct a survey for the multi-purpose Bodhghat project on the Indravati river, Gidam, Dantewada district of Chhattisgarh, actually, the project has been pending for the last 40 years.<sup>2</sup> The series of agitations against the project led by the project affected persons who are extremely dissatisfied with the announced packages of R&R have created delays in acquiring land and thereby commissioning the project and also resulted in legal hurdles as NGOs filed cases that defamed the projects prospects (Jijelava & Vanclay, 2017). Among many reasons, internal displacement on account of government-sponsored developmental projects along with poor rehabilitation packages resulted in acute food insecurity in the project affected regions (Elamin, Hamza, Abdalla, Mustafa, Altayeb, Mohammed & Abass, 2020).

Sen (1999) said that the development must be environment friendly as true-development is integrated with the high-quality life, more freedom and enlarged social, economic and political opportunities, which are positively associated with ecological inclusiveness to generate quality air, safe drinking water, prevent depletion of ground level water and so on which are the indispensable ingredients for leading a quality life. The voices and interventions of environmentalists against development-induced environment destruction or degradation are constructive in nature and not destructive or 'anti-development', often ridiculously called by strong growth seekers, a by-product of 'Market mania' or 'growth mania' (Dreze & Sen, 2002). The fruits or benefits from economic growth, resulted from multiple economic activities facilitated by advanced infrastructure or developmental activities, are distributed unevenly that would pave the way for unbalanced development of the region, of course, result in the prosperity of a few and impoverishment or marginalization of many (Patel, Sliuzas & Mathur, 2015).

There is a significant defect in the definition of project affected persons and thereby ambiguities in the disbursement of rehabilitation and resettlement. For instance, the officials intentionally seclude the affected persons from the label of displaced persons as their homes were not damaged or attached for the project by the authority. This type of distinction has considerably reduced the volume of compensation to them. The fact, as highlighted by social scientists in their empirical studies, that the sufferings of these people, very often, are much larger because of the loss of their farming land which adversely affected their

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<sup>2</sup> Hindustan Times, Jun 27<sup>th</sup>, 2020.

livelihood and earnings (Cernea, 1990, Morse et al., 1992). The global lenders such as World Bank rightly articulated in their policy documents that the exclusion of a particular group of people, who were forced to surrender their lands but not homes for the project, from the category of project affected persons is irrational and inhumane. It is asserted that right and fair compensation is to be paid to all affected persons on the basis of gravity of loss, both material and social (Cernea, 1988; Szablowski, 2002).

Land acquisition for developmental projects that pave the way for the loss of land to project affected persons is one of the most deprivations faced by them (Anaya, 2004; Rodhouse & Vanclay, 2016). The local people, who are experiencing adverse effects from the projects, have the tendency to mobilize themselves to protest against the project that is mainly intended to drag the attention of the Government and also mass support in favour of them (Hanna, Langdon & Vanclay 2016). In addition to these, the renowned social scientist Cernea (1995) highlighted that the social disintegration and dismantling of a host of productive activities, either formal or informal, are the certain by-products of the involuntary and forced evacuation of inhabitants for developmental projects. The project-induced displacement also ruins the supplementary sources of support or income like credit, rental income of project affected persons. The loss of access to social support networks in the post-displacement life reduced their opportunities to do productive activities and gain income (Faas et al., 2015; Smyth & Vanclay 2017a). Impoverishment of sizeable magnitude of displaced and project affected persons is the single most malevolent side of the forcible relocation of the people in the name of infrastructure advancement and other developmental projects (Cernea, 2003).

Varkkey and Raghuram (2001) examined in their discussion that acquisition of land for developmental projects by the authority results in the changes of livelihood, family pattern and living standards of the project affected persons in general and displaced inhabitants in particular. The Cochin International Airport had acquired around 1300 acres of land in the initial stages of its construction which evacuated 822 families and also affected approximately 2600 land-owners. The study mainly focused on the socio-economic impact of the project on affected families by classifying the period into pre-displaced and post-displaced. The lion shares of the project affected families belonged to two panchayats; namely: Nedumbassery and Kanjoor. The major change in the pattern of family was the dramatic rise in the number of nuclear family setup. Many of the joint families experienced a separation of members in the time of resettlement. The nature of employment has been shifted from agriculture oriented to non-agricultural works such as loading and unloading, taxi drivers and so on.

Asif (2000) examined in his study that the resettlement of displaced persons, who are forced to contribute their homestead for developmental projects, is a sophisticated job as it involves the packages for restoring at least their normal life that they had led during the pre-displacement period. Many of the displaced persons are not happy with the resettlement site identified by the authority and it takes much time to build a friendly atmosphere between newcomers and host people. The study reveals that displaced inhabitants prefer another conducive place to the Government's resettlement site. Of course, developmental projects have been imparting host of benefits to the society which stimulate capital formation and thereby economic activities in a country, but the projects exert much costs up on local residents who generally come under the title of 'project affected persons' including displaced inhabitants as their land, home and livelihood were taken by the authority for commissioning these infrastructural projects.

Robinson (2003) has sagaciously articulated in his article "Risks and Rights: The Causes, Consequences, and Challenges of Development-Induced Displacement" that the sympathy, care, empathy and even national and international aids were guaranteed to those displaced persons who are forced to move from their natives to another place domestically or internationally on account of internal conflicts, violence, foreign attack, natural calamities, man-made disasters and so on. However, the development-induced displaced inhabitants are not getting the similar sympathetic attention received by the victims of catastrophic natural disasters or conflicts in spite of more or less the same trauma, loss and impoverishment experienced by both, that is, victims either of conflict / disaster-induced or developmental projects-induced. Holbrooke (2000) strongly argued that the UN must expand its norms to consider the interests of internally displaced persons (IDP) who are forced to renounce their homestead for developmental projects and treat them under the ambit of refugees. Sadly, two-thirds of refugees belonged to the category of development-induced displaced persons who do not come under the breadth of UNHCR (United Nations High Commissioner for Refugees). The fact is that both IDP and refugees are victims in the real sense as their agonies are more or less the same but the authority's treatments and perspectives are uneven and unequal.

Apart from the potential risk narrated by Michael Cernea associated with the DIDR, Rajagopal (2000) has articulated five prominent challenges or issues in terms of safeguarding human rights as development-induced displacement may violate them. The first challenge is that how a system upholds the local residents' right to development and self-determination which is adopted as Declaration on the Right to Development by the UN General Assembly

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in 1986. The second one is related to Right to Participation which clearly asserted in the ILO's Convention 169 that the local people must participate right from the formulation, launching and also in the assessment of the development projects which primarily affects them. It is applicable to tribal people as well. The Right to Life and Livelihood is the third challenge in the way of developmental projects as the Article 3 of UDHR and the Article 6 of ICCPR have been dealing with the rights of the people to lead a decent standard of life which protects their home, livelihood, dignity and give space to improve their standard of living. The next two challenges are related to the protection of Rights of Vulnerable Groups and Right to Remedy which manifest in the Article 2 and 8 of ICCPR and UDHR respectively. The right to remedy indicates that the affected persons must know about the projects, compensation and resettlement places in advance.

Reddy, Smyth and Steyn (2017) discussed that the displaced households become pauperised and decapitalised in terms of both natural and social capital as they are forced to surrender their land for economic development of the country. There are plenty of empirical studies available in the literature which highlight that the primary reason for pauperisation is the loss of land or landlessness faced by the affected people. In Orissa, a state in India, a group of Kisan tribes of the state had lost their lands. The compensation offered by the Authority was insufficient to rebuild their normal life. The ultimate result was their severe impoverishment and suffering (Nayak, 2013). The proportion of landless people doubled in Odisha, a state in India, when they were displaced from a particular area in the state for the Rengali Project. The percentage of landless families after displacement has drastically increased from 4.6 % during the pre-displacement period to 10.9 % (Ota, 1996). Another shocking empirical result came from coal mining-induced displacement at Singrauli district in Madhya Pradesh where the percentage of landless families has rapidly increased from 20 % in the pre-displacement period to 72 % after the relocation (Somayaji & Talwar, 2011).

Cook (1994) underscored in his edited work that the average landholding of the family has decreased in large extent and the quantity of live-stock has also dwindled after the relocation when we compare the post-displacement life with the pre-displacement lifestyle of the project affected people. For example, the average land possessed by the farmers was 13 hectares during the pre-displacement period which declined to 6 hectares in the post-displacement period when land was acquired for the Kiambere Hydropower project of Kenya. Moreover, the livestock, productivity / yields per hectare and income of the people considerably decreased in the dislocation era. The loss of fertile land is a heavier shock especially to the peasants than the loss of even homesteads which is revealed in a number



of studies led by the social scientists. The earnings or income of the resettled families drastically decreased and even halved and the extent of ownership of land decreased by around 47 percent as noted in Indonesia in relation to a reservoir project Called, Saguling Project and these shocking findings were published by the Institute of Ecology of Padjadjaran University (1989). Mougeot (1990) manifested the similar trend in the development-induced displacement and the resulting impoverishment in Brazil.

Aboda, Mugagga, Byakagaba and Nabanoga (2019) observed that the displaced persons generally suffer a lot acutely from joblessness or underemployment which is lasting and they fail to get a suitable job even after the completion of physical resettlement processes. Very often, the Authority fails to fulfil their promises in the form of assured jobs per family either inside or outside the project. Certainly, this type of broken promises aggravates the miseries and frustrations among the project affected persons. It is common in urban as well as rural areas. The unemployment rate increased from 9 % to 43.6 % among the displaced persons who were ousted from five villages located in Talcher in Odisha, India, and more interestingly, a large shift of these people from primary sector jobs to tertiary sector employment created problems in the local job market. The earnings of people, especially Scheduled Tribes and Scheduled Castes drastically reduced by 50 percent and 80 percent respectively (Pandey, Patro, Rao, Padhi & Mallick, 1998).

Hoffman (2002) revealed that the unproductive time among the evacuated households increased that revealed in the field survey in relation to the Churchill-Nelson Hydro project in Manitoba, Canada. Their economic activities like fishing, waterfowl capture and food processing industries have curtailed in a significant manner. It is also noted that there was an employment boom in the local economy when project-related jobs either inside or outside the project were available. This situation has, however, vanished at the end of the project. And as a result, there has been a tremendous increase of temporary and chronic or prolonged unemployment among the project affected persons.

The loss of home on account of developmental projects worsened the living conditions of displaced persons. They are forced to accept compensation for rebuilding their homes at market value rather than replacement value which deteriorates their means of living. Many of them failed to get assistance from the government or loans from the bank to construct new dwellings in the resettled area. For instance, out of 2000 displaced households from the Cameroon-Douala Urban Project only less than 5 percent succeeded in availing bank loans for building their houses. Another report from the Danjiangkou reservoir project in China

shows that approximately 20 percent of the total displaced families became homeless and suffered acutely from hunger and destitution. The similar trends happened in the Kibale Park area, Uganda and dam-induced displacement in South Africa (Downing, 1996; de Wet, 2006).

A major part of the displaced families relied on temporary shelter and even set up refugee camps because they couldn't bear the growing labour costs and the expenses of other materials. This trend can visibly be seen in the Upper Krishna dam and irrigation project in Karnataka, India, where homelessness among DPs is common. In Mauritania only 200 out of the 881 displaced households from Foum-Gleita irrigation project have finished their construction of new homes successfully and pathetically the rest of them lived more than two years under the ad-hoc shelter with the roof of tarpaulins. Rege (2000) adds that in the Kulkadi-Krishna irrigation sub-projects in Maharashtra, India the Authority deplorably failed to resettle the displaced persons in which 59 percent of them were living in temporary/semi-permanent houses for a period of even 10 to 15 years after their displacement. The Government can mitigate these miserable situations by providing adequate compensation with fair rehabilitation and resettlement.

The displaced persons confront the losses of natural capital, man-made capital and social capital which lead to marginalization and stigmatization. The host people call them as 'newcomers / strangers' and are reluctant to share common properties, entitlements and amenities with the DPs. They also face very seriously the psychological marginalization as clearly articulated by the social scientists (Fernandes, 2001) which manifests in terms of decline in self-esteem, high risk of stress, frustration and panic among the DPs (Cernea, 2004). The occurrence of marginalization may happen even before the actual realization of the project. Very often, farmers are shifted from highly fertile agricultural land to less fertile land. This can also be termed as marginalization. Cernea and McDowell (2000) discussed the loss of off-farm income sources and disintegration of means of production also come under this type of impoverishment and substantiated their arguments by quoting the findings of Pockharel (1995) and Bjonnes (1983) in relation to the Nepal Kulekhani Hydroelectric project and also in Sri Lanka's Kotmale project by Soeftestad (1990).

Cernea (2008), IFC (2010) and Brereton et al. (2011) viewed that it is also imperative to set aside a particular percentage of the profits generated from the project for the well-being and development of project affected people especially in the post-displacement periods. There are a number of instances of poor rehabilitation of project affected persons in India. The typical example of this can be seen from dam projects-induced displacement. The agitation

was organized under the banner of Narmada Bachao Andolan which was formed in 1985 and led by social activists including Medha Patkar. This organisation had been in forefront to mobilise protests against 30 big dams, 135 medium dams and 3000 small dams built on the Narmada River and its tributaries in three states of India – Madhya Pradesh, Gujarat and Maharashtra. Fisher (1995) argued in his book, ‘Toward Sustainable Development? Struggling over India’s Narmada River’ that the protesters were continuously demanding justice and fair compensation for around five million people who were adversely affected by these dam projects in three states. They argued that there were no satisfactory R&R measures from the part of the Government applied even to a single project on Narmada River. These affected persons were compelled to bear all costs associated with the project. It is rightly asserted by affected people in India that, “For their tomorrow, we are giving our today.”

### **2.3 Rehabilitation and Resettlement (R&R) of Evicted Families**

It is admitted by the majority of social scientists that displacement is inevitable in the course of development, but with bold steps and policies the Government can restore the life of the affected people as they are not in a position to bring back prosperity to their families. Deliberate Government actions are indispensable in this regard (Somayaji & Talwar, 2011). Thus, the overall benefits of developmental projects can easily be increased and disseminated by sharing their benefits to DPs / PAPs. This type of enhanced economic entitlements to the neediest displaced persons ensures equity, justice and overall happiness. However, the reverse happens in most of the projects in the real world as shown in the empirical studies (Cernea, 1996; Saxena, 2011). The reports of UN, World Bank and ILO also indicate that the forced displaced persons, both development-caused-displaced and refugees, belong to the segment of the poorest or impoverished people in the world (Szablowski, 2010)

A better rehabilitation and resettlement mechanism, of course, is highly needed to mitigate the issues related to land acquisition and mass displacement. These R&R measures must include not only those affected persons who are forced to surrender their land and other properties but also those people who are adversely affected by the acquisition and the commissioning of the project. Unfair and meagre compensation is the leading factor for the failure of the majority of resettlement programs (Cernea, 1996, 2003, 2007). A comprehensive and holistic approach is essential to ensure the overall development of affected people (National Rehabilitation and Resettlement Policy, 2007). It is now compulsory to conduct a thorough social impact survey before acquiring land for public purposes like infrastructural projects.<sup>3</sup>

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<sup>3</sup> Section 4 of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 - LARR, 2013.

The interesting argument of social scientists like Cernea (1999a; 2003; 2007) that scientifically proved through models that proper resettlement measures with shared benefits with the PAPs can restore their normal life and also improve their living standards through livelihood measures, policy support of the authority instead of predicted impoverishment, that is, resettlement itself creates an atmosphere for further development (World Bank, 2004; Perera, 2006). The commitment with human face and benefit sharing attitude from the part of project developers rather than a monetary calculation are essential in this regard (Wilson & Kuszewski, 2011). Resettlement of project affected persons in a proper and better way is not the generosity of developers or authorities but their responsibility (van der Ploeg & Vanclay, 2017), moreover, the resettlement is a right retained by the PAPs (Adeola, 2017).

It is rightly articulated by social scientists based on their scientific empirical studies, Oliver-Smith (2010), Mathur (2011), Reddy (2017) and Vanclay (2017) that the mechanism of rehabilitation and resettlement is multifaceted, that is, multi-layered, multi-dimensional, multi-pronged and multi-scalar. The story of DIDR tells different versions in which some affected people get benefits from the project, for example, jobs or business opportunities and others confront losses of valuable things, and more interestingly, its values are beyond the estimation of compensation and monetary calculations. Are there any norms to compensate for all these invaluable materials, both tangible and intangible assets? (Cernea, 1996, 2003, 2007).

Reddy et al. (2017) treated the Rehabilitation and Resettlement, a strategic part of DIDR, as not only a single component of the project itself but also a bigger project within projects. The dam construction in China, for example, Three Gorges Dam alone set aside 100 billion Yuan to rehabilitate and resettle the project-affected persons which was estimated at approximately 11 lakh and 30 thousand people (Jackson & Sleight, 2000; Wilmsen, 2016). At the same time, right policy mix with pragmatic approach in resettlement of displaced persons can create a conducive atmosphere for development (Vanclay, 2017).

Many studies in the DIDR field highlighted the significant role of NGOs in exerting influences on Government actions and in preparing fair compensation and rehabilitation packages, mobilising public opinions against ecological imbalances on account of the project, protecting the interest of natives and empowering them to demand well packaged resettlement. Their actions definitely benefited the DPs/PAPs, for instance, Agrabamee, an NGO which designed a resettlement action plan for the Upper Indravati Project in Orissa. This NGO has succeeded in unearthing the shortcomings of rehabilitation policies of the Authority (Padel & Das, 2012).

An exhaustive study was conducted by Muggah (2008) on Sri Lanka's several decades' experiences relating to developmental projects-induced displacement, conflict-induced displacement and natural calamities-induced displacement and an attempt was made to trace out the common factors for the general impoverishment of displaced persons. It also compared the inter-related determinants and examined the responses of various departments and bureaucrats in implementing the rehabilitation packages which ultimately led to relocation failures.

Rodgers, Gore & Figueiredo (1995) observe in their study that the loss of social network adversely affects the DPs and aggravates the deterioration further. Sen (1997) articulates in his work, 'Choice, Welfare and Measurement' that the exclusion of particular sections / groups, any form for any purpose, is not consistent with development as it implies the expansion of freedom and choice. The ousted persons are forced to lead a poor life even after the passage of a decade of displacement for developmental projects. Most of the studies on DIDR conducted by social scientists articulated that the land acquisition for developmental projects manifest overall development. As far as the affected persons are concerned, this acquisition is an inevitable misfortune that leads them to untold miseries causing mental agony, sacrifice, frustration and despair (World Bank, 1994).

In the case of marginal households likely to experience the bitter repercussions in relation to DIDR, the Government should take effective steps to ameliorate their life even before the actual land acquisition for the project. Dreze, Samson and Singh (2013) urged that due care about these sections should be taken as they are already impoverished and can't bear any additional costs in relation to displacement, rehabilitation and resettlement. The Government can resort to a social safety net to protect these people from the adverse impact of the project and its allied activities. The Authority / the Government that sanctions the project and designs it intentionally does not allocate adequate resources for proper rehabilitation and resettlement of displaced persons. If the concerned authority keeps the 'equity compass' in acquisition of land, displacement of inhabitants, distribution of benefits, costs and resettlement, it would prevent the impoverishment of DPs or at least lessen the intensity of risks which inflicts in the post-displacement life (Scudder 1981; Cernea, 1988; Mahapatra, 1999).

Terminski (2014) focuses on another angle of displacement as the by-product of infrastructural projects in his book, entitled 'Development-induced displacement and resettlement: Causes, consequences, and socio-legal context.' Here, the PAPs are leaving their native places voluntarily because of intolerable/unbearable effects like environmental degradation, water

contamination, lingering unpleasant smell, sound pollution and so on. Generally, these people do not come under the purview of DPs and the authority circumvent them from the payment of compensation. Often, these people are forced to sell their properties at very low prices and in some extreme cases they abandon the assets including homesteads as they fail to sell the assets in the open market. Unfortunately, this group of affected people do not come under the PAPs as per the existing land acquisition laws in spite of their very high number (Dwivedi, 1999; Fernandes, 2012).

Appa and Patel (1996) discussed two types of displacement, the first one is direct and unavoidable in which there is no alternative for it and the consequences are visible, open and foreseeable. The second one is indirect and unrecognised in which feasible alternatives are available but the authority has decided to go ahead with less feasible, mass displacement and ecologically imbalanced project and it is the clear-cut manifestation of human rights violations. The case studies of around seven projects in Gujarat, a state in India, has shown this malady where the Authority acquired the most fertile land from the farmers even though less fertile and even waste lands were available in the nearby areas. It is a case of injustice and encroachment but it has got a legal entity.

Appa & Sridharan (1992) revealed the case of indirect, unnecessary and unrecognised displacement which happened to the fishermen who lived in the vicinity of downstream area of the Sardar Sarovar Dam. The Gujarat Government was not ready to recognize them as losers and in the subsequent period compelled them to leave the places. In reality, these people faced all the ill-effects associated with the project but they were not in a position to receive any relief or monetary compensation from the Government. There are several communities living in the adjacent places of this project who experienced similar touching plights of these people who earned a living by fishing.

Empowerment and emancipation of DPs / PAPs are integral parts of the rehabilitation and resettlement policies chalked out by the concerned authority. Local participation is a must in the developmental projects through job security inside the project which guarantees regular income and thereby enables to prevent impoverishment of adversely affected persons. It is a case of participatory growth which honours the dignity of life and equality of life enshrined in the Constitution of India under the Article 21 and Article 14 respectively. The social scientists strongly recommend the state to take constructive steps and effective policies to protect the interest, rights and aspirations of all segments of the society including DPs and PAPs. It is the responsibility of the acquiring authority / developer, say the Government, to

protect the rights of the affected people to lead a decent, happy and creative life in the post-displacement phase (Oliver-Smith, 1996).

Other specialised experts in the DIDR field suggest that the system requires more democratization which is ranged from the setting up of the projects to the plan of resettlement. This practice will impart autonomy for the DPs to decide where to live and how to live. The existing system of monetary compensation is inadequate because it fails to identify all the factors which impoverish displacees and measure them properly. Some writers (Koenig, 2006) vehemently demand equal distribution of social power among the different stakeholders of the project and ensure the participation of the local people in it. A study on World Bank assisted project of urban development in Madagascar which displaced 2341 local inhabitants and resettled these people in a new location at Antanarivo Plain that paved the way for deplorable life of affected households and worsened their living standards in the post-resettlement period (Francis, 1999).

Miseries and apprehensions of development-induced displaced persons got world-level attention only after 1980 when the international lender, the IBRD designed its first operational objectives and guidelines for mitigating the issues associated with DIDR and also updated them regularly. Certainly, the guidelines admitted the fact that forced displacement and unplanned / unjust resettlement may result in long-term deprivation, impoverishment, destitution of evicted inhabitants and paved the way for ecological crisis in the region. It vehemently argued for systematic plan for the project, conducive measures to prevent the impoverishment of project affected persons, measures to conserve the balance of environment and also need much care and norms for envisaging the project (World Bank, 2004). The World Bank initially recommended beyond any doubt that the resettlement of displaced persons is a very integral part of the project itself and not the outside or peripheral part of the project's design and its commissioning (Rew, Fisher & Pandey, 2000).

## **2.4 Major Policy Responses towards DIDR**

Development-induced displacement and resettlement is a global phenomenon which invariably needs policy responses backed by institutional and legal framework at international as well as national levels. The effective steps for framing appropriate policies and prudent interventions of the judiciary are strategic to mitigate the adverse impacts of DIDR on inhabitants (World Bank, 2004; Cernea, 2007; Perera, 2014). The role of Non-Governmental Organizations (NGOs) is decisive in designing policies on DIDR and their influences are very deep and wide among project affected persons, for instance, the Arch Vahini, Anand

Niketan Ashram and Narmada Bachao Andolan, prominent NGOs associated with Sardar Sarovar project and play relentless role in shaping R&R and they also represented the voices of voiceless and marginalized DPs (Berger, 1993). More intensive research in the field of institutional and legal framework to safeguard the interests and aspirations of DPs/PAPs is needed which can avoid or at least find out alternatives of the projects requiring massive displacement. McDowell (1996) urges that the international fund agencies as well as the national Government should come forward with enlightened and humane policies to address the challenges created by DIDR.

The latter part of the 20<sup>th</sup> century had witnessed a host of policy guidelines, to address the issues associated with DIDR and thereby to ensure fair compensation and R&R to PAPs, mainly designed by the World Bank and the International Finance Corporation (IFC), one of the chapters of World Bank Group to promote private investment in UDCs, the Organization for Economic Cooperation and Development (OECD) and the European Bank for Reconstruction and Development. Besides, the FAO (Food and Agriculture Organization of the United Nations) has issued comprehensive guidelines to mitigate the concerns of project affected persons (Seufert, 2013; Paoloni & Onorati, 2014). The policy documents of the World Bank were widely practiced in the name of the World Bank's Operational Policy on Involuntary Resettlement (OP 4.12) (Downing, 2002) and the subsequent handbook (World Bank, 2004). Of course, all these guidelines of global lenders have been helpful for legislating holistic national policies on DIDR.

The policy initiatives of the World Bank were replaced in 2016 with the new Environmental and Social Framework (World Bank, 2016) which came into force in 2018; and the IFC Performance Standard 5 on Land Acquisition and Involuntary Resettlement (PS5) (Windfuhr, 2017). The components such as payment of compensation even before the displacement and proper resettlement of PAPs have been clearly stipulated in the IFC PS5. For instance, Paragraph 9 of IFC PS5 states that *“The client will take possession of acquired land and related assets only after compensation has been made available and, where applicable, resettlement sites and moving allowances have been provided to the displaced persons in addition to compensation.”* Cernea (1996) vehemently recommends that the system needs an efficient mechanism to monitor the social cost of large-scale infrastructural projects and sagacious policies to mitigate the pain and sacrifice confronted by DPs / PAPs.

The advancement of infrastructural projects results in the renunciation of prosperity of one section for the fortune of others. It is vital to promulgate apt policies and foster existing mechanisms to restore or rehabilitate the lives of DPs / PAPs who are forced to pay the price

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of the developmental projects (Clark, 2002). There are lots of instances in which the Hon. High Court of the state concerned and the Supreme Court of the country observed that the actions of the State in the name of public purposes caused for environmental degradation and very often land acquisition without proper compensation and rehabilitation measures is the visible example of serious derailment of the Article 21 of Indian constitution, which guarantees right to life, and a visible human rights violation.<sup>4</sup>

Owen and Kemp (2016) examined that the clear-cut vision of any policy initiative to alleviate pain, loss and all other problems connected to the DIDR is to give financial support to project affected persons in the form of time bound disbursement of fair compensation as well as resource base support like land-based resettlement and jobs inside the project or associated fields thereby making them partners of the project and to ensure overall development of the region. There was not a standard norm for rehabilitation and resettlement until the World Bank in 1980 envisaged the first global procedure on resettlement which is known as Operational Policy 4.12 on Involuntary Resettlement in later stages. The move was in response to horrible experiences from different projects funded by the World Bank, especially from Brazil's Sobradinho Dam which evacuated around 70,000 people without any systematic initiatives to resettle them (Mathur, 2011).

#### **2.4.1 Land Acquisition Policy Framework in India under British Administration**

The mechanism of land acquisition in India under the British administration was guided by the principle of acquiring required land with minimum compensation to landowners. The Britishers acquired land extensively for transportation purposes like road, railway and also to set up factories, mines, etc. There were occasional resistances raised by the landowners against the nominal compensation and forced land acquisition. The prominent protests in this regard include Indigo revolt that happened in Bengal in 1859, Adivasi led rebellion in Chhotanagpur areas and peasant's resistance in the Deccan (Chakravarty, 2013).

The apparent aim of the British administration in India was to mobilise raw materials at the cheapest prices for factories located in the UK. The Indian market was used for selling finished products at higher prices. The policies and actions of colonial powers systematically destroyed the socio-economic fabrics of India. They promulgated laws and envisaged policies to harvest maximum profit for Britishers which resulted in poor farming sector and eroded industrial base of the country, lopsided and stagnant economy (Naoroji, 1901; Tharoor, 2016). The colonial power intervened in infrastructural advancement by acquiring

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<sup>4</sup> State of Kerala v. Peoples Union for Civil Liberties, Kerala State Unit, AIR 1998 SC 1703.

land and built-up railway lines, roads which enabled them to collect raw materials even from remotest places very easily and sell the finished products by charging very high prices at every nook and corner of the country. The antagonistic presence of the Britishers in India right from 1757 to 1947 collapsed Indian economy and the country fell into deprivation, starvation and pauperisation which was labelled once as the richest country in the world at the time of British arrival by contributing around 24 percentage of global GDP and 27 percentage of foreign trade which was drastically diminished to 4 percentage and 7 percentage respectively when Britishers left (Tharoor, 2016).

#### **2.4.2 The Principle of Eminent Domain**

The concept of “Eminent Domain” is one of the vital instruments strategically adopted by most of the countries of the world since the early period of imperialistic administration for acquiring land by displacing inhabitants, which upholds the philosophy of public necessity greater than private necessity and thereby ensures the happiness for the greatest number. Interestingly, most of the Authorities, in the present scenario, are also following the same principle to acquire land by ejecting native people. The practice of the postulates of Eminent Domain in land acquisition by most of the nations in the world reflect that the power of acquiring private land for public or strategic purposes is embodied in it which is an integral attribute of a nation’s sovereignty (Shaw, 2017).

Of course, compulsory acquisition of land and other properties by the state for larger interest is inherited in the principle of Eminent domain as it gives legal rights to expropriate assets of its people even without their consent (Lindsay, 2012). Apparently, the legal framework of India related to DIDR is based on Eminent Domain. Actually, this principle was propounded by Hugo Grotius, a renowned Dutch Jurist in his magnum opus titled ‘De Jure Belli et Pacis’ published in 1625. Mr. Grotius had outlined three basic characteristics which are applicable to this principle.

Firstly, the state has the power to acquire the possession of land from its citizens even without consulting them and maybe there is no formal dialogue with the owners of the land or property.

Secondly, this eminent domain power of the state is only for guaranteeing the benefits for the public, safeguarding the interest of the large number of people and ensuring the allocation of public goods.

Thirdly, the principle underscored the responsibility of the state to ensure the disbursement of compensation to displaced persons and project affected persons. This principle highlights

the moral imperative or commitment of the state to assist the affected persons to restore their normal life in the post-displacement period.

### **2.4.3 The Permanent Settlement System and Subsequent Laws**

Lord Cornwallis, one of the prominent Governor Generals of India deployed by the British Crown, made a vital change in the laws of land acquisition for which a market for land had been given for the first time. This step paved the way for extensive commercialisation of land which essentially needed new policies and laws to attach land for public purposes. More interestingly, the Bengal Code / Regulation I of the 1824 in general and its regulation in particular gave the rules and principles of land acquisition in detail. The provisions of 1824 Act were extended to several fields, for example, railway segment in 1850, and enacted various acts to acquire land for various ventures under British rule such as the Act I of 1850, the Bombay Act No. XVII of 1850, the Madras Act No. XX of 1852 the Act XXII of 1863, Madras Act No. 1 of 1854 X of 1861, the Act VI of 1857, the Act X of 1870 and so on.

More clearly, the next stage of development of laws on DIDR happened in 1857. This year witnessed the passing of a comprehensive legislation by the authority which incorporated the provisions for acquiring land and also the criteria for determining compensation to DPs / PAPs. The Government had changed some of these provisions and added a new clause in 1863. The new Act gave more powers to states to acquire land and transfer the same to the private sector – either private individuals or private companies. In 1874 all the existing laws on DIDR were replaced and a new law was enacted which added new provisions in which DPs / PAPs could give appeal against the adjudication or arbitration to higher courts. Within two decades, the country had witnessed another enactment in 1894 which was named as Land Acquisition Act. Not surprisingly, this Act acted as the main land acquisition law during the remaining period of British administration in India and also the independent India followed this Act for a long period, that is, up to 2013 (Ramesh & Khan, 2015). The new Act, called The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 replaced the Act of 1894.

### **2.4.4 Land Acquisition Act (LAA), 1894**

The extensive use of force or intimidation in land acquisition for developmental projects result in land conflicts between developers and land-owners. It also creates a serious imbalance of power between state (acquirer) and land losers and disempowers them economically, socially, culturally, psychologically and politically. The wide prevalence of inefficiency and

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inequity in land acquisition in India is primarily because of non-transparent and inhuman acquisition laws or policies such as the Land Acquisition Act, 1894 (Wahi, 2017; Hoda, 2018).

Mallavarapu (2006) states that the Land Acquisition Act, unfortunately, says nothing about the pattern and form of compensation set aside for the DPs / PAPs and keeps silent on the time period for the distribution of compensation to them. Sarkar (2007) underscored that the unsettled part in the process of land acquisition by the authority during the late 19<sup>th</sup> century was forced displacement of inhabitants, meagre compensation, abuse of laws by officials including bribery and malpractices.

Not surprisingly, the post-independent Government, both at the Center and States, has enjoyed a bit of monopoly on acquiring land for developmental project from the private landowners under the LAA, 1894 particularly after nullifying the Article 19(1)(f) and the Article 31 which guarantees 'Right to Property' as Fundamental Rights under Part III of Indian Constitution. Actually, the 44<sup>th</sup> Amendment of Indian Constitution in 1978<sup>5</sup> opened the path for shifting the Right to Property under Articles 19(1)(f) and 31 to a constitutional right or legal right as per the Article 300A which insists the state to follow apt procedures with the back-up of clear-cut Act to acquire private property for public purposes. Undoubtedly, this move has strengthened the eminent domain principle that vested with the Government (Fernandes, 1998). Obviously, a host of developmental projects are thwacked and thereby a bulk amount of funds becomes either locked or idle in India primarily on account of growing conflicts and disagreements on land and allied resources (Sambhav, Bhaya & Worsdell, 2020). Interestingly, the Supreme Court Bench had observed in the case of State of Haryana v. Mukesh Kumar case (2011) that the Right to Property is a constitutional right, statutory right as well as a human right.

The honourable Supreme Court of India reiterated, in the verdict of a case filed by an 80-year-old lady hailing from Hamirpur district whose 3.34 hectares of land area had been

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5 The 44<sup>th</sup> Amendment is officially recorded as the Constitution (Forty-fourth Amendment) Act, 1978 which was instigated on 16<sup>th</sup> December, 1977 by Shanti Bhushan, Union Minister for Law, Justice and Company Affairs under the Janata Party led Government. The Act mainly intended to reverse the sea changes brought by the 42<sup>nd</sup> Amendment to the Constitution of India envisaged by the Congress led Government under the leadership of Indira Gandhi during national emergency. It was passed by the Rajya Sabha on 31<sup>st</sup> August, 1978 and Lok Sabha on 7<sup>th</sup> December, 1978. The Act was notified in The Gazette of India on 30<sup>th</sup> April, 1979 after the accord from the President of India, Neelam Sanjiva Reddy. The Act has altered the Articles 19, 22, 30, 31A, 31C, 38, 71, 74, 77, 83, 103, 105, 123, 132, 133, 134, 139A, 150, 166, 172, 192, 194, 213, 217, 225, 226, 227, 239B, 329, 352, 356, 358, 359, 360, 371F, amended the Part XII and the schedule IX and also inserted Articles 134A and 361A to Indian Constitution. Moreover, the Act resulted in the cancellation of Articles 31, 257A and 329A.

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procured forcibly by the State of Himachal Pradesh for building Nadaun-Sujanpur road, that the authority had to follow appropriate procedures for acquiring private land and it had to be consistent with the existing law. The Court had ordered to pay a lump sum amount of Rs. 1 crore as compensation to the victim and also ordered the state to pay Rs. 10 lakhs as relief to her in the name of legal costs.<sup>6</sup> It articulates that the Right to Property is also a human right and the authority must refrain from the actions which reflect the mind set of encroachers or violators of human rights. The action of grabbing the land of people by the State is contradicted with the principles of a welfare-oriented state. Supreme Court Bench of Justices Indu Malhotra and Ajay Rastogi rightly said, “*A citizen’s right to own private property is a human right. The state cannot take possession of it without following due procedure and authority of law, the Supreme Court has held in a judgement.*”

#### **2.4.5 Key Policy Initiatives on DIDR during Post-Independence Era**

Ironically, the day of 15<sup>th</sup> August, 1947, an era of colonial administration in India was ended, in which the sovereignty of India was reverberated at global level. However, many of the laws or enactments made by British administrators, for example, Indian Contract Act, 1872, Negotiable Instruments Act, 1881, Reserve Bank of India Act, 1934, were followed in post-independent India. The law related to land acquisition in India has no exception in this regard. That is, independent India had adopted the Land Acquisition Act of 1894, however, with some amendments, for acquiring land from private land owners and also for deciding the volume of compensation to them.

Apparently, the Article 372 of Indian Constitution has given cent percent validity to all existing legislations enacted during the British Raj in India unless the laws expired, altered or revoked by the Indian Parliament. Moreover, India had inherited a weak economy with poor socio-economic infrastructure from British raj which forced the post-independent Government to launch policies to speed up economic recovery, foster infrastructural amenities, acquire more land for developmental projects of the country and so on. During the first two decades of India, especially under the inspiration of Nehruvian ideology which was prominently associated with heavy and basic industries, dams and other forms of infrastructural advancement for public purpose and also for accelerating industrialisation in the country. Naturally, acquisition of land was made which resulted in the huge involuntary displacement of local people. The history of land acquisition in India in the past 50 – 60 years shows unfair deals between the acquisition authority, say, the Government and the

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<sup>6</sup> The Hindu, 12<sup>th</sup> January, 2020.

project affected persons, say, the land-owners. The Government itself committed a lot of wrongs. The authority was most guilty or culpable in the way of land acquisition which resulted in forcible displacement of inhabitants and loss of livelihood to thousands of local people (Ramesh & Khan, 2015).

The macroeconomic fundamentals of the Indian economy were weak at the time of her independence so that the administrators and policy-makers were serious about the socio-economic development of the country. Sharma (2003) underscored in his paper that the country, indeed, needed fast infrastructural development which essentially required land acquisition which, of course, necessitated displacement of natives, and the questions of compensation, rehabilitation and resettlement arose eventually. These people who were opposing a developmental project were branded as anti-nationals, traitors, terrorists, anti-developmental activists and were charged with seditions (Cernea, 2003 & Terminski, 2014). The affected people, social activists, NGOs, farmers and environmentalists genuinely raised their grievances but very often the authority suppressed their sentiments and paid little attention to their concerns (Vanclay, 2017). It is also widely articulated that the DPs/PAPs were considered as a section who sacrificed for the public good and common benefit.

The Authority acquired land extensively for hydro-electric projects, railway lines, basic and heavy industries, national and state highways, airports, dams, hospitals, schools, colleges, universities and so on. Jawaharlal Nehru, the first Prime Minister of India gave much importance to key industrial development and infrastructural advancement. For instance, there were three major hydroelectric projects which were commenced during the very first five-year plan (1951-1956) of the country; namely: the Bhakra Nangal dam in Punjab, the Hirakud dam on the Mahanadi in Orissa and the Nagarjuna Sagar dam on the Krishna River in Andhra Pradesh. Nehru rightly projected these three projects as the “temples of modern India” (Khagram, 2003).

We have mentioned in the preceding section that the Government followed the old Land Acquisition Act of 1894 in acquiring land, disbursement of compensation and also in designing rehabilitation measures. However, this Act was subjected to amendments from time to time. For instance, this Act was amended in 1967, 1984 and 1999. Of course, the LAA of 1894 enabled the Center and States in India to take possession of land held by private owners for commissioning developmental projects which were mainly intended for public purpose (Nandal, 2014) and this law, definitely, belongs to draconian category, observed by Siddiqui (2012). It is really shocking to hear the fact that many of the developmental projects

were designed and executed in India during the period of pre-1980 without a clear-cut rehabilitation and resettlement plan (Swamy, 2011). The large developmental projects like dams, irrigation projects, airports, road ways, preservation of nature, mining, urbanisation and so on resulted in large scale displacement and their number reached at least 15 million per year. Here, the people had to surrender their homestead (Terminski, 2012).

Parasuraman (1999) rightly argued that a large number of people had to relinquish their valuables for commissioning projects without harvesting any benefits from them. In this context, it is imperative to think about a policy initiative on DIDR in which all stakeholders or economic agents would be benefitted rather than following an ideology of ‘zero-sum game’ which reflects ways of gains by one person only at the expense of others. The mechanism of land acquisition in the present scenario reveals that the triumph of one economic agent, say, developers or industrialists, becomes the loss of another stakeholder, say, landowner or farmers. On the other hand, the stringent measures to protect the interest of one group, say, farmers, will harm the industrialists or developers and so on.

#### **2.4.6 Land Acquisition Amendment Act, 1984**

We have mentioned earlier that the LA Act, 1894 has been subjected to amendments from time to time, of which its amendment in 1984 is a prominent and massive one which made some commendable changes in its provisions. The main intentions of this amendment were to remove ambiguities or defects in this Act and thereby modify it in terms of humane compensation, fair R & R. This amendment paved the way for making changes in 21 Sections of the Act and also resulted in addition of 5 new Sections to this Act and removed one Section from this Act.

Astonishingly, Pakistan, our neighbouring country, has used the same LAA, 1894 with some amendments and modifications for acquiring land for public purposes. The Section 11 of this LAA Act, 1894 deals with the awards or compensation for displaced and project affected persons. Interestingly, the authority must hear the objections or complaints raised by the affected families under Section 5A of LAA, 1894. That is, Section 5A enabled the project affected persons to air their grievances. The final outcome of this Act is that the acquirer will become richer and the landowners will live in destitution as wretches (Fernandes, 1998).

The Amendment Act of 1984 entrusted the State to acquire private land for public purposes as well as private companies. The Amended Act extended a bit of relief in the form of disbursement of interest rate to affected families which was calculated rightly from the day of the first notification under Section 4 to award distribution or possession. Another

remarkable change occurred in favour of affected families was the enhancement of the volume of solatium to 30 percent of total amount of acquired land from the earlier 15 per cent of land value.

The amendment of LAA, 1894 in 1984 made a mandatory provision up on the District Collector to publish the notification of acquisition of land under Section 4 of the Act in at least two newspapers of which one had to be in vernacular language. This step was in addition to the provision of exhibiting the notification in the convenient public places in the region where the land was located.

Interestingly, the notification of acquiring land on the basis of Section 4 would be lapsed unless there is declaration under Section 6 of this Act within a year from the day of notification instead of three years granted in the pre-amendment (1984) provisions of the Act, 1894. In addition to these, the distribution of award to the project affected families should be completed within two years after the declaration made under Section 6 of this Act. This clause was absent in the original Act of 1894.

The demand for land for infrastructural advancement has multiplied during the post-liberalisation period. Higher demand for land is persistently coming from the private sector and foreign sector apart from Government. There is a tremendous growth of inflows of foreign capital into the country on account of New Economic Policy (NEP) which consists of three pillars; namely: liberalization, privatisation and globalisation (LPG programmes) which resulted in commodification of land (Siddiqui, 2008) and tremendously increased the land acquisition by the Government and handed over to corporates or private developers.

#### **2.4.7 National Rehabilitation and Resettlement Policy (NRRP), 2007**

Certainly, the drafting of this new policy, for addressing the concerns of project affected persons, is an advanced version of the previous policy of the Government, called as “National Policy on Resettlement and Rehabilitation for Project Affected Families” which was designed in 2003 and it came into practice with effect from February, 2004. The guidelines under the NRRP, 2007 which consist of nine chapters, reveal that the state Governments, public sector units (PSUs) and any other agencies can enhance the volume of benefits than that of offered under this policy to affected persons. The measures under this policy endeavoured to foster a good relationship between land acquiring authority and project affected persons through promising fair compensation and better R&R and also measures of permanent income activities to project affected families. It also recommends to provide adequate land,

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if possible, for proper rehabilitation of uprooted families. It is argued that these steps will help to develop mutual trust and cooperation among different stakeholders of the project.

It is argued that the compensation ensured to affected families should be part with the current market price and should complete the whole payment in advance before the actual displacement. There is a provision of enhancing employability of project affected persons by imparting adequate professional skill, entrepreneurship and training programs under the aegis of government concerned, either Central, State or Local. The intention was to foster self-employment capacity among displaced or project affected persons.

The policy visibly articulated in its preamble that the system must adopt the measures to minimize the possibilities of large-scale displacement of inhabitants in the name of public purpose or greater public benefit or promote non-displacing or least-displacing alternatives. It tells about the need for urgent measures to monitor all disadvantages, agonies, loss of material as well as social capital related to land acquisition and also steps for assessing the social impact of displacement.

The draft paper of this policy clearly adds provisions to minimize the incidence of involuntary displacement for developmental projects by giving prioritization to waste lands and other less fertile lands for further advancement in infrastructure and other projects like atomic power, industrial parks and so on. In addition to this, this policy strictly adheres that the take up of agricultural land for non-agricultural purposes should be avoided or at least make efforts to minimize that type of acquisition.

There is a clause in this policy about Social Impact Assessment (SIA) survey before acquiring land for developmental projects. However, this provision of SIA is restricted to large scale projects and mass displacement. That is, Chapter IV of NRRP, 2007 manifested that SIA study is mandatory for those projects that cause involuntary displacement of 400 or more families in plain regions or 200 families or more in hilly or tribal areas. There should be a separate R&R plan for those affected people belonging to Scheduled Tribes. The acquisition of minimum land in emergency time, say, national defense or security perspective, the clause of SIA study will be exempted.

It also specifically stipulated that there should be an authority to monitor the entire system and well-defined mechanism, that is, “Ombudsman” who is selected on the basis of Paragraph 8.3 of this NRRP, 2007, to settle the concerns or grievances raised by the affected families.

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The documentation of record of land and its revisions are very weak in India. Generally, land transactions are under-reported and dealers, both seller and buyer of land, drastically manipulated its original price to save the stamp duties (Chakravarty, 2013). Hence, the provision of payment of compensation to landowners on the basis of market price of land is futile and, practically, they will get a meagre amount as compensation because the authority will consider the value of land from the revenue documents on recent land transactions reported in the land registration office.

## **2.5 Corporate Social Responsibility (CSR) and DIDR**

Hopefully, the new Companies Act, 2013 made a compulsory provision of Corporate Social Responsibility (CSR) up on the companies; managed by either private or public. Howard Bowen, an economist from Harvard University, has developed the concept of CSR in 1953 in his book, ‘Social Responsibility of Businessmen.’ It upholds a key ideology that a company must adopt measures to ameliorate the living conditions and welfare of its workforce, local community as well as society as a whole. CSR, a strategic tool in the form of “Triple-Bottom-Line Approach” to achieve economic, environmental and social targets along with the realization of expectations of shareholders/stakeholders of the company (United Nations Industrial Development Organization - UNIDO).

More proudly, by the legislation of her new Companies Act, 2013 with a statutory provision of CSR, India became the first country in the world to make such provision with ingredients of compliance, enforcement, conformity, disclosure and auditing. Those companies, which retained the stipulated threshold as per Section 135 of the Companies Act, 2013 such as net worth of Rs 500 Crore or more or turnover of Rs 1000 Crore or more or net profit of Rs 5 Crore or more, should spend at least 2 percent of net profit on CSR activities (The Ministry of Corporate Affairs (“MCA”), vide its Notification dated 11<sup>th</sup> October 2018). The concept of CSR upholds a perspective that business corporates must act as social engineers of the nation rather than profit hunters.

Researchers of many countries including India were astonished by seeing the indifferent attitude of the state and the corporate sector towards designing a good rehabilitation and resettlement policy for DPs / PAPs. Some of them argued that the new initiative of Corporate Social Responsibility (CSR) would produce positive results in this regard. They pointed out that there would be no good rehabilitation and resettlement policy and CSR would not work as an alternative until and unless there was a fundamental change in the legal framework and the recognition of the need of ethical back up by the authority concerned as well as imperative commitment of the corporate sector (Pattnaik, 2013).

## **2.6 Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013**

Indeed, the modern economic development framework has been coupled with infrastructural advancement which in turn resulted in land acquisition, displacement of inhabitants and their rehabilitation and resettlement. That is, developmental projects and displacement of local people are inseparable. In this context, a flawless and humane policy initiative is essential to minimise the incidence of mass displacement on account of developmental projects and also to ensure a better life prospect to the project affected persons (PAPs) and displaced persons (DPs). In this regard, the enactment of new Act, titled, “Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCTLARR)”, has opened rays of hope among evicted persons or to those people who are going to be evacuated by the authority in the name of developmental projects in the near future. The development practitioners have argued that the meaningful intervention of the Government with right legislations and packages would prevent the incidence of impoverishment among PAPs / DPs (Kerala State Human Rights Commission, 2009).

Interestingly, RFCTLARR Act has replaced the oppressive provisions of Land Acquisition Act of 1894, an act promulgated by the British rulers, with humane provisions. Its salient features are discussed in the subsequent chapter of this thesis. The successful implementation of the provisions embodied in the new Act, RFCTLARRA, 2013 invariably need a change in the outlook and approach of the officials to execute them in meaningful ways and then only we can genuinely expect a change for disempowerment of land losers to empowerment of them (Shahbaz & Jain, 2017; Sinha, 2020).

Not surprisingly, in 1947, the Government of India adopted LAA of 1894 and extensively applied this law for land acquisition for various developmental projects like dam construction, roads, railways, airports, industrial parks and so on. Interestingly, in India, both Centre and States are entrusted to draft laws in relation to land acquisition, compensation and rehabilitation and resettlement as the subject of land acquisition and requisitioning of properties belonging to the Concurrent List of Indian constitution. There are a number of instances in which the state government made amendments to the land acquisition act to accommodate the needs and aspirations of locally affected persons in an amicable way. For instance, the Land Acquisition (Amendment and Validation) Act of 1967 has been enacted by the state of Karnataka (Nandal, 2014). Recently, Kerala state has announced Kerala Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and

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Resettlement Rules 2015 and Government of Kerala – Revenue (B) Department - State Policy for Rehabilitation and Resettlement Package for Land Acquisition in the State in lieu of RFCTLARR Act 2013 vide GO(MS)No.448/2017/RD dated 29/12/2017.

The abuse of the clause of “public purpose” (Cernea, 1996) by the authority created obscures in land acquisition for developmental projects in most of the countries including India. Moreover, ill-defined ‘urgency clause’ in the LA Act with poor compensation, absence of clauses on rehabilitation and resettlement of project affected persons and under-representation of displaced persons in designing rehabilitation packages for them label the Act as “brutal law” in the mindset of the people. The issue reached at the door steps of High Courts of different states and Supreme Court of India in which the verdicts of the Court have been consistent with the interest of the government. More clearly, the verdicts have given more discretionary powers to the Center or States to decide those projects come under the purview of public purposes, in fact, it approves the principle of Eminent Domain.

The Supreme Court of India has observed in the cases of *State of Bombay v. R.S. Nanji*, 1956 and *Coffee Board v. Commissioner of Commercial Taxes*, 1988, that Eminent Domain is one of the vital ingredients of sovereignty of every state and the authority can acquire land for public purpose even without the consent of landowners. However, the Court adds that the Government must ensure proper rehabilitation of displaced persons (Sreya, 2013). The guidelines on DIDR must accommodate the ethical aspects of development as well as displacement which clearly recommend the measures not only for the well-being of DPs / PAPs but also for dropping particular projects on account of large-scale displacement (Penz, Drydyk & Bose, 2011).

Indeed, the sad part in this process of growth mania (Dreze & Sen, 2013) is that the overall task of the welfare-oriented Government – “inclusive growth” is becoming a casualty. Here, the significant question is: “How do we define development? More interestingly, how can we ensure inclusive growth by excluding a group of people who incurred a large form of real cost as they are forced to surrender their homestead, livelihood and social capital for the project, from enjoying the fruits of development?” (Morris & Pandey, 2010).

## **2.7 Research Gap**

Unlike the dam-induced displacement and resettlement, there is insufficiency of studies on airport-induced land acquisition, displacement and resettlement. Of course, the nature and intensity of risks associated with the DIDR are different from projects to projects

and also regions to regions. These kinds of differences may arise in the same projects operated in different districts of the same state as the economic and demographic profiles and approaches of inhabitants are different which may influence on the decisions on land acquisition, displacement, compensation and resettlement. There exists a gap in adopting both DPs and PAPs as gainers and also losers of the airport projects, as many of the existing studies on DIDR are focusing on the impacts of developmental projects only on DPs. That is, the existing literature gives little attention to the concerns and prospects of economic evictees (PAPs). The available studies on trends, patterns and outcomes of rehabilitation and resettlement process between two different airport models under public sector and joint venture initiatives are inadequate which invariably demand more holistic analyses in this regard. Additionally, this study also endeavours to take into account the transition phase of the affected households apart from their pre-evacuation and post-evacuation phases as commonly seen in most of the studies. The present study is attempting to fill all these research gaps in the areas of DIDR.

## **2.8 Concluding Remarks**

In essence, the literature review on DIDR helped the researcher immensely to understand the nature and pattern of development-induced land acquisition, displacement and resettlement. This extensive review covers empirical works, theoretical studies, analytical models and policy level reviews. This chapter clearly identifies the existing gap in this field which demands scientific studies to fill the aforementioned research gap. The paucity of reliable data on project affected persons including evictees adversely affected in designing concrete measures by the authority to mitigate their grievances linked to DIDR. There are unexplored areas in the airport-induced relocation and resettlement which intensify the necessity of more studies on DIDR.

## CHAPTER III

### AN OVERVIEW OF TRANSPORT INFRASTRUCTURE ADVANCEMENT IN INDIA

#### 3.1 Introduction

Of course, economic growth of an economy like India is largely dependent on the quality investment in physical infrastructure as well as social infrastructure which is generally known as human capital formation. Broadly, the economic agents heavily depend upon infrastructure, which consists of basic amenities and services, to carry out economic activities in an optimum way. Overwhelmingly, the pace of capital inflows into the country from the investors mainly from abroad depends largely on the strength and easiness of infrastructure set up of the country. This is visible in the Ease of Doing Business Report of the World Bank in which India is ranked at 63 out of 190 countries in 2020.<sup>1</sup> There is an extensive literature available in the form of theoretical and empirical studies at international, national and local levels in which one can visibly infer the link between infrastructural advancement and economic well-being of a country. The physical and social infrastructural development benefits the poor directly and reduces the magnitude of poverty in a multiple-way (Munnell, 1990; World Bank, 1994; Roller & Waverman, 2001; Canning & Pedroni, 2004; Estache, 2004).

The need for adequate investment in quality infrastructure to unlock economic growth especially in the present era of fourth industrial revolution is highlighted in the Global Competitiveness Report, 2019.<sup>2</sup> Infrastructure, one of the key twelve pillars of Global Competitiveness Index (GCI), acts as the accelerator of economic growth by filling competitiveness gap in the country (Schwab, 2019). Actually, India invariably requires the highest single digit or even double-digit GDP growth rate to reduce the level of acute poverty and malnourishment which essentially needs a robust infrastructure advancement

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<sup>1</sup> Ease of Doing Business Index, developed by the World Bank, is constructed on the basis of simple average (equally weighted) of 10 parameters; namely: starting a business, construction permits, getting electricity, registering property, getting loan, protecting minority investors, paying taxes, trading across borders, enforcing contracts and resolving insolvency. The index released by the World Bank for the first time in the year 2003 in which the rank of India has improved dramatically from 142<sup>nd</sup> in 2014 to 63<sup>rd</sup> in 2020.

<sup>2</sup> The Global Competitiveness Report has been published annually by the World Economic Forum (WEF) since 1979.

as there exists a strong positive relationship between physical and social infrastructure and economic growth of a country and the eradication of poverty (Agrawal, Sahooa & Dash, 2009). There is a strong positive relationship between investment, either physical or human, and human capabilities in the country (Human Capital Index, 2020).<sup>3</sup>

A country, for example, India sets aside a huge amount of money for infrastructural development in every budget that is presented in the country from time to time. It is unanimously agreed that infrastructure plays a significant role in the socio-economic development of the country and also in ensuring the growth process being more inclusive and sustainable in all aspects (Economic Survey, 2019-20). Interestingly, one of the flagship programmes of the present government under the leadership of Hon. Prime Minister, Narendra Modi, named the National Infrastructure Pipeline (NIP) for the five-year span which begins from the financial year 1<sup>st</sup> April of 2020-21 to 31<sup>st</sup> March 2024-25 marks a bold step of the government into the right direction. This novel project of the Central Government contains lots of measures to avoid time delays, fosters PPP framework, enables creation of jobs and smooths land acquisition process. The system needs all these sagacious measures and action should be taken in a time-bound manner to eradicate obstacles to investment flows and capital formation. The report published by a host of think-tank institutions including NITI (National Institution for Transforming India) Aayog invariably manifested that India needs a massive infrastructure investment fund of about the U.S. Dollar 1.4 trillion (100 lakh crore) during the phase of five-year period from 2020-21 to 2024-25. The draft of the NIP vehemently highlights the joint venture investment mode of public-private-partnership (PPP).

Out of the total investment fund, both the Central and State governments contribute 39% and the remaining 22% by the private sector. More interestingly, the share of the private sector will enhance up to 30% by 2025. Fortunately, many of the projects were already initiated in the country. The progress of the work shows that around two-thirds of the pipeline have already been started in the country (Economic Survey, 2019-20). The airports sector also occupies a strategic position in the NIP as this sector commands a considerable amount of 1,43,398 crores for the period of 2020-2025. This amount will be utilised for both greenfield and brownfield airport projects in the country. In addition to these features, the authority has given due weightage to address infrastructure-related disputes and bottlenecks in an amicable way and has also highlighted the significance of maintaining a balanced PPP agreement ensuring the timely execution of contracts. The private sector will play a decisive role along with the foreign capital inflows in materialising the solid objectives of NIP.

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<sup>3</sup> HCI is an index released by the World Bank every year since 2018. India is ranked at 116 among 174 nations in the Human Capital Index 2020.

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### **3.2 An Overview of Transport Sector Developments in India**

Indeed, the expansion of infrastructure is a continuous process and it must be a precondition for progress and should go hand in hand with the authority to materialise our distinct goals of expediting the mechanism of economic growth and development (Rao, 1980). In a wide sense, the infrastructure facilities of a country consist of transport, energy, communication networks, irrigation-related projects including dams, science and technology, social overheads such as educational institutions and health-allied buildings and amenities. The transport sector, which is one of the major segments of infrastructure, includes roads, railways, shipping, civil aviation, inland waterways and so on.

Pandit Jawaharlal Nehru, the architect of modern India and other experts gave much importance to the rapid development of infrastructure to overcome the miseries and backwardness of the Indian economy as our economy was exploited and her size was dwindled under the clutches of the British administration rightly from 1757 to 1947. This tendency was vividly noticed right from the first five-year plan which was commenced on 1<sup>st</sup> April, 1951. It befittingly indicates that Indian planners had holistically understood the positive link between infrastructural progress and general economic growth of the country. For instance, most of the five-year plans have allocated around 50% of the total plan expenditure to boost the infrastructure base of the country. As a result, there has been sizeable enhancement in the infrastructure amenities of the country. Let us examine the progress of the transport sector of the Indian economy.

The policy-makers right from the independence of India grant emphasis on the progress of the transportation sector. They correctly observed that “an efficient and well-developed system of transport and communications is vital to the success of a plan of economic development which lays stress on rapid industrialisation.”<sup>4</sup> It is observed in the first three five-year plans that the share of funds for the transport sector was significantly high as it was ranged from 25% to 28%. However, this allocation was a little bit lowered in percentage wise in the subsequent plans as the country was confronted with the resource constraints and much attention was paid to energy and for rapid industrialisation of the country.

#### **3.2.1 Road Transport System in India**

India has occupied the 2<sup>nd</sup> position in the length of road network in the world which is only next to the United States. India has retained around 58.98 lakh km in which 1,32,500 km National Highways / Expressways, 1,56,694 km State Highways and 56,08,477 km other

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<sup>4</sup> The Draft Document of the 2<sup>nd</sup> Five Year Plan – 1956-1961, p.459.



roads. National Highways in India registered an average growth rate of 2.2% during the last sixty years and also manages around 40% of the road traffic. More interestingly, State Highways represent only 3% of the total road network which carry approximately 40% of total road traffic in the country. The latest estimate shows that around 90,000 km of state highways are single lane (3.5m wide). At the same time, the number of vehicles is increasing very rapidly and expanding at 10.8% in a compound annual growth rate (CAGR) and the passenger traffic is 12,000 billion passenger-kilometre (BPKM). The present freight traffic is registering an annual growth rate of 9.7% and it is anticipated that it would be 13,000 BTKM by 2032.

**Table 3.1: Length of Road Network in India (in km)**

<b>Road Transportation</b>	<b>Length (km)</b>
Total Length of Road Network in India	58,97,671
Length of National Highways	1,32,500
Length of State Highways	1,56,694
Length of Other Roads	56,08,477

Source: Economic Review 2019-20, Planning Board of Kerala

In India, the road transport commands a strategic position in the transport network of the country as it occupies a vital position in contributing to Gross Value Added (GVA) and in dealing freight and passenger traffic at national and state levels. The study of the World Bank highlighted the significant role of the road network in India as the road transport manages 65% of freight traffic and 85% of passenger traffic. It is also interesting to note that the sector of transport contributes around 4.77% to GVA during 2017-18 in which the road sector occupies a leading role as its share is 3.06%. The railway sector contributes 0.75% towards GVA for 2017-18 which is only next to the road sector. Another major contribution is done by air transport which is estimated to 0.15% and the contribution of water transport is 0.06% to GVA in 2017-18 (Economic Survey, 2019-20).

Another striking finding is coming from the report submitted by the National Transport Development Policy Committee (NTDPC). The report clearly mentions that the road transport handled approximately 69% of the total countrywide freight activities and also 90% of the passenger traffic in 2011-12.<sup>5</sup> In India, the Ministry of Road Transport & Highways (MoRTH) is entrusted to develop and look after the road sector especially the National Highways and also is entitled to envisage the Motor Vehicle Act. It also designs

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<sup>5</sup> NTDPC Report, released on 7<sup>th</sup> June, 2014.

comprehensive road transport policies for India. A better road system is the precondition for accelerating the economic growth of a country like India as it boosts economic activities by providing connectivity and access to markets, trade, commerce and investment and it also helps to develop and open up backward areas. In addition to these benefits, the road network imparts good links to airports, railway stations, ports and other logistical centres.

**Table 3.2: Recent Trends of Road Sector  
(Length of Road Accorded and Build – Length in km)**

	2015-16	2016-17	2017-18	2018-19	2019-20*
Award of NHs/Road projects	10,098	15,948	17,054	5,494	2,103
Construction of NHs/Roads	6,061	8,231	9,829	10,855	4,622
Road construction per day	17	23	27	29.65	12.7

Source: MoRTH, Economic Survey, 2019-20

\* As on 30.09.2019.

The latest profile of the road network in India shows that the country retains around 59.64 lakhs km of road transport as on 31<sup>st</sup> March 2018. The National Highways involve the total length of 1.32 lakh km as on 1<sup>st</sup> March 2019 (Economic Survey, 2019-20). The available data shows that the speed of road construction has increased phenomenally from 17 kms per day in 2015-16 to 29.7 kms per day in 2018-19. Moreover, there has been dramatic enhancement in the aggregate investment in the sectors of roads and highways which is increased by three times in the last five-year phase from 2015-16 to 2019-20.

### **3.2.2 Railway Sector**

Indian Railways, the 3<sup>rd</sup> largest rail network in the world only next to the U.S. and China, maintains around 68,000 route kms which transported 120 crore tonnes of freight and 840 crore passengers during the year 2018-19 which positioned Indian Railways as the largest passenger carrier at global level and in the case of freight carrier it occupied fourth rank in the world. Actually, Indian railway consists of 1,20,000 km rail track which covers 7,300 stations. The electrified rail route in India consists of around 29,376 km. The railways network of India has shown a growth rate of 3% per annum in freight originating tonnage. At the same time, the growth in route length was deplorably low.

### **3.2.3 Shipping Sector in India**

A wide coastline of India, which is estimated to be 7,512 km, provides an immense opportunity to flourish freight transport through the modes of coastal shipping and inland

waterways. India also retains 12 major ports and 200 minor ports, a good asset for India to manage cargo business. It is estimated that in recent years 53 million tonnes of cargo traffic were managed by both major and minor ports. Surprisingly, the transportation mode of coastal shipping and inland waterways handled only a mere 1% of the total domestic freight movement in the country (Economic Review, 2019).

A large volume of trade, both in merchandise and services, essentially needs an effective shipping transport in any country. It is estimated that the transportation via sea managed around 95% of India's trade by volume and 68% in terms of value. The performance of shipping transportation in India was poor at the time of independence where the country's shipping tonnage was only 1.92 lakh Gross Tonnage (GT) and it has improved to 20 lakh Gross Tonnage in 2004-05. The fleet strength of India is estimated at 1419 ships as on 30<sup>th</sup> September 2019. However, as per the report of Institute of Shipping Economics and Logistics, India retains only a marginal share of 0.9% in total world dead weight tonnage (DWT) as on 1<sup>st</sup> January, 2019.

### **3.2.4 Inland Water Transport (IWT)**

IWT, is one of the cheapest transportation modes in India in general and in Kerala in particular, consisting of a number of transport facilities of river, canals, backwaters, creeks and so on. This mode of transportation requires only less energy consumption and uses more labour-intensive efforts in its operations. The trends of this transport mode in India show that IWT was decisive in the mechanism of transportation of India till the middle of the 20<sup>th</sup> century. Currently, we are depending heavily on railway transport for moving goods, passengers' purposes and also the rivers using mainly for irrigation tasks that reduced the significance of IWT in India.

The IWT is very important for some states of India like Assam, West Bengal and Bihar where 50% of the total 25 lakh tonnes of traffic between Assam and Calcutta is met by river transport and the rest 50% by the railways and road networks. As far as the state of Kerala is concerned the IWT is very important as the rivers and backwaters are extensively utilized for the movement of goods and also for the movement of people. Moreover, the state of Kerala is blessed with a large number of rivers and backwaters.

### **3.2.5 A Brief Profile of Civil Aviation / Airports Sector of India**

Undoubtedly, air transport has been playing a notable role especially in a resource constrained country like India as this transport mode helps to attain optimum utilisation of technology, managerial and administrative skills and also saves our valuable time which cannot be

matched by road lines, inland services or rail networks. Presently, the airport sector is an integral part of the transport system of India both for domestic and international purposes. Clearly, the aviation sector of India is playing a decisive role in enhancing connectivity, flourishing cargo business, promoting tourism and boosting trade and commerce. The paper clearly shows that the people depending aviation sector has dramatically increased, for instance, between 1991 and 2011 the domestic air passengers have increased by 800% (Mohan, 2016). Interestingly, India offers a wide domestic market for civil aviation as it is the 3<sup>rd</sup> largest in the world in this regard (Annual Report, 2018-19, AAI). Air connectivity and its proper undertakings and channelizing are essential to promote economic activities and more importantly to boost trade, both domestic and foreign. The involvement of the private sector, both from domestic and abroad, mushroomed this sector and also enhanced the healthy competition in this air-field. However, the first notable development of the aviation sector of India happened even in the colonial administration, especially in 1920s.

In 1920, the Government had constituted a few airbases in India which marked a revolutionary step in the history of the airport sector of India. In 1927, the authority had established the Civil Aviation Department and a number of flying clubs in India. The outbreak of the second world war forced the colonial power to commence more air services and designed new airfields in India which accelerated the pace of growth of this sector. A broad aviation policy was chalked out by the Government of India in 1946 which promoted the private players to start air services in the country. The year 1946 also marked for the constitution of the Air Transport Licensing Board which initially gave 11 licenses to private entities that adversely affected the air transport mode and confronted huge losses by air companies due to the overcrowded operations which resulted in cut-throat competition in this field.

The Government of India in the post-independent era had decided to integrate the whole existing air-field companies into four which was mainly recommended by the Air Transport Enquiry Committee chaired by Rajadhyaksha in 1950. It was the right step to eliminate stiff competition in this field and to attain systematic and meticulous division of zonal work of the airport sector. The aforementioned steps invariably resulted in the nationalisation of the aviation sector of India which was mainly done for raising operational competency, getting well-trained pilots, staff and technicians and for reducing costs and losses and thereby removing duplication of services.

The Air Transport Corporation Act was enacted by the Indian Parliament in 1953. It enabled the Indian Airlines Corporation to run domestic services and similarly the Air India

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International to manage foreign services. As a result, the air services in terms of internal and external modes of transport were widely extended in the country. Moreover, additional greenfield airports were constructed and also expanded. They modernised the existing brownfield airports also in India.

The aviation sector of India now consists of a host of air operators and service providers which is managed and controlled by different stakeholders including the Government of India, private sector and foreign companies. Air India, Indian Airlines and Vayudoot provide air services inside and outside the country and the required infrastructural amenities were guaranteed mainly by International Airports Authority of India (IAAI) and Director General of Civil Aviation (DGCA). Interestingly, the development of international airports is the main concern of IAAI and the DGCA is entrusted to maintain and develop civil aerodromes, civil enclaves, terminals and aeronautical communication stations.

Additionally, Airports Council International (ACI) role is immense in enhancing cooperation among airports across the world and it promotes international standard norms in global air transport mechanism by fostering safety, security, efficiency and by chalking out environment friendly policies and programmes. Actually, ACI, a Montreal (Canada) based institution was founded in 1991, which is popularly known as the voice of airports of the world. Let us make a comparison of the aviation infrastructure of India with other BRICS nations and also with Singapore which secured the first rank in the WEF's Global Competitiveness Report, 2019.

**Table 3.3: Aviation Sector of BRICS Countries and Singapore**

Indicators	India	Brazil	Russia	China	South Africa	Singapore
	Score	Score	Score	Score	Score	Score
Airport connectivity	100	89.7	89.2	100	63.5	85.4
Efficiency of air transport services	64.3	56.8	66.6	60.7	74.5	95.5

Source: Global Competitiveness Report, 2019, World Economic Forum (WEF)

The Civil Aviation sector of India is working under the aegis of the Ministry of Civil Aviation which is entrusted to design, supervise and implement aviation policies and schemes in the country. Currently, private operators, permitted to participate in the aviation sector for extending aircraft services, are playing a crucial role in the aviation sector of India and also dominating the sector which promotes healthy competition in the sector that results in low cost or affordable air services and enhances the quality of air services. The regulatory

framework of the aviation sector is vested with the regulatory body – DGCA which issues guidelines from time to time to ensure safety services, air safety, enforcement of civil air regulations and air worthiness standards. The existing aviation sector policy doesn't allow the foreign airline to hold equity in a domestic airline company of India.

The decade wise analysis of air traffic in the country shows a tremendous growth of air services in India especially in the post-1991 period. The period from 1960 to 1985 indicated an average yearly growth of 10% in the domestic air traffic in the country. Similarly, the international air traffic has been reported to achieve a growth rate of 12.4% per annum during this period (AAI, 2020). The experts in this field opined that the infrastructure of the air transport sector of India is poor which needs timely intervention from the authority concerned including IAAI and DGCA to upgrade the basic infrastructure that would compete with the most developed airfield abroad.

At present, there are 136 commercially-managed airports under the aegis of Airports Authority of India (AAI) and 6 airfields are running under the banner of public-private partnership for operation, maintenance and development of airports. The seat capacity of Indian aircraft has registered a robust growth. For instance, between 2013 and 2018 the airline operators in India have increased the seat capacity of aircraft from 0.07 annual seats per capita to 0.12 annual seats per capita. However, the aviation sector of India needs more broad policies to initiate more airports and additional steps to improve their efficiency and capacity enhancement to catch up with the aviation sector of America and China, the first and the second largest domestic aviation market respectively in the world. The fact is that the seat capacity of Chinese aircraft has reported 0.33 annual seats per capita in 2013 which increased to 0.49 in 2018. In this key parameter, the U.S. aircraft registered a splendid growth figure from 2.59 annual seats per capita in 2013 to 2.95 in 2018. The latest report shows that all airports in India managed 1271.40 thousand aircraft movement during the period from April 2019 to September 2020 and interestingly this estimate secluded the General Aviation Movements. During this period, Indian airports handled 170.02 million passengers and 1707.98 thousand tonnes of freight (AAI, 2020).

The Government also envisaged another holistic policy for Indian air crafters to double their fleet from around 680 aircraft (number of aircrafts endorsed on Scheduled Airlines) in November 2019 to over 1200 aircraft by 2023-24. Table 3.4 shows aircraft movements and freights handled by the airports operating under the aegis of Airport Authority of India (AAI).

**Table 3.4: Aircraft Movements (in numbers) & Freight Movements (MTs)  
in India Managed by AAI**

Particulars	2007-08	2017-18	2018-19
	<b>Aircraft Movements (in numbers)</b>		
International	248538	437926	452641
Domestic	1059091	1886625	2153323
Total	1307629	2324551	2605964
<b>Freight (in million tonnes)</b>			
International	1146745	2143968	2200187
Domestic	568233	1213060	1361714
Total	1714978	3357028	3561901

Source: 13<sup>th</sup> Annual Report, 2007-08 & 24<sup>th</sup> Annual Report, 2018-19, AAI.

The present aviation policy gives due importance to the public-private partnership (PPP) framework model to establish and maintain airports in the country. For example, the PPP model was accorded to six more airports in the country which include Ahmedabad, Guwahati, Jaipur, Lucknow, Mangalore and Thiruvananthapuram to enhance their efficiency and augment their resources 2019 (Economic Survey, 2019-20). Moreover, in 2019-20, the construction of five new greenfield airports were completed and operationalised successfully in the country. They are: Durgapur (West Bengal), Shirdi (Maharashtra), Pakyong (Sikkim), Kannur (Kerala) and Kalaburagi / Gulbarga (Karnataka).

### 3.3 Transport Infrastructure Development in India: A Comparison

This section endeavours to give a comparative performance of the infrastructure segment of the Indian economy with respect to BRICS and Singapore. The analysis is based on the report of the World Economic Forum, titled, Global Competitiveness Index (GCI) of 2019 which covers 141 countries across the world that covers approximately 99 % of the world GDP. The GCI index is designed on the basis of 12 pillars in which infrastructure is the vital one. The remaining pillars include Institutions; ICT adoption; Macroeconomic stability; Health; Skills; Product market; Labour market; Financial system; Market size; Business dynamism and Innovation capability. Let us examine the infrastructure component and the performance of India. Interestingly, in the segment of infrastructure, India got 70<sup>th</sup> rank with a score of 68.1 out of total 100 score.

**Table 3.5: Infrastructure Component in GCI and Performance of India**

Sl. No.	Indicators	Value	Score	Rank / 141
1	Road connectivity 0–100 (best)	75.8	75.8	72
2	Quality of road infrastructure 1–7 (best)	4.5	58.6	48
3	Railroad density km/1,000 km <sup>2</sup>	22.7	56.6	39
4	Efficiency of train services 1–7 (best)	4.4	57.0	30
5	Airport connectivity score	1,224,525.6	100.0	4
6	Efficiency of air transport services 1–7 (best)	4.9	64.3	59
7	Liner shipping connectivity 0–100 (best)	59.9	59.9	25
8	Efficiency of seaport services 1–7 (best)	4.5	59.1	49

Source: Global Competitiveness Report, 2019, World Economic Forum (WEF)

The methodology that was adopted in framing GCI includes the scaling scores ranging from zero to hundred. The figure zero represents worst performance (very poor state) and 100 indicates best performance, that is, an ideal state. In the latest GCI of 2019, India is ranked at 68 out of 141 countries which shows a decline of 10 position compared to the previous Global Competitiveness Report, 2018 (that is, 58 / 140). In addition, it is worthful to make a glimpse on infrastructural advancement in India and its comparison with BRICS group as well as the top performer country, that is, Singapore in GCI, 2019 of WEF.

**Table 3.6: Infrastructure in India and its Comparison with BRICS and Singapore: Rank of each Country in the Infrastructure Pillar of GCI, 2019 (Score Range - 0 to 100)**

Indicators	India		Brazil		Russia		China		South Africa		Singapore	
	S	R	S	R	S	R	S	R	S	R	S	R
<b>Infrastructure</b>	68.1	70	65.5	78	73.8	50	77.9	36	68.1	69	95.4	1
a. Road connectivity	75.8	72	76.1	69	85.7	41	95.7	10	96.2	7	n/a	n/a
b. Quality of road infrastructure	58.6	48	33.5	116	41.3	99	59.7	45	59.1	47	90.9	1
c. Railroad density	56.6	39	8.9	78	13.1	69	17.9	61	43.2	47	100	1
d. Efficiency of train services	57.0	30	24.3	86	64.6	17	59.0	24	34.1	68	80.1	5
e. Airport connectivity	100.0	4	89.7	17	89.2	18	100	2	63.5	39	85.4	23
f. Efficiency of air transport services	64.3	59	56.8	85	66.6	52	60.7	66	74.5	27	95.5	1



g. Liner shipping connectivity	59.9	25	38.2	48	40.4	43	100	1	40.1	44	100	2
h. Efficiency of seaport services	59.1	49	37.1	104	61.1	47	58.6	52	59.1	50	90.8	1
Overall Rank	68		71		43		28		60		1	

Source: Global Competitiveness Report, 2019, World Economic Forum (WEF)

Note: S stands for Score out of 100 and R represents Rank out of 141 countries

In essence, India needs a massive investment of around the U.S. Dollar 1.4 trillion in quality infrastructure of the country to attain a targeted GDP of \$ 5 trillion economy by 2024-25. For instance, the Union Budget 2022-23 has allocated a big amount for boosting the infrastructure segment of India which accounts for 2.9% of her GDP. And it is unprecedented in the history of India.

### **3.4 Transport Infrastructure Profile of Kerala**

Kerala, often known as ‘God’s own country’, is one of the rich southern states of India which is popular for her enviable achievement in the healthcare, education or simply for social development that is popularly known as “Kerala Model of Development”, the term first coined by K.N. Raj in 1971. Indeed, the solitary model which portrays distinctive social development in spite of lower economic capacities that clearly violate the growth model mainly propounded by Harrod and Mahalanobis and the model is popularly known as “The Kerala Model” (Kumar, 2013). The state of Kerala retains the first position in a number of social indicators like literacy rate, sex ratio, lower IMR, MMR, etc. Amartya Kumar Sen, a leading developmental economist and Nobel Prize laureate, rightly articulates that the rest of India should learn from a tiny state, Kerala, the means and ways of social development, mass participation in decision making process in democratic ways through quality education which is remarkable in every aspect (Sen, 2003).

In another context, A.K. Sen observes that, “Kerala, despite its low-income level has achieved more than even some of the most admired high growth economies such as South Korea” (Sen, 1997). Kerala State with low per capita income and economic growth has attained a fantabulous quality of life and a fabulous social development which make Kerala Model of Development (KDM) as unique in the world (Franke and Chasin, 1994). In addition to these, the State shares the first rank with Tamil Nadu in the number of international airports, both having four international airports. A tiny State like Kerala with a thick population has raised many concerns in this regard especially in relation to land acquisition, displacement, compensation, rehabilitation and resettlement.

The state government cherishes the goal of accelerated economic growth with sustainable development goals in which the authority gives much emphasis on infrastructural advancement in the state. It is clearly portrayed in the visible goals of Kerala Infrastructure Investment Fund Board (KIIFB) which is the nodal agency to supervise, approve and also entrusted to allocate sufficient funds for major infrastructure projects. Interestingly, a bulk amount of funds, Rs. 50,000 crore is set aside under KIIFB for these projects including transportation, energy, IT, social infrastructure, etc. Kerala, one of the beautiful states of India, has a limited territorial area of 38,863 sq. km. and however, is blessed with a number of rivers, lakes, estuaries, backwaters and 585 km coastal route in which Kerala positioned the 5<sup>th</sup> largest among Indian states as far as the coastal length is concerned. The latest infrastructure profile of Kerala shows 2.73 lakh km of road, 1588 km of railways, 1687 km of inland waterways, 18 ports and 4 international airports.

There are a number of proposals and some of them are in the pipeline including Sabarimala Airport, Light Metro Rail Projects in Thiruvananthapuram and Calicut with a total cost of Rs. 6,728 crore, Kochi Water Metro Project, K-rail, and so on. For example, the Kochi Water Metro Project has acquired the green signal from the Department of Revenue for acquiring land from the natives to build 15 terminals (Economic Review, 2019). The valid question here is how can we install all these projects which are very strategic for growth and development of the state with minimum displacement of the people and also give much weightage to fair and speedy compensation and rehabilitation.

### **3.4.1 Road Sector of Kerala**

Kerala has a wide network of roads under the aegis of different bodies like Public Works Department (PWD), National Transportation Planning and Research Centre (NATPAC), Roads and Bridges Development Corporation of Kerala (RBDCK), Kerala State Transport Project (KSTP), Kerala Road Fund Board (KRFB), Road Infrastructure Company Kerala (RICK) Ltd and so on. The total length of road network in Kerala as per the available estimate in 2017-18 is 2,73,113.30 km which consists of both classified and non-classified roads as correctly remarked by Indian Road Congress. There are 11 National Highways inside the state of Kerala, which are mainly constructed and maintained with the fund allocation of NHAI and also the Ministry of Road Transport and Highways (MoRTH), Government of India. The total road traffic in Kerala is primarily met by the National Highways which is estimated to 40% and another 40% of this segment is handled by the State Highways and Major District Roads (MDR). The length of National Highways in Kerala is 1,781.50 km.

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To develop quality roads in cities and their proper maintenance the Government of Kerala has constituted a statutory body under the state government through Kerala Road Fund (KRF) Act in 2001 - Kerala Road Fund Board (KRFB). The KRFB is responsible for developing and maintaining roads mainly in cities by promoting the mode of public-private partnership (PPP).

KRFB promoted Road Infrastructure Company Kerala Limited (RICK) under Indian Companies Act 1956 to develop State Highways and MDRs. Actually, Kerala is experiencing congested traffic as the road traffic is increasing tremendously at an average rate of 12% to 14% annually and the road density is 390 km / 100 sq. km which is approximately three times the average of India as a whole. Another interesting information in this regard is that the length of road per one lakh population is 686.55 km and the lion's portion of the road network in Kerala is single lane which is 90% of the road network in the state. The fact is that the present situation in Kerala urgently requires the expansion of the road network which demands additional land acquisition, displacement, compensation, rehabilitation and resettlement.

### **3.4.2 Rail Transport of Kerala**

The state of Kerala has retained 1,257 railway route km and 1,588 km of total track so that the state achieved a pivotal position in the railway map of the country. Kerala has sponsored two administrative Divisions, namely: Thiruvananthapuram and Palakkad under the Southern Railway. The Palakkad Division has 95 stations and Thiruvananthapuram has 105 stations and the total number of Railway stations in Kerala is 200. It is a welcome step that resulted in the setting up of a joint venture called Kerala Rail Development Corporation (KRDCL), between Government of Kerala and Government of India and entrusted to boost Kerala's railway infrastructure.

The venture, KRDCL, is working on a cost sharing format in which the 51% equity shares and 49% equity shares are held by the Government of Kerala and the Government of India respectively. Currently, the Joint Venture is working with an initial paid-up capital of 100 crore and this amount may be enhanced in future with the sanction of Ministry of Railways and the state Government. The expansion of rail infrastructure in the state invariably needs additional lands. The authority has estimated that 1,226.45 Ha of land is required to finish the work as of May 2019. The demand for land from private segment is 1,074 Ha in this regard. The state Government set aside public land for the project is 107.98 Ha and the Railway's land is 44.28 Ha which is falling in the adjacent areas of the existing rail track.

### 3.5 Air Transport Sector of Kerala

The experts who are working at the International Civil Aviation Organisation (ICAO) opined that an economy can attain 100 jobs in the airport sector itself and 610 jobs in the country as a whole and also an overall benefit of Rs.325 can be derived from the expenditure of every Rs.100 in the aviation sector. A small state like Kerala has four civilian airports; surprisingly, all of them are international airports which is the unique feature that is applicable only to Kerala among Indian states. In addition to this, Kerala shares the first position among Indian states with her neighbouring state – Tamil Nadu – in the greatest number of international airports operating in a state. Kerala’s four international airports include TIAL, CCJ, CIAL and KIAL are four international airports in Kerala. Of these airports, TIAL is the oldest one in the state which has been operating since 1932. The new airport commissioned in Kerala is KIAL on 9<sup>th</sup> December, 2018.

A common feature of airports which are operating in the various states of India is that there is hectic air traffic that can be seen from the capital city of the concerned state. Surprisingly, this feature is not applicable to Kerala as air traffic is allocated more or less equally or evenly among four international airports in Kerala. At the same time, in the map of the busiest airports of India, all airports of Kerala except the new one, KIAL, occupied in the list of 15 busiest airports in India. It is estimated that around 8 lakh domestic passengers and 50 lakh international travellers are depending these four airports of Kerala every year. Undoubtedly, commissioning of new airports or expansion of the existing one will impart a wider choice of services at reasonable fare or competitive cost to the air-passengers. This will help the region to attract domestic as well as foreign tourists and thereby promote economic activities in the region. Table 3.7 shows the list of both brownfield and greenfield airport projects of the state.

**Table 3.7: List of Brownfield and Greenfield Airports Projects in Kerala**

Brownfield Airport Projects			Proposed Greenfield Airport Projects		
Name of the Project	Location of the Project	Nature of the Ownership	Name of the Project	Location of the Project	Nature of the Ownership
TIAL	Chacka, Trivandrum	Public Sector	Aranmula	Pathanamthitta	Private
CCJ	Karippur, Malappuram	Public Sector	Wayanad	Panamaram	Private
CIAL	Nedumbassery, Ernakulam	Public-Private Partnership (PPP)	Idukki	Anakkara	PPP Model
KIAL	Mattannur, Kannur	Public-Private Partnership (PPP)	Sabarigiri Airport	Erumely, Kottayam	Public Sector

Source: The Economic Review, Kerala Planning Board & The Hindu Daily

The state of Kerala has designed more proposals to build airports including Sabarimala Airport and more regional airports as a part of UDAN Scheme which is framed by the Centre to promote regional connectivity and make air travel affordable. Another striking feature here is that the existing airport of Kerala, that is, brownfield airport, demands additional land for their expansion and modernisation. The notification for acquiring land for KIAL and CCJ published, but postponed on account of strong protest from the local people, ecologists and NGOs. We can expect the same trend in acquiring land for greenfield airport projects.

### **3.5.1 Trivandrum International Airport Limited (TIAL)**

TIAL, is the first airport of Kerala, mainly serving the capital city of the state, Thiruvananthapuram, which was commissioned in 1932. The Airport had bagged the international status in 1991 when the former Prime Minister of India, V.P. Singh announced it, which resulted in realisation of the dream of Keralites for getting an international airport in Kerala. The airport has been playing a decisive role in the passenger movements and in boosting cargo business, that is, TIAL became the nerve centre of air traffic in Kerala especially in the post-1970s, the era of gulf boom. Presently, the TIAL is Kerala's 2<sup>nd</sup> busiest one and 14<sup>th</sup> busiest airport at national level. Moreover, the completion of ongoing project of Vizhinjam International Deepwater Multipurpose Seaport in Trivandrum city would enhance the strategic position of TIAL and also the commercial viability of it, all of these, of course, generate job opportunities and promote economic activities including trade and commerce in the state.

#### **3.5.1.1 A Brief History of TIAL**

The first proposal to establish an airport in the country in the city of Trivandrum (this region was a part of Travancore region) came from the Royal Flying Club in which the concrete efforts were taken by Colonel Raja Goda Varman, Consort of Rani Karthika Thirunal Lakshmi Bayi, Rani of Attingal and of Travancore Kingdom. Actually, Raja Goda Varman was a trained pilot who naturally felt the need of an airport in the region and sagaciously convinced the Kingdom to initiate steps into this direction to get a vital position for Travancore region in the aviation map of India. Subsequently, the day, that is, 1<sup>st</sup> November, 1935 marked a landmark event in the history of the aviation sector of India as the region of Travancore witnessed her maiden flight to the airport using DH.83 Fox Moth aircraft. This prestigious moment was commanded by Nevill Vincent, India's first pilot, who controlled the aircraft.

In 1938, a private aircraft, named Dakota, owned by the Royal Government of Travancore made service as the first squadron of Royal Indian Air Force (Travancore) for safeguarding the region from aerial rebellions. In the post-independent era, the airport was used mainly for domestic flights through a domestic terminal – Terminal I. Interestingly, Air India commenced international operations from Trivandrum airport in 1970s to Gulf countries using Boeing 707 and then to Colombo and Male in early 1980s. Another milestone of TIAL airport happened on 1<sup>st</sup> January, 1991 when the Government of India gave international status and thus TIAL became the 5<sup>th</sup> international airport of India only next to Delhi, Mumbai, Chennai and Kolkata. The aircraft started their operations from Terminal II on 1<sup>st</sup> March, 2011. The airport is also reputed for providing single man refuelling operation since March 2016.

### **3.5.1.2 Aircraft Movements in TIAL**

The report of the Airport Authority of India (AAI) regarding the air traffic of India shows that the TIAL has managed millions of passengers which was more than 4.4 million during the accounting year, 1<sup>st</sup> April 2018 – 31<sup>st</sup> March 2019 which included the 33,093 aircraft movements (AAI, April, 2019). Proudly, TIAL bagged the award of ACI 2020, titled as Airport Service Quality (ASQ) Awards, in providing best quality services to its customers. The award comes under the category of 2 to 5 million passengers' category of Asia-Pacific region. In this category, two airports from India; namely: Chandigarh Airport and Mangalore Airport bagged this prestigious award. In the category of 5 – 15 million passengers, two airports from India - Chaudhary Charan Singh Airport (Lucknow) and Cochin International Airport were included.

**Table 3.8: Aircraft Passenger Movements of TIAL (in numbers)**

<b>Particulars</b>	<b>2010-11</b>	<b>2017-18</b>	<b>2018-19</b>
International Passengers	1842824	2477342	2529551
Domestic Passengers	684061	1916127	1904908
<b>Total Passengers</b>	<b>2526885</b>	<b>4393469</b>	<b>4434459</b>

Source: Statistics Report of Airport Authority of India, 2010-11, 2017-18 & 2018-19

Another remarkable achievement of Indian airports can be seen in the category of 25 – 40 million passengers in which Kempegowda International Airport (Bangalore) secured the award. In the case of Over 40 million passengers Chhatrapati Shivaji International Airport (Mumbai) and Indira Gandhi International Airport (Delhi) occupied a pivotal position in the award winners' list.

### **3.5.1.3 TIAL: Land Acquisition, Displacement and Resettlement**

TIAL has spread over a land area of 700 acres (280 ha) which had resulted in the physical and economic displacement of more than a thousand families. Many of the displaced families have been facing acute miseries and impoverishment which shows the ineffective rehabilitation packages including delayed compensation and broken promises of authorities. Recently, the State Government gave green signal for acquiring additional land for the expansion of Trivandrum international airport which includes the 18 acres of land from Vayyamoork in Pettah Village and may affect 171 land owners in the area and displacement of 72 families. The additional land is meant for the construction of an integrated terminal which is an integral component to augment the standard of the TIAL. The Authority has completed the Social Impact Assessment (SIA) survey and also compensation and rehabilitation packages as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (LARR Act), 2013. The SIA survey revealed the possible socio-economic impact of land acquisition on displaced and project affected people. The study strongly recommended for quick payment of compensation and also measures to ensure jobs for project affected persons in the airport project by imparting adequate skill training and other measures.

The TIAL has two terminals, namely; Terminal I for all domestic air traffic except for Air India and Terminal II for managing international flight movements as well as Air India's domestic operations. It is right to say that TIAL is known for not only civil aviation operations but also for its strategic role in Indian Air Force (IAF) and the Coast Guard by providing a separate apron in it to manage their operations. In addition to these, the airport is also used as one of the avenues for pilot training activities under the aegis of Rajiv Gandhi Academy for Aviation Technology. In essence, the TIAL evolved from a family airport for the prince of Travancore Maharaja to one of the international airports of India over a period of time that resulted in land acquisition in multiple times which led to multiple displacement of inhabitants in the region.

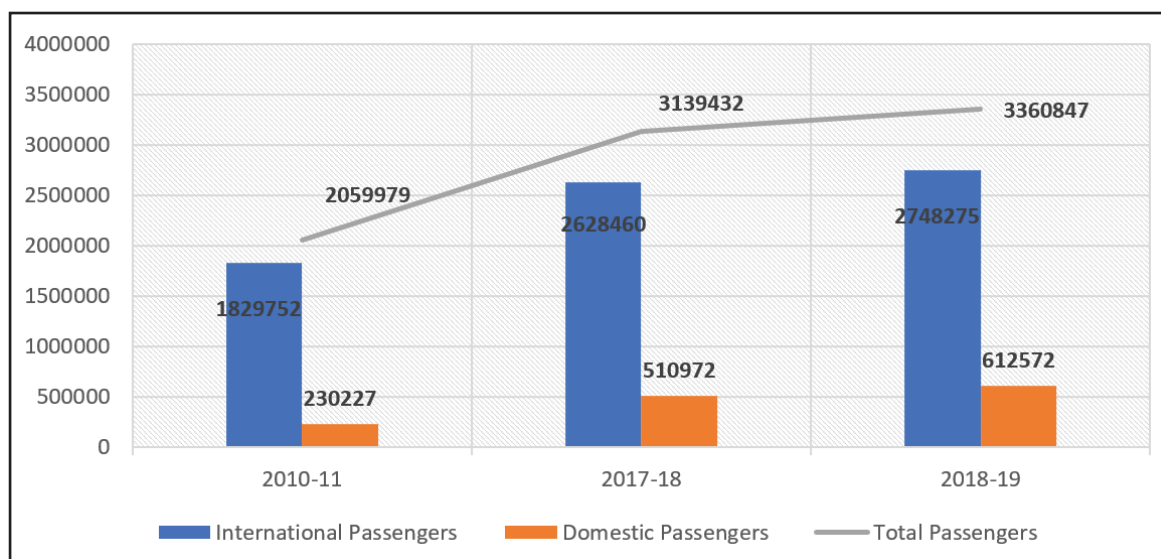
### **3.5.2 Calicut International Airport Limited (CCJ)**

Calicut Airport, which is locally known as Karipur Airport as it is located at Karipur in Malappuram district, manages the passenger as well as the cargo air services of Malabar regions, mainly of Kozhikode and Malappuram. The airport was commissioned on 13<sup>th</sup> April, 1988 as a domestic airport by the Airport Authority of India after a long agitation in 1977 under the guidance of K.P. Kesava Menon, a renowned freedom fighter. The

Calicut Airport has crossed another milestone when the Central Government recognised it as an international airport on 2<sup>nd</sup> February, 2006 which paved the way for augmenting its infrastructure amenities. Undoubtedly, the status of international airport given to Calicut airport strengthens the business prospects of the region. It helps the airport to multiply the volume of cargo business which generates jobs to local people.

Currently, in terms of overall passenger traffic and the handling of cargo business the Calicut Airport bagged the position of 12<sup>th</sup> and 11<sup>th</sup> among Indian airports respectively. The airport also occupied the 3<sup>rd</sup> rank in the yardstick of busiest airport inside the state of Kerala, the first and the second ranks were retained by the Cochin and Trivandrum airports respectively. The Calicut Airport secured the tagline of the best AAI airport in India in the publication of The Airport Council International's Survey for Airport Service Quality (ASQ) for the quarter period from January 2012 to March 2012 with an outstanding rating of 4.18 out of 5-point scale. The trends of Calicut Airports' aircraft movements since 2010-11 are clearly depicted in figure 3.1:

**Figure 3.1: Aircraft Movement of Calicut Airport**



Source: Statistics Report of Airport Authority of India, 2010-11, 2017-18 & 2018-19

The airport also managed the embarkation point for Hajj pilgrims from Kerala and Lakshadweep till 2014 which resulted in the construction of Hajj House in the vicinity of it. However, the Ministry of Civil Aviation has decided to shift the Hajj embarkation point from Calicut airport to Cochin International Airport. It was done to strengthen and re-carpet the runway of the Calicut airport which resulted in partial closing of it from 1<sup>st</sup> June, 2015



to 1<sup>st</sup> March, 2017. The interesting feature of this airport is that it is the only airport which retains the table top runway in the state of Kerala, which is the rarest feature even at global level. However, the KIAL has also been functioning as a table top runway in the state since December 2018.

Moreover, the airport got wide media attention several times because of the frequent mass agitation organised by the Samara Samithi / Action Council with the strong support of local people and NGOs like 'The Friends of Nature' against the authority who gives the permission to acquire additional land for the expansion of the airport by evicting a large number of families in the region. Actually, the region has experienced twelve times of land acquisition for the construction and the expansion of this airport and again the authority demands more land which would be the thirteenth one. The social scientists (Cernea, 2003; Fernandes, 2007; Manjula, 2013) argue that the unscientific proposals and lack of long sightedness, of course, result in the double displacement or even multiple displacement of inhabitants which further worsen or deteriorate the living conditions of the project-affected persons.

The AAI and DGCA (Director General of Civil Aviation) insisted on a few more safety standards or norms to give permission to operate wide-bodied aircrafts and thereby to avoid air traffic accidents in the country. The fact is that the Calicut Airport is working with less land area which is estimated at 380 acres. The result is that there is a strong demand from the Authority for additional land to expand the airport. The various stakeholders of the airport vehemently demanded the permission to make service of the wide-bodied aircrafts like Boeing 777 and Boeing 747. The concerns which are genuinely raised by the AAI are that the length of runway of Calicut airport is not adequate to accommodate wide body aircraft like Jumbo flights. All these factors culminated into the decision of the State Government for acquiring additional land for strengthening the infrastructural facilities of the airport.

The fact is that the safety standard promulgated by the AAI in landing of big body aircraft in an airport must retain a minimum of 240 metre of Runway End Safety Area (RESA) in each direction. Unfortunately, Calicut airport has only 90 metres of RESA which is very short of the existing safety principles of AAI. In addition to this, contrary to many other airports in the country, Calicut airport needs more stringent safety norms as its runway is located in the table top base. The Calicut airport has presented a proposal for extending the length of runway from the current 2850 meters to 3150 meters to ensure 240 meters of RESA that will

help the airport to fulfil the safety guidelines stipulated by the AAI for landing Jumbo aircraft.

In 2011, J.P. Alex, the then Airport Director of Calicut Airport, submitted an affidavit in the High Court of Kerala in which he argued that the Calicut Airport required 1200 acres of land for its development. However, presently the airport has retained only 380 acres of land. The local people moved to the High Court by arguing that the Airport Authority had acquired land several times and a significant portion of land is still vacant. Moreover, the move of land acquisition, indeed, would displace thousands of families as the adjacent places of the airport are thickly populated.<sup>6</sup> Moreover, the said renovation and expansion of this airport would need at least 120 to 150 lakh cubic meters of mud which, definitely, affect the ecology of the region catastrophically. The environmentalists including geologists warned the authority and strongly recommended to skip this proposal as it may result in the disappearance of the whole hills located in the nearest places of the airport site.

The role of NGOs is imperative in building the public conscience towards the victims / project affected persons of the Airport. For instance, The Friends of Nature, the NGO, filed a public interest litigation against further expansion of the airport by acquiring additional land and its repercussions on ecology of the adjacent areas of it.<sup>7</sup> The NGO has filed a memorandum of writ petition (civil) as per the Article 226 of Indian Constitution. Actually, the Friends of Nature has started social agitations since 2007 and has given strong support to the Action Council framed by affected people with the support of local people when the State Government announced to acquire an area of 132 acres of land for the expansion of the airport.<sup>8</sup>

On the other hand, the AAI has accused the state Government for making delay in acquiring the required land and its transfer to AAI for the expansion of the Airport. It states that the Government's efforts for acquiring adequate land have been far from reality though the Government has been given ample time with clear-cut proposals. The majority of the local people are raising the slogan of "Not an inch of land for the expansion of the Calicut International Airport." The details of sequences and the acres of land acquisition for the construction and expansion of Calicut Airport are listed in the table given below:

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6 W.P (Civil) No. 10953/2011 – Afthar Ali C & Others vs. The Director, Airport Authority of India & Others, Before the Hon. High Court of Kerala at Ernakulam.

7 W.P (C) No. 2475/2012 – Friends of Nature Charitable Society vs. State of Kerala & Others, Before the Hon. High Court of Kerala at Ernakulam.

8 The State Government vide G.O (M.S) No.62/2010/Tran dated 19/08/2010.

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**Table 3.9: Sequences of Land Acquisition for Calicut Airport since 1971**

Sl. No.	Year of Acquisition	Areas of Land Acquired (in acres)
1	1971	214
2	1984	24.50
3	1987	1.749
4	1992	0.379
5	1996	106.659
6	1996	5.54
7	1998	5.228
8	1999	0.8016
9	1999	4.73
10	2000	8.45
11	2002	11.3
12	2004	9.15
13	2018	248*

Source: Land Acquisition Office, Malappuram

\*The Hindu, 4<sup>th</sup> September, 2018. It was later revised to 152.5 in 2021.

In brief, the gulf remittance is regarded as one of the pillars of Kerala Model, Indian expatriates abroad are largely depending on this airport. The airport has celebrated its 30<sup>th</sup> birth anniversary on 12<sup>th</sup> April, 2018 which is handling 32 lakh passengers annually.

### **3.5.3 Cochin International Airport Ltd (CIAL)**

CIAL is situated at Nedumbassery in the district of Ernakulam, Kerala mainly serving Kochi, one of the hectic cities of the district. CIAL is also known as Nedumbassery Airport derived from the name of its location. This is the first airport in India that was built under the framework of Public Private Partnership (PPP) in which around 10,000 Non-Resident Indians (NRIs) from 29 countries occupied 38.03 % shares of CIAL that helped it to generate a significant portion of funds for the project. The Government of Kerala retains 33.36 % of its shares. The remaining stakes are purchased by Indian companies like Air India, BPCL, AAI and scheduled commercial banks such as State Bank of Travancore (SBT), Federal Bank and Canara Bank. HUDCO purchased 3.37 % of shares of CIAL when the company sold shares through a public offering.

CIAL is the biggest and the busiest airport in Kerala as it manages around 61.8 % of the total air passenger movement in the state. Moreover, at national level, CIAL is the 4<sup>th</sup> busiest airport in the category of international traffic and also the 8<sup>th</sup> busiest one in terms of overall business of the airport among Indian airports. CIAL is known for imparting novel ideas,

strengthening green technologies and also for introducing cost-effective operations in handling air traffic activities. The Airport Service Quality (ASQ) Survey, 2016 of Montreal (Canada) based Airports Council International (ACI) ranked CIAL as the 3<sup>rd</sup> best airport in the category of 50 to 150 lakh passengers. Another fantabulous achievement of CIAL is that it is the first airport at global level which is operating completely with solar power as it set up a number of solar plants in the adjacent areas of its terminals. The United Nations recognised the efforts of CIAL in cutting green-house gas emission / carbon footprint and thereby fostering green energy by awarding a prestigious award to it, Champions of the Earth in 2018, which is the UN's top award in the category of conservation of environment.

**Table 3.10: Aircraft Passenger Movements of CIAL (in numbers)**

<b>Particulars</b>	<b>2010-11</b>	<b>2017-18</b>	<b>2018-19</b>
International Passengers	2358579	5369772	4907833
Domestic Passengers	1982146	4803067	5211992
<b>Total Passengers</b>	<b>4340725</b>	<b>10172839</b>	<b>10119825</b>

Source: Statistics Report of Airport Authority of India, 2010-11, 2017-18 & 2018-19

The airport imparts safe and quality air services through three passenger terminals and the fourth terminal is exclusively meant for cargo movements. CIAL has managed 41,104 domestic flights and 30,762 international aircrafts in the financial year of 2018-19. As per the latest data available in the year 2019-20 as on 30<sup>th</sup> August, 2019, it operated 17,574 domestic flights and 12,659 international flights. The airport accommodated 52,68,824 domestic passengers and 49,32,265 international passengers in 2018-19 who travelled to various destinations. Moreover, CIAL is managing a bulk of cargo services in the state. In 2018-19, it managed 14,918 and 61,447 tonnes of volume of cargo through domestic and international services respectively (Economic Review, 2019).

### **3.5.3.1 A Brief History of CIAL**

The initial step for the construction of Cochin Airport was started in the colonial administration, exactly in 1936 by the British Residency of Kingdom of Kochi who built an airstrip on Wellington Island. During the Second World War, the Indian Navy transformed the airstrip into a military airport and subsequently it was used as an air station cum landing craft and seaplane base by the Royal Navy. During the post-independence period, the site was used by the Indian Navy and permission was given to civilian aircraft to operate. There was a strong demand for an international airport raised by NRIs, mainly from the middle East during the time of the Gulf boom of 1980s.

The state government constituted a body, known as Cochin International Airport Society under the chairmanship of K. Karunakaran, Hon. Chief Minister of Kerala in July 1993 to supervise, coordinate and complete the project. The proposal of greenfield airport was accepted by the Central Government and green signal was given by the Ministry of Aviation in May 1993. Subsequently, the state Government envisaged a public limited company, Cochin International Airport Ltd. (CIAL) in March 1994 with an authorised capital of Rs. 900 million to raise funds smoothly and also to supervise the progress of the work. CIAL has succeeded to mobilise interest free loans from NRIs, co-operative societies and also from state Government.

The state Government has acquired a total of 491 ha (1,213 acres) of land for the construction of CIAL. Actually, the land acquisition for the project adversely affected around 2300 land owners and 872 families who were displaced directly. The government framed compensation and rehabilitation packages for the project-affected families. Sadly, many of them raised voices against the unjust provisions of rehabilitation packages which culminated into the miseries of affected persons. They also accused the machinery because the authorities miserably failed to keep their promises especially in ensuring adequate compensation, job for an individual per affected family and so on.

Finally, CIAL was officially inaugurated by the Hon. President of India, K.R. Narayanan on 25<sup>th</sup> May, 1999. Interestingly, the first commercial aircraft commenced services from CIAL on 10<sup>th</sup> June, 1999. The airport undertook the renovation, modernisation and timely expansion of the project, mainly the terminals from time to time. The airport retains a large runway with a length of 3400 meters that enables CIAL to accommodate big-bodied flights. The runway partially covers the parts of three panchayats; namely: Nedumbasserry, Sreemoolanagaram and Kanjoor.

### **3.5.4 Kannur International Airport Ltd (KIAL)**

KIAL is located at Moorkhamparamba, near Mattannur in Kannur, a north Kerala's district. It is the second greenfield airport in Kerala that was built under the model of Public Private Partnership (PPP) in which the Government of Kerala occupies 32.86% of the total shares, public sector units (PSUs) hold 22.54% of stakes, Airport Authority of India (AAI) retains 9.39 % and the remaining 35.21% by the private sector consisting of companies, banks, societies and individuals. A public-private consortium was registered as Kannur International Airport Ltd. (KIAL) in October 2009 which owned the airport and also was entrusted to manage and operate the airport. KIAL was officially commissioned on 9<sup>th</sup> December, 2018

in which Pinarayi Vijayan, Hon. Chief Minister of Kerala inaugurated it in the presence of Suresh Prabhu, Hon. Minister for Civil Aviation, Government of India. Currently, the airport is serving around one million passengers yearly and the experts in the field of aviation sector anticipated that by 2025 KIAL will handle 5 million passengers annually.

The formal KIAL project work was started only on 17<sup>th</sup> December 2010 when V.S. Achuthanandan, Hon. Chief Minister of Kerala, laid the foundation stone of KIAL. Subsequently, the construction of the airport was commenced on 2<sup>nd</sup> February 2014 and was inaugurated by A.K. Antony, Hon. Defence Minister, Government of India. The first trial flight in KIAL's runway was inaugurated by Oommen Chandy, Hon. Chief Minister of Kerala on 29<sup>th</sup> February 2016. It was Air India Express IX 715 (Boeing 737 – 800) that flew to Abu Dhabi from KIAL as the first commercial flight which was jointly flagged off by Pinarayi Vijayan and Suresh Prabhu.

#### **3.5.4.1 Aircraft and Cargo Movements in KIAL**

The statistics of passenger and cargo movements in KIAL have shown the following results. In 2018-19 (1<sup>st</sup> April to 31<sup>st</sup> March), KIAL has witnessed 1,579 domestic flights and 578 international flights with 1,35,251 domestic passengers and 89,134 international passengers. The latest figure from the financial year 2019-20 (from 1<sup>st</sup> April to 30<sup>th</sup> September 2019) shows that 5,439 domestic flights and 2,649 international flights with 4,60,490 domestic passengers and 4,06,899 international passengers were operated from this airport.

**Table 3.11: Aircraft Passenger Movements (in numbers) Handled by KIAL**

<b>Particulars</b>	<b>2018-19</b>	<b>2019-20 (Up to 30-08-2019)</b>
International Passengers	89,134	4,06,899
Domestic Passengers	1,35,251	4,60,490
Total Passengers	224385	867389

Source: Economic Review, 2019-20

Surprisingly, the findings of a study conducted by the Airport Authority of India (AAI) reveals that the establishment of KIAL would impact other airports. It would divert the air traffic mainly from Calicut International Airport which is estimated at a fall of 55 % of its traffic. Moreover, the operations of KIAL will adversely affect the revenue earnings of airports in Kerala and in the neighbouring state and a loss of revenue of 27.6 % to Calicut Airport, 5.1 % to CIAL, 3 % to Bangalore and 1.5 % to TIAL can be expected.

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### 3.5.4.2 Phases of Land Acquisition for KIAL Project

In the initial stage of granting the approval for KIAL the Central Government insisted that the project required a minimum of 2000 acres of land. As per the existing norms, it is the responsibility of the concerned state government to acquire land by giving fair compensation to the affected families and transfer the land to AAI. Actually, the authority acquired around 1200 acres of land by August 2010 in two phases. The authority has decided to procure 783 acres of land which are spread over the regions - Velliyamparamba, Elambara, Kariyil, Kuttikkara and Karakotheri. The third phase of land acquisition is under progress. One of the welcome steps taken by the KIAL is to replenish the loss of trees on account of the project. The steps include compensatory tree plantation of at least 1:3 ratio which is popularly known as ‘green belt areas of KIAL.’ The state government appointed KINFRA (Kerala Industrial Infrastructure Development Corporation) as the nodal agency to speed up and supervise the mechanism of land acquisition and the government transferred the acquired land to KIAL in February 2012.

**Table 3.12: Phases of Land Acquisition for KIAL and Displacement of Inhabitants**

Village / Taluk	Desam	Total Land Acquired (in Acres - till 31 <sup>st</sup> March 2019)	No. of Displaced Families
Pazhassi / Thalasseri	Kara	67.732	15
	Mattannoor	79.034	88
Keezhallur / Thalasseri	Kanad	293.101	164
	Keezhallur	275.3	11
	Elambara	129.953	20
	Kotheri	354.862	52
	Peravoor	161.187	11
Total	Moorkanparambu	1361.169	361

Source: Office of the Special Tahsildar (LA No. I, II & III), Mattannur, Kannur

Not surprisingly, KIAL is one of the promising airports in India with good prospects as it will be linked in the new initiative of the government, UDAN which fosters air connectivity at affordable cost and thereby ensures inclusiveness in the airport sector by enhancing regional connectivity. The airports now render lots of domestic as well as international airlines operations.

### **3.6 Concluding Remarks**

In brief, the well-connected road networks, sufficient number of airports, sea ports, railways, inland waterways, etc. are necessary for economic growth of a nation. Truly, there will be no room for the word, ‘sacrifice’ or idiom which says, “No one can make omelette without breaking a few eggs” in the nation-building process. The options of “Auction / Bidding Method / pooling resources” are also effective, according to experts, in acquiring private land for developmental projects of a country like India where there is a significant rise in demanding land for the transport infrastructure advancement as well as the incidence of land conflicts. This method will ensure the best deal for every stakeholder of the project, especially to landowners. The federal nation like India requires an independent Land Regulator, both at the Centre and State levels to manage land acquisition activities. The system must follow a policy of no acquisition of multi-crop irrigated land until and unless an emergency happens. In the process of acquisition of land, the authority must give priority to procure barren and waste lands, non-irrigated land and thereafter only irrigated land area as the last resort. It is imperative to conduct a loophole free land survey to frame a map of land and to prepare a document on the availability of waste lands and arid lands in the country.



## **CHAPTER IV**

### **SOCIO-ECONOMIC IMPACT OF AIRPORT-INDUCED DISPLACEMENTS ON INHABITANTS**

#### **4.1 Introduction**

Unsurprisingly, social scientists and policy-makers confront a paradox in the form of a large demand for land acquisition for fulfilling the developmental targets of the country and simultaneously face strong urge for taking measures to minimise the incidence of displacement on account of developmental projects. Another impasse in this regard is that the need for land-based resettlement of project-induced displaced families intensifies the demand for a huge volume of vacant land. The primary focus of this chapter is to conduct an aggregate level analysis of socio-economic ramifications of airport-induced displacement of inhabitants rather than a disaggregate level (project-wise) analysis of rehabilitation and resettlement of evictees which is the subject matter of subsequent chapter of this thesis. The holistic analysis of socio-economic conditions of displaced families, by categorising the period into two distinct phases; viz., pre-displacement and post-displacement phases, helps us making inferences regarding the living conditions of these affected segments of the society, that is, whether improved, remain unchanged (*status quo*) or deteriorated. More interestingly, the analysis part gives special focus to the transition stage, which manifests the period from households' evacuation to resettlement in the new areas, to understand the nature of dwellings, jobs and social support in this interim period.

The continuous research and in-depth investigations are imperative to unearth the real living conditions and livelihood measures of displaced and project affected persons (Cernea, 1995; Fernandes & Paranjpye, 1997). The microscopic study is highly recommended by the social scientists in mobilising information on the socio-economic impact of DIDR on project affected persons. The respective authority is insisting the developers to conduct social impact assessment surveys even before giving green signal to initiate the work of proposed projects in the region. This provision is one of the fundamental pillars of the new land acquisition act of 2013.<sup>1</sup> The inclusion of necessary variables and the scientific collection of reliable information are the essential ingredients to make valid inferences on

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<sup>1</sup> The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (LARR) Act, 2013.

the socio-economic impact of airport-induced displacement of inhabitants. Table 4.1 shows the total number of males and females of sampled households from displaced and project affected families.

**Table 4.1: Details of Males and Females in Displaced Households and Project Affected Families**

Airport Projects	DPs			PAPs			Total (DPs + PAPs)		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Calicut Airport	248	276	524	192	217	409	440	493	933
Kannur Airport	186	211	397	156	198	354	342	409	751
Total	434	487	921	348	415	763	782	902	1684

Source: Primary Data

The analysis part of this chapter touches core variables related to the socio-economic conditions of the displaced households. These variables include their access to land in the pre-displaced as well as post-displaced phases, per capita land availability, nature of land use and pattern of land distribution, access to basic amenities like water, electricity, road, sanitation, housing status, livelihood status, occupational shifting, demographic profile of displaced families, nature of family, neighbourhood status, educational access, incidence of multiple displacements and so on. This part also incorporates a vital tool, called as Quality-of-Life Index (QLI) to trace out the exact living status of displaced households. A separate QLI is constructed for pre-displacement period and also for post-displacement period. In addition to these, a few of socio-economic variables are incorporated and analysed for the transition stage as well and compared them with pre-displacement and post-displacement periods.

## **4.2 Per Capita Land Availability Before and After Displacement**

Land is invariably considered as one of the strategic assets of any household. Undoubtedly, the land-holder derives immense benefits from land. It becomes a part and parcel of homestead, cultivable areas, business purposes and additionally a symbol of prestige and status. It belongs to the category of physical assets / capital of the household. The availability of arable land and its proper utilisation will ameliorate the living standards of the people. Contrary to this, the loss of land or shrinking of land area is a great loss to any person that results in the impoverishment and disempowerment of households and also paves the way for decapitalisation (Cernea, 1997; Terminski, 2014). The analysis of per capita land availability of displaced persons will help us to understand the intensity and nature of

impacts of airport-induced land acquisition. The existing empirical studies on DIDR substantiated the argument of a steep fall in average landholdings among evictees in the post-relocation stage compared to their holdings in the pre-relocated stage (Cernea & World Bank, 1997).<sup>2</sup>

**Table 4.2: Land Availability per Household and Land Man Ratio Before and After Displacement**

Airport Projects	Minimum Land Area		Maximum Land Area		Land Availability per Household		Land Man Ratio	
	Before (Cents)	After (Cents)	Before (Cents)	After (Cents)	Before (Cents)	After (Cents)	Before (Cents)	After (Cents)
Calicut Airport	4.00	1.50	400.00	268.00	53.23	24.26	7.21	3.29
Kannur Airport	5.00	10.00	500.00	210.00	61.27	31.13	9.87	5.01
Aggregate	4.00	1.50	500.00	268.00	57.04	27.52	8.36	4.03

Source: Primary Data

Note: One cent is equal to 0.004 hectare

Table 4.2 represents land availability per household and per man over the period of two distinct stages, that is, before and after displacement of inhabitants. It is visible from the analysis of the table that there is a drastic reduction in the per capita availability of land. The affected persons pathetically failed to purchase additional land by using the compensation amount received from the authority as a part of rehabilitation packages. The aggregate level analysis shows that there were 57.04 cents of land per household or 8.36 cents of land per man before displacement that massively declined to 27.52 cents or 4.03 cents after displacement. The project-wise analysis shows that displaced persons from the KIAL project had a larger land man ratio compared to Calicut Airport. The availability of land per household during the pre-displacement period was 61.27 cents and 9.87 cents of land per man in KIAL. This magnitude declined in the post-displacement phase to 31.13 cents of land per household and 5.01cents of land per man. This figure for Calicut Airport was 53.23 cents per household and 7.21 cents per man before displacement that steeply declined to 24.26 per household or 3.29 per man after displacement.

#### **4.2.1 Size of Landholdings during Pre-displacement and Post-displacement Phases: Mann-Whitney Test**

The data to the extent of landholdings shows a non-normal distribution. The researcher has used the Mann-Whitney U Test, a non-parametric statistical test, equivalent to independent sample t-test to unearth the differences in landholdings of the sampled households who were displaced from the project sites of Calicut Airport and Kannur Airport. This test has been

<sup>2</sup> Kiambere Hydropower Project on the Tana River, near Kiambere, Kenya.

used to identify the statistical significance of the differences in landholdings during two distinct phases; namely: before displacement and after displacement in each of the projects separately. The same test can also be used for the land man ratio differences. Let us first consider the test statistic of the pre-displacement phase between these two projects. We can construct the null and alternative hypotheses as shown below:

$H_0$ : There is no significant difference in landholdings between CCJ and KIAL projects during the pre-displacement phase.

$H_1$ : There is a significant difference in landholdings between CCJ and KIAL projects during the pre-displacement phase.

The Mann-Whitney U test revealed that there is no statistically significant difference in average landholdings between CCJ and KIAL projects during the pre-displacement phase. That is, Mann-Whitney U test,  $U = 1998.00$ ,  $Z = -1.208$ ,  $p = .227 > 0.05$ . Here, the p-value (0.227) is greater than 0.05 (5%) significance level so that we failed to reject the null hypothesis as shown in table 4.3.

**Table 4.3: Test Statistics of Per Capita Land Availability and Mann-Whitney Test**

<b>Pre-displacement Phase of the Calicut and Kannur Airport Projects</b>		
Mann-Whitney U	Z	P value
1998.000	-1.208	.227*
<b>Post-displacement Phase of the Calicut and Kannur Airport Projects</b>		
Mann-Whitney U	Z	P value
1932.000	-1.517	.129*

Source: Primary Data

\*Not significant at 5% level of significance

Now we can run the same test statistics for the post-displacement phase of CCJ and KIAL with respect to landholdings of evicted households.

$H_0$ : There is no significant difference in landholdings between CCJ and KIAL projects during the post-displacement phase.

$H_1$ : There is a significant difference in landholdings between CCJ and KIAL projects during the post-displacement phase.

Here, the p-value (0.129) is greater than 0.05 (5%) significance level so that we failed to reject the null hypothesis. That is, there is no significant difference in landholdings between CCJ and KIAL projects during the post-displacement phase as well. That is,  $U = 1932.00$ ,  $Z = -1.517$ ,  $p = .129 > 0.05$ .

#### **4.2.2 Land Availability at Household Level Before and After Displacement: Project-wise Analyses Using Wilcoxon Signed Ranks Test**

In this context, Wilcoxon Signed Ranks Test, an alternative non-parametric test statistics to paired sample t-test, will help us to understand the statistical significance of the reduction in the size of landholdings among displaced households from the airport project site of CCJ and KIAL in the post-displacement period compared to the respective phases of their pre-displacement. The test statistics show that the p-value (.000) is less than 0.05 (5%) level of significance so that we can reject the null hypothesis. That is, there is a significant difference in landholdings between before and after displacement from the project site of CCJ as shown in table 4.4. The same conclusion is also applicable to the project site of KIAL as the p-value (.000) is less than 0.05 level of significance. The inference that we can derive in this regard is that the airport-induced land acquisition and displacement of inhabitants resulted in the drastic reduction of average landholdings of evicted households.

**Table 4.4: Test Statistics of Per Capita Land Availability and Wilcoxon Signed Ranks Test**

<b>Landholdings Before and After Displacement: Calicut Airport Project</b>	
Z	P value
- 6.321	.000*
<b>Landholdings Before and After Displacement: Kannur Airport Project</b>	
Z	P value
- 4.400	.000*

Source: Primary Data

\*Significant at 5% level of significance

Unsurprisingly, the land-based resettlement package of the Government in relation to the KIAL project helped the displaced people to retain a minimum of 10 cents of land per household. This provision lacked in the case of Calicut Airport. The sample data shows that the majority of displaced persons (85%) from the site of KIAL project decided to construct their homes in the allotted free land compared to some other projects like ICTT at Vallarpadam, Kochi and Techno City at Pallippuram, Trivandrum where displaced persons received 6 and 4 cents of land free of cost, respectively, but were reluctant to build residences in the allocated land areas (Manjula, 2013). On the other hand, 10 cents of free land package in KIAL project enabled the displaced households to construct houses and also to purchase additional land by using the compensation amount. At the same time, the displaced families from the Calicut Airport site confronted with a severe financial stringency as they were managed to purchase new land to build homestead first, one of the basic needs of human beings.

### **4.2.3 Extent of Land Acquisition for KIAL and Calicut Airport**

The required land for the project of KIAL was acquired from the Keezhallur Panchayat and the Mattannur Municipality. The Government of Kerala had acquired land for the setting up of Calicut Airport and also for its subsequent multi-stage expansions from the Pallikkal Panchayat and Kondotty Municipality. The acquired land includes both dry land and paddy fields. The people usually use dry land for the purpose of both cultivation and homestead. Paddy fields are exclusively for cultivation. It is also noted that some portion of the paddy field remains as barren land. It is imperative to analyse the nature of land acquired by these two airports from the inhabitants (sampled displaced households in our study) and its impacts on them.

**Table 4.5: Nature of Land Area Acquired for Airport Projects: KIAL and Calicut Airport**

Name of the Project	Paddy Field Acquired		Dry Land Acquired		Total Land Acquired	
	Cents	Mean	Cents	Mean	Cents	Mean
Calicut Airport	883.50	12.4437	2207.80	31.0958	3091.30	43.5394
Kannur Airport	997.00	15.5781	2870.50	44.8516	3867.50	60.4297
Aggregate	1880.50	13.9296	5078.30	37.6170	6958.80	51.5467

Source: Primary Data

The total land area acquired from the selected samples, that is, 135 displaced households (physical displacement), is 6958.80 cents (69.58 acres / 28.16 ha). It includes both dry land and paddy fields, 5078.30 cents and 1880.50 cents respectively. In disaggregate level, the Calicut Airport acquired 3091.30 cents (30.91 acres / 12.51 ha) land area in which 2207.80 cents of dry land and the remaining 883.50 cents of paddy field. The KIAL project obtained 3867.50 cents (38.67 acres / 15.65 ha) of land in aggregate level which consist of 2870.50 cents of dry land and 997.00 paddy land. The details of land area acquired from the project affected persons (economic displacement) are added to the sixth chapter of this thesis.

### **4.2.4 Pattern and Nature of Land Use and its Distribution**

Obviously, the availability of adequate fertile paddy fields and its effective utilisation are crucial in producing both food and cash crops in the region. It is one of the vital determinants of food security in the respective region. The comfortable size of land area and homestead are common especially in rural areas where people earn considerable income from farming activities and also supplementary income from animal husbandry and allied activities. Another highlight is the active participation of women in the job sector by supplying their skills and efforts in cultivation, animal husbandry, and so on. The productive activities

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like kitchen garden and poultry are common in these areas. All these activities are closely associated with the size of land, neighbourhood support and easiness of community life. People can easily move around and feel comfortable in every walk of their life. In addition to these, households can easily collect wood and other particular items for cooking purposes. The nature of land, its distribution and uses are added in table 4.6 by categorising the period into two distinct stages, that is, before displacement and after displacement.

**Table 4.6: Project-wise Analysis of Nature of Land Use and its Distribution**

Nature of Lands	Calicut Airport Site		KIAL Project Site	
	Area in Cents		Area in Cents	
	Before	After	Before	After
1. Total paddy land area	1056.50	244.00	997.00	255.00
a. Cultivated area of paddy land	972.50	217.00	917.00	195.00
b. Total area of barren paddy land	84.00	27.00	80.00	60.00
2. Total dry land area	2722.75	1478.60	2924.50	1737.00
a. Cultivated area of dry land	1835.50	865.45	2072.00	1095.00
b. Homestead area of dry land	887.25	613.15	852.50	642.00

Source: Primary Data

There was a drastic reduction in the cultivable land area in both the projects during the post-displacement period when compared to the pre-displacement phase. The cultivated areas of paddy land were 972.50 cents and 917.00 cents before displacement in the regions of Calicut Airport and Kannur Airport respectively. These figures of cultivable paddy land have declined to 217.00 cents and 195.00 cents in the post-relocation phase. The reduction in the size of cultivated area of dry land was less when compared to the steep fall in the size of cultivable area of paddy land. The cultivated area of dry land was 1835.50 cents in the pre-displacement period in the site of Calicut Airport which declined to 865.45 cents in the post-displacement period.

In KIAL, the cultivated area of dry land was 2072.00 cents and declined to 1095.00 cents after displacement. The remaining portion of dry land was used for homesteads. Interestingly, the area set aside for homesteads has dramatically decreased in the post-displacement period in both the projects. The aggregate homestead land area of household samples was 887.25 cents in Calicut Airport and 852.50 cents in KIAL during the pre-displacement period. These figures declined to 613.15 cents and 642.00 cents respectively in the post-evacuation period.

#### **4.2.5 Classification of Displaced Households Based on the Size of Landholdings**

The socio-economic impact of land acquisition on the livelihoods and living status of inhabitants can easily be understood from the level of landholdings of households and its changes between two distinct phases – pre-displacement and post-displacement periods. The present study categorised the landholders into four heads based on the area of land occupied by the households. However, the concern in this classification is that there is a high chance of variation in the size of landholdings based on the regions, customs and its prices. To make this classification more scientific, the researcher has adopted the statistical tool of quartiles to categorise the landholdings into four groups as the sampled data is collected from two different districts of the state. In addition to this, the names of categories of landholdings were taken from the Report on Land and Livestock Holdings in Kerala, NSS 70<sup>th</sup> Round, January-December 2013.<sup>3</sup> Accordingly, two different sets of size of landholdings have been arranged for CCJ and KIAL projects based on the tool of quartiles as shown in table 4.7.

**Table 4.7: Categorisation of Landholders Using the Quartiles Method**

Categorisation of Landholders	Size of Landholdings (in cents)		
	Calicut Airport	Kannur Airport	Aggregate (CCJ+KIAL)
Marginal landholders	< 16	< 21	< 19
Small landholders	16 - 33	21 – 45	19 - 36
Medium landholders	34 - 70	46 - 80	36 – 78.5
Large landholders	> 70	> 80	> 78.5

Source: Primary Data

The four categories of landholders from Calicut Airport project include marginal landholders who retained land areas less than 16 cents; small landholders who occupied land between 16 cents and 33 cents, medium landholders kept land between 34 cents and 70 cents and large landholders possessed more than 70 cents of land. This classification in the KIAL site is less than 21 cents for marginal landholders, between 21 cents and 45 cents for small landholders, between 46 cents and 80 cents for medium landholders and finally above 80 cents of land represent the large landholders.

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<sup>3</sup> The report includes six categories on the basis of landholding size; namely: land less, marginal, small, semi-medium, medium and large. Actually, the number of households belonging to the category of land less is nil in our collected samples. Similarly, the category of semi-medium landholders is excluded in this discussion to avoid the extreme fragmentation of the data.



**Table 4.8: Categorisation of Households based on the Size of Land Area Possessed:  
Aggregate Level Analyses**

Categorisation of Land	Pre-displacement Phase			Post-displacement Phase		
	Number of Households	Percent	Mean (Cents)	Number of Households	Percent	Mean (Cents)
Marginal landholders	33	24.4	11.59	82	60.7	9.49
Small landholders	32	23.7	27.35	27	20.0	23.84
Medium landholders	33	24.4	53.38	14	10.4	53.43
Large landholders	37	27.5	126.53	12	8.9	128.67
Total landholders	135	100.0	57.04	135	100.0	27.52

Source: Primary Data

Table 4.8 shows a sea change in the possession of land area by the households between pre-displacement and post-displacement phases. The proportion of marginal landholders, who retained only a maximum of 19 cents of land which was mainly used for building homesteads, badly increased from 24.4 percent to 60.7 percent. This tendency might be on account of land-based resettlement package of KIAL projects as the majority of affected people constructed double storeyed houses in the allotted land area by spending a lion's portion of compensation amount. The project-wise break up of landholding status of displaced households in the subsequent section will give more striking observations in this regard.

In addition to these, the aggregate level analysis reveals a drastic reduction of average landholdings of evicted households to 27.52 cents from 57.04 cents before displacement. Similarly, the analyses in terms of category of landholding size reflect that the average landholdings (mean score) of the sampled households in the post-displacement phase have declined among marginal and small landholding groups when compared to their pre-displacement phase. Contrary to this, there was a slight increase in the average landholding size of medium and large landholders' categories from 53.38 and 126.53 cents in pre-relocation phase to 53.43 and 128.67 cents respectively in post-relocation stage as shown in table 4.8.

Another shocking trend is the steep fall in the category of large landholders who represented 27.5 percent in the pre-displacement period that considerably declined to mere 8.9 percent in the post-displacement phase. Another drastic reduction happened to the category of medium landholders; their percent declined from 24.4 to 10.4. These trends reveal that many of the households shifted from the large and medium landholders to marginal landholders. The small landholders group reflected a less impact compared to other categories. Its proportion was dwindled from 23.7 percent to 20.0 percent. The overall observation from table 4.8 is that the land acquisition for airport projects may result in impoverishment of displaced

people unless there is a fair compensation and humane rehabilitation measure from the part of the authority / developer. The naked truth here is that the proportion of marginal landholders increased in manifold manners in the post-displacement phase. The project-wise analyses of changes in the land groupings of households tell more facts about the impacts of airport-induced land acquisition and displacement on displaced families.

**Table 4.9: Project-wise Changes in the Size of Landholdings (Frequency of Households)**

Categories of Landholdings	Calicut Airport		Kannur Airport	
	Pre-displacement Phase	Post-displacement Phase	Pre-displacement Phase	Post-displacement Phase
	No. of Households	No. of Households	No. of Households	No. of Households
Marginal landholders	17	39	16	43
	(23.94)	(54.93)	(25.00)	(67.19)
Small landholders	17	20	15	7
	(23.94)	(28.16)	(23.44)	(10.94)
Medium landholders	20	9	13	5
	(28.18)	(12.68)	(20.31)	(7.81)
Large landholders	17	3	20	9
	(23.94)	(4.23)	(31.25)	(14.06)
Total	71	71	64	64
	(100.0)	(100.0)	(100.0)	(100.0)

Source: Primary Data

Note: Figures in parentheses are percentages to the total

Table 4.9 reveals that the loss of land was prominent in the case of KIAL where the large landholders rapidly declined from 31.25 percent in the pre-displacement stage to 14.06 percent in the post-displacement stage. At the same time, the proportion of marginal landholders increased from 25.00 percent to 67.19 percent. Similarly, the percent of large landholders in the Calicut Airport fell from 23.94 to 4.23 and the level of marginal landholders enhanced from 23.94 percent to 54.93 percent during these two distinct phases of land acquisition process. Interestingly, the Government acquired more land for airport projects from large landholders which account for 27.5 percent in aggregate level and less land from small and marginal landholders (23.7 % and 24.4 %) in both the projects (also see table 4.8).

The project-wise analyses also reflect a contradictory change in the possession of land between Calicut Airport and KIAL as shown in table 4.9. That is, the proportion of small landholdings increased from 23.94 percent during the pre-displacement phase to 28.16 percent in the post-displacement phase in relation to the land acquisition for Calicut Airport.

Contrary to this, its percent has significantly declined from 23.44 to 10.94 in the project site of KIAL. Both the projects follow more or less the same trend in the changes of medium landholders. Its percent declined from 28.18 to 12.68 on account of land acquisition of Calicut Airport and this proportion fell from 20.31 to 7.81 in the project of KIAL. An aggregate as well as average landholding status of households before and after displacement on the basis of the above categorisation at disaggregate level is shown in table 4.10.

**Table 4.10: A Disaggregate Level Analysis of Changes in Landholdings of Evicted Households**

Categories of Landholdings	Calicut Airport						Kannur Airport					
	Pre-displacement Phase			Post-displacement Phase			Pre-displacement Phase			Post-displacement Phase		
	Size of landholdings	%	Mean	Size of landholdings	%	Mean	Size of landholdings	%	Mean	Size of landholdings	%	Mean
Marginal landholders	185.25	4.90	10.90	316.90	18.40	8.13	197.25	5.04	12.33	462.00	23.19	10.74
Small landholders	401.00	10.61	23.59	429.70	24.94	21.49	474.25	12.09	31.62	214.00	10.74	30.57
Medium landholders	986.50	26.11	49.33	463.00	26.88	51.44	775.00	19.76	59.62	285.00	14.31	57.00
Large landholders	2206.50	58.38	129.79	513.00	29.78	171.00	2475.00	63.11	123.75	1031.00	51.76	114.56
Total	3779.25	100.0	53.22	1722.60	100.0	24.26	3921.50	100.0	61.27	1992.00	100.0	31.13

Source: Primary Data

The drastic reduction of the size of landholdings of evicted families in the post-displacement phase can easily be understood from table 4.10. The categories of medium and large landholders confronted the large reduction in the total land areas. For instance, the medium landholders' group witnessed the fall from 986.50 cents to 463.00 cents in the post relocation phase of the CCJ site and from 775.00 cents to 285.00 cents in the KIAL site. This trend in the category of large landholders shows the reduction from 2206.50 to 513.00 cents in Calicut Airport whereas in Kannur Airport, this fall is from 2475.00 to 1031.00 cents. At the same time, the size of landholdings has increased in the groups of marginal and small landholders in the CCJ project, that is, an increase from 185.25 to 316.90 cents and from 401.00 to 429.70 cents respectively. However, in the KIAL site, the size of landholdings in the category of small landholdings has dwindled to 214.00 cents after displacement from 474.25 cents before relocation stage.

There is a considerable fall of large landholders and, alarmingly, many of them migrated to the categories of small and marginal landholders. It reflects the phenomena of land alienation on account of dislocation of persons that manifested by social scientists (Cernea, 1999) in

their studies on DIDR. This catastrophic change in the possession of land ownership of households increased their risk of impoverishment and social exclusion (Rodgers, Gore, & Figueiredo, 1995), curtail entitlement and thereby considerable fall in the quality of socio-economic freedom (Sen, 1997) in the post-displacement life of displaced inhabitants.

#### **4.2.6 A Disaggregate Level Analysis of Abandoned Lands Among Evicted Households**

There are many small plots of land which had to be abandoned by the displaced persons due to non-accessibility to them. As they are very small in measurements, there is no demand for them in the real estate market nor can they be used for economic activities including farming operations. One Mrs Pathummu Thatha, who was displaced by the CCJ authority, shed tears when she narrated to me the story of her land which extends over only two cents and still remains abandoned in a corner near the airport-wall. The evictees' loss on account of DIDR includes land abandonment, adverse health impacts including mosquito-borne disease outbreaks and poverty among others (Monosowski, 1990; Cernea, 1998; Fearnside, 1999).

In this context, the abandoned lands indicate that the balance of land located in the nearest areas of the airport project after land acquisition is not useful for some evicted families as their resettlement site was far away from their original habitat. Moreover, the small size of the remaining land, say between 1 to 3 cents, failed to drag the attention of prospective buyers of the land. These households requested the authority to acquire the whole land at the time of assessment but the officers refused to change the alignment. Some heads of the households attempted to sell these balanced lands but failed as their location was very close to the airport wall. Subsequently, the owners of these lands gave up their attempts as there were no returns from them. Hence, these lands are now treated as abandoned lands by them. The extent of abandoned land areas is manifested in table 4.11.

**Table 4.11: Airport-induced Displacement and Magnitude of Abandoned Land Area**

Airport Projects	Total land area acquired by the airport authority		Total land area located in the nearest of the project – after displacement		Abandoned land area nearest to airport after displacement	
	Cents	Mean	Cents	Mean	Cents	Mean
Calicut Airport	3091.30	43.54	473.40	6.67	51.90	0.73
Kannur Airport	3867.50	60.43	280.00	4.38	5.00	0.08
Total	6958.80	51.55	753.40	5.58	56.90	0.42

Source: Primary Data

\*t-test p value is .004 (significant at 5% level of significance)

A few of the displaced households, especially from the Calicut Airport site, shared their loss in the form of abandoned lands, an indirect impact of airport-induced land acquisition upon them. We have already discussed the magnitude of land that was acquired from the sampled families by the authority for the development of CCJ and KIAL projects. Table 4.11 reveals that 51.90 cents of land constitute the category of abandoned land among the displaced households from the CCJ site while this figure is negligible in the project site of KIAL, that is, only 5 cents. The independent two sample t test shows that the p value (.004) is less than .05 significance level so that we can reject the null hypothesis. That is, there is a significant difference in the average cents of abandoned lands between Calicut Airport and Kannur Airport regions. This type of loss is generally unnoticed and not counted in deciding the volume of compensation. The fact is that the airport authority acquired lion's portion of their land and paid compensation to them. However, in effect, some of the evicted households experienced the loss of further lands which were not acquired by the authority but they were forced to abandon that portion of their land.

### **4.3 Access to Basic Amenities**

The quality of life is directly related to the availability and access of basic facilities to the entire persons of the region. The access to the quality basic amenities like clean and safe drinking water, all weather roads, electrification, fuel, sanitary facilities, healthcare centres and other requirements like playgrounds, parks, baby feeding centres, gym centres and recreational facilities are crucial for ensuring a good standard of living of the people. This section is attempting to trace out the impacts of land acquisition for airport projects and displacement of people on the availability and access to the basic facilities. The analyses are based on some of the aforementioned variables of basic amenities by categorising the whole period into two; namely: pre-displacement phase and post-displacement phase.

**Table 4.12: Access to Multiple Sources of Safe and Clean Water to Households (%)**

Source of Water	Pre-displacement Phase (%)			Post-displacement Phase (%)		
	CCJ	KIAL	Total	CCJ	KIAL	Total
Own Well / Pipe	83.1	90.6	86.7	67.6	98.4	82.2
Neighbour's Well / Pipe	25.4	31.0	17.8	9.4	0	16.3
Public tap / well	0	4.7	2.2	11.3	93.8	50.4
Public supply of water	4.2	0	2.2	1.4	4.7	3.0
Purchase from outside	0	0	0	19.7	34.4	26.7

Source: Primary Data

Table 4.12 manifests the households' multiple sources of water during pre-displacement and post-displacement stages. Indeed, many of the households have multiple sources of water like their own well, public tap, purchase of water from outside and so on. The bigger source of water for households in the regions of Calicut Airport and KIAL is own well or pipe during both phases. Its percentage was 86.7 during the pre-displacement phase which declined slightly to 82.2 in the post-displacement stage. Another striking trend can be seen in the case of access to the public tap or well as its percent remarkably increased from 2.2 in the pre-displacement stage to 50.4. This is mainly on account of ground level implementation of one of the provisions of resettlement packages, that is, ensuring public supply of water or public tap / well in the rehabilitation sites where displaced persons from KIAL project are resettled. This provision was not effectively practised in the case of Calicut Airport-induced displacement and rehabilitation.

The KIAL project site commands 93.8 percent in the case of households' sources of public tap or well in the post-displacement phase when compared to 4.7 percent in the pre-displacement stage as clearly shown in Table 4.12. This figure for Calicut Airport was only 11.3 percent in the post-displacement phase and it was zero percent in the pre-displacement phase. It is also noted that many of the displaced households are forced to purchase water from outside by paying cash especially during summer seasons. The percentages of this source of water in the post-displacement phase are 19.7 and 34.4 in relation to Calicut Airport and KIAL projects, respectively. Its aggregate percent is 26.7. Its proportion in the pre-displacement stage was zero for both the projects.

Additionally, some households, who resettled in the nearest of the airport projects, registered their complaints against airport's operations that caused damages to properties including contamination of well-water, especially during monsoon seasons. There are other issues like change of tastes and colour of water, alterations in the chemical and mineral content of the water, etc. raised by the local residents. This water is not conducive for drinking and also for cooking purposes. The use of this water resulted in alterations of utensils and other daily used materials. The airport authority is trying to mitigate this serious issue by supplying clean and safe drinking water to these affected families. The Airport authorities have set aside a portion of their CSR (Corporate Social Responsibility) for this purpose. This head was shown in table 4.12 in the form of public supply of water and its percentage is meagre, that is, 2.2 and 3.0 in both stages, respectively, at aggregate levels.

### **4.3.1 Road Connectivity Status / Access to Road**

Undoubtedly, access to all weather roads is regarded as one of the basic requirements of households. Speedy access to town through all-weather road connectivity is the leading factor among others in deciding the location of residence. It is rightly articulated in the Programme Guidelines of PMGSY-III<sup>4</sup> (Ministry of Rural development, Government of India, October, 2019) that the availability of proper road connectivity is the catalyst for development of the region by connecting habitations which creates multiplier effect in generating job opportunities, enhancing agricultural income, reducing the level of poverty and improving the living standard of the people in the region.

A particular region may emerge with adequate transportation facilities, educational institutions, healthcare centres and other socio-economic amenities on account of a single decisive factor, that is, proper all weather road connectivity in the location. The dislocated households definitely prefer a location having all these facilities including all weather roads to a remote place lacking all these facilities. The analyses of access to road connectivity and the travel distance to nearest town that were enjoyed by the sampled households during the pre-displaced and post-displaced phases may give more insights into the impact of DIDR on inhabitants.

The land acquisition for airport projects resulted in adverse impact regarding the road connectivity and 44.4 percent of the total displaced households responded that the acquisition had affected badly with respect to the travel distance to reach town, educational institutions and healthcare centres as shown in table 4.13. The remaining 55.6 percent of the households are satisfied in matters regarding distance and travel facilities. The project wise analyses show that the trouble associated with the travel distance is significant only in relation to Calicut Airport where the dissatisfied households' percent is very huge, that is, 80.3. This percent is meagre in the KIAL-induced displaced households, that is, 4.7. The people who were very close to town and having road facilities in the areas of Calicut Airport constituted 53.5 percent in the pre-displacement phase which massively declined to 11.3 percent in the post-displacement stage. Contrary to this, in the KIAL project, the households who live very close to town increased to 17.2 percent in the post-displacement phase from 10.9 percent in the pre-displacement phase as shown in table 4.13.

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<sup>4</sup> Pradhan Mantri Gram Sadak Yojana (PMGSY) was launched on 25<sup>th</sup> December, 2000 by the Government of India which worked thereafter with the primary objective of ensuring quality rural road connectivity. The construction, maintenance and upgradation of roads are going under the aegis of this scheme with three heads - PMGSY I, PMGSY II and the latest, PMGSY III. The Union Budget, 2021-22 has granted Rs. 15000 crores exclusively for road connectivity under PMGSY.

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**Table 4.13: Responses of Households Regarding Distance and Travel Facilities**

Road and Travel Facilities to Reach Town	Pre-displacement Phase (%)			Post-displacement Phase (%)		
	CCJ	KIAL	Aggregate	CCJ	KIAL	Aggregate
Less than 1 KM	53.5	10.9	33.3	11.3	17.2	14.1
Between 1 and 2 km	28.2	20.3	24.4	4.2	21.9	12.6
Between 2 and 3 km	11.3	35.9	23.0	7.0	40.6	23.0
Between 3 and 4 km	2.8	12.5	7.4	7.0	7.8	7.4
Between 4 and 5 km	1.4	9.5	5.2	11.3	3.1	7.4
More than 5 km	2.8	10.9	6.7	59.2	9.4	35.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary Data

Note: Figures are in percentages

It is seen from the above table that 59.2 percent of the displaced households from Calicut Airport were forced to build their homes in the remote places whereas this figure is very small in the case of KIAL, that is, 9.4 percent. This contradictory result is on account of changes in the packages of resettlement of displaced households announced by the authority for Calicut Airport and KIAL projects. The land-based resettlement package in KIAL enabled the households to stay in the nearest areas of their former places which is very close to their old towns. Actually, they didn't feel the severe bitterness of dislocation compared to Calicut Airport where there was no land-based resettlement system.

Moreover, the loss of the main road, which connected three places; namely: Koottalungal-Melangadi-Kondotty within a distance of one kilometre, on account of the expansion of Calicut Airport in the later part of 1990s and initial years of 2000s resulted in the increase of travel distance of the people. The Airport Authority had constructed an approach road, popularly called as 'airport-belt-road' lessened the travel burden of the people a little bit. This belt road is only for light vehicles, that is, the authority strictly restricted the entry of heavy vehicles. However, the further expansion of the Airport will block the so-called belt road and, obviously, create severe troubles in the matters of travel distance and road access. Permanent loss of many places, emergence of new towns and decaying of existing old towns are some of the repercussions of these project-induced land acquisition and displacement.

At the same time, due to the developmental projects like airports, some people got a golden chance to reap handsome profits and returns. These beneficiary groups include the land brokers, land owners whose lands are located in the nearest of new approach roads, belt roads or terminals of the airports, waste land owners, etc. These segments are the immediate beneficiaries of the project simply called as capital gainers. It is highly recommended to

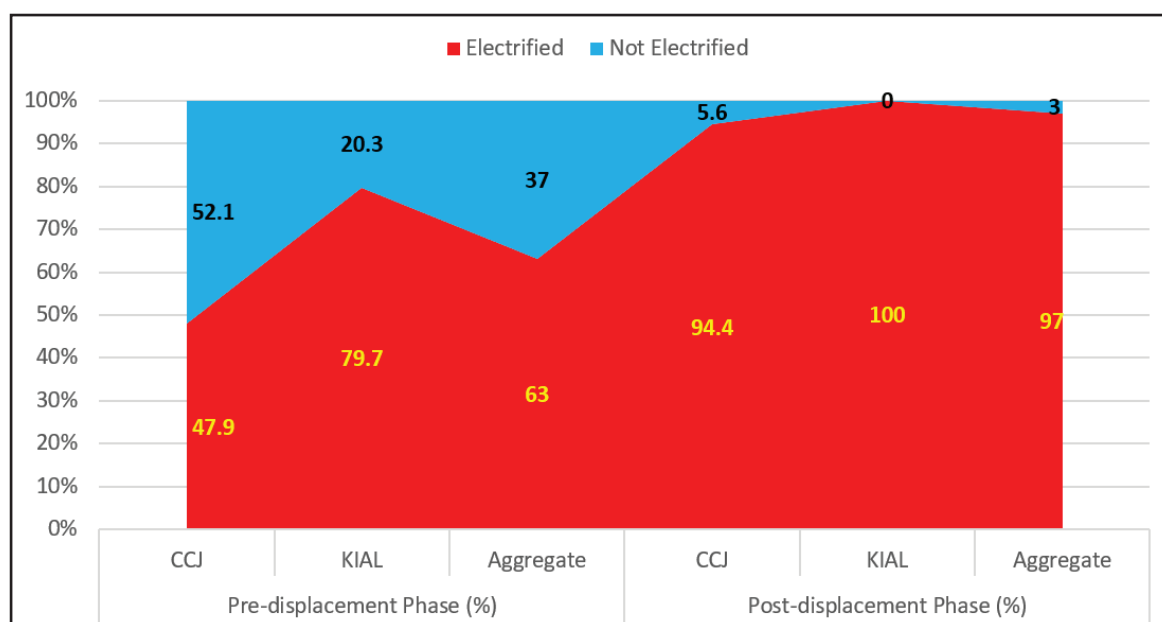


impose one time levy, popularly known as “special assessment” upon them. This levy enables the Government to collect additional revenues from the capital gainers on account of the government decision to initiate a new project (greenfield investment) or the expansion of existing one (brownfield project). The Government can use these funds for announcing a better and humane rehabilitation package for the displaced and project affected persons. In this way the developer, say, the Government can transfer some meaningful amount from the beneficiaries’ group to losers’ group (displaced and project affected persons).

### 4.3.2 Electrification Status of Households

The availability of uninterrupted power supply is paramount for every household to lead a decent standard of living. There are specific schemes at national and state levels to ensure adequate power supply at affordable cost, for instance, the scheme of DDUGJY.<sup>5</sup> The state of Kerala is known for taking effective initiatives to ensure 100 percent rural electrification. Electrifying all households with quality and undisturbed power supply is a dream of any government. This milestone has been achieved by the Government of Kerala by providing electricity access to every household in the state. This section looks at the status of power supply in the households who were displaced on account of airport projects by dividing the period into two – pre-displacement and post-displacement phases.

**Figure 4.1: Electrification Status of Households Before and After Displacement**



Source: Survey Data

<sup>5</sup> The Government of India has envisaged the scheme of Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) on December 3, 2014 by replacing the former programme of Rajiv Gandhi Grameen Vidutikaran Yojana (RGGVY). Its mission is to fulfil the goal of 100 percent rural electrification in the country by ensuring quality and reliable power supply.

Figure 4.1 reflects that 85 households (63 percent) of the total samples were living in electrified houses and the rest of 50 households (37 percent) lacked this basic amenity during the pre-displacement phase. There is a considerable improvement in the electrification status of displaced households in the post-displacement period and its status increased to 97 percent (131 households) and there are only a few homes unelectrified, that is, only 3 percent (4 households). Interestingly, these households are likely to get electricity connection immediately when they finish all required basic things for getting it and also submit all necessary documents to KSEB. Unsurprisingly, the electrification status of project affected persons registered the same trends with the rest of the regions of Kerala state.

The project-wise analysis shows that more than half of the households in the regions of Calicut Airport project were living in unelectrified houses during the pre-displacement stage. That is, 37 of the total 71 samples of households (52.1 percent) were unelectrified. Many of the households heavily depended on kerosine lamps. This percentage in relation to the KIAL project was only 20.3, that is, 13 households of the total 64 samples were unelectrified. The electricity status, one of the key indicators of living standards, marked a tremendous growth in the post-displacement phase related to Calicut Airport – 94.4 percent (67 households) and 100 percent for the KIAL project (64 households). The remaining 4 unelectrified houses (3 percent at aggregate level) belong to the Calicut Airport Project site. As per this data, one can observe that airport-induced land acquisition and displacement resulted in positive growth of electrification status of households. The common policy initiative of the state government or public intervention in this regard is more significant in achieving this fabulous status of household electrification.

### **4.3.3 Households' Access to Cooking Fuel**

Households in the rural areas of India are predominantly using traditional biomass like firewood for cooking. Universal access to clean cooking fuel is crucial for attaining well-being of the people as the use of processed biomass fuel or LPG will prevent health issues / disorders on account of diseases associated with indoor air pollution and also very important in terms of environment conservation by reducing the emission of black carbon and deforestation. In this section the researcher is attempting to find out changes in the status of households' access to cooking fuel between the two phases of respondents – pre-evacuation and post-evacuation periods.

**Table 4.14: Households' Access to Cooking Fuel during Pre-relocation and Post-relocation Phases**

Sources of Cooking Fuel	Pre-displacement Phase (%)			Post-displacement Phase (%)		
	CCJ	KIAL	Total	CCJ	KIAL	Total
Fire wood / Solid fuels	100	100	100	100	100	100
LPG	16.9	25.0	20.7	94.4	98.4	96.3
Electric oven	0	1.6	0.7	5.6	4.7	5.2

Source: Primary Data

Table 4.14 shows that the primary source of cooking fuel is fire wood or solid fuels during pre-displaced and post-displaced phases. We can see a considerable change in the access to cooking gas between these two periods. The number of LPG connected households were meagre in the pre-displacement period and its percentage was very low, that is, 20.7 at aggregate level (16.9 percent for Calicut Airport and 25.0 percent for KIAL). This figure registered a dramatic growth in the post-displacement phase to 96.3 percent at aggregate level (94.4 percent and 98.4 percent for Calicut Airport and KIAL, respectively). The Government's scheme like Pradhan Mantri Ujjwala Yojana<sup>6</sup> (PMUY) played a decisive role in achieving this target. The household who used biogas was nil in both projects and the use of electric oven was very little, that is, 0.7 percent in the pre-displacement phase and 5.2 percent in the post-displacement phase at aggregate levels.

#### 4.3.4 State of Sanitation (Toilet Facilities) Before and After Evacuation

The universal access to improved sanitation including regular private toilet facilities to all households is one of the crucial ingredients in ensuring betterment of life. The condition of access to sanitation is very pathetic in India. At the global level, the largest incidence of open defecation is happening in India as per the report of WHO and UNICEF in 2017. Interestingly, the United Nations Organization is observing November 19 every year as the World Toilet Day to generate awareness about improved and hygienic toilets and also enlighten the people about the outcome of unsafe sanitation.

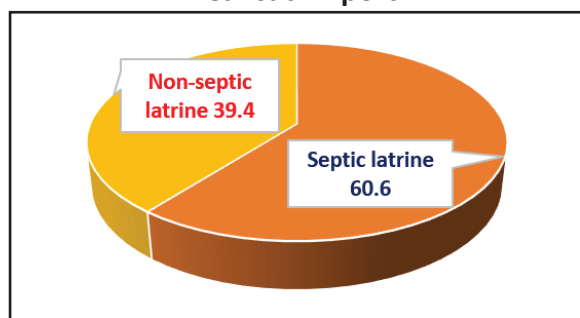
Kerala stands first among Indian states in ensuring sanitation to its households and became the first state with high density of population in the country to declare open defecation free (ODF) state. The two states of India - Himachal Pradesh and Sikkim have already declared

<sup>6</sup> Pradhan Mantri Ujjwala Yojana" (PMUY), one of the key initiatives of the central government, commenced on 1<sup>st</sup> May 2016 to fulfil the target of smoke free rural India by providing concessional LPG connections. This scheme upholds the slogan of "Swachh Indhan, Behtar Jeevan" which translated into English - Clean Fuel Better Life.

ODF states where the density of population is very low. Kerala's Suchitwa Mission in consistent with the Centre's Swachh Bharat Abhiyan Mission helped the state to attain this landmark achievement in the socio-economic front. Indeed, the overall improvement in the sanitation measures in Kerala can also be seen in the post-displacement phase of majority of the households as shown from the analyses of collected samples in relation to both the project sites, Calicut Airport and KIAL.

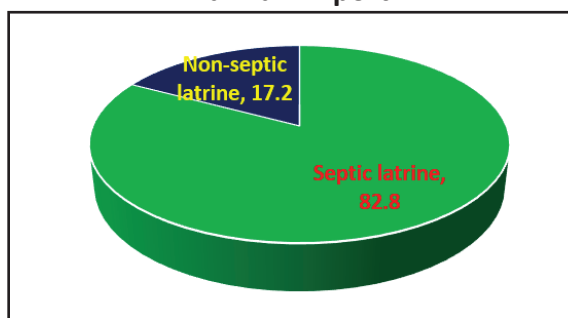
The data analyses of the post-displaced phase indicate that displaced households have access to improved sanitation when compared to the pre-displacement phase. In the pre-displacement phase, 96 households at aggregate level (71.1 percent) had private septic latrine facilities and the remaining 39 households (28.9 percent) used non-septic latrine means like open pit or open space. The non-septic latrine facilities users are larger in the regions of Calicut Airport (39.4 percent) when compared to KIAL (17.2 percent) in the pre-displacement life period as shown in figures 4.2 and 4.3.

**Figure 4.2: Pre-displacement Phase of Calicut Airport**



Source: Survey Data

**Figure 4.3: Pre-displacement Phase of Kannur Airport**



Source: Survey Data

The post-displacement phase reflects 100 percent access to septic latrine facilities in both the projects. The role of local self-governments (LSGs) is remarkable in achieving this splendid target of eradication of open defecation as many of the BPL (below poverty line) families received funds from LSGs to set up improved toilet facilities.

#### **4.4 Nature and Ownership of Acquired Home and Newly Built Homestead**

The common tragedy faced by the displaced persons in relation to DIDR is the loss of their homestead. That is, the exchanges of houses built by the evacuated inhabitants, either old or newly built, are a matter of great loss to the owners. They were forced to surrender their community life including neighbourhood. They were also forced to relocate from their old place to new place, where they had to resettle partially or fully. The peak time of this tragedy

is the period of their transition stage between pre-displacement site to post-displacement site. Most of the households confronted the alarming situations of homelessness, joblessness, hopelessness, loneliness (Cernea, 1997), and so on. This transition phase is very horrible to those households having more vulnerable persons like kids, pregnant women, differently abled, diseased, and senior and super senior citizens. The land acquisition for airport projects and resulted relocation invariably changed the nature of house ownership, pattern and size of family, structure of home, areas of homestead and so on. The researcher spends adequate time and efforts to mobilise information on these variables related to nature and ownership of homesteads to understand the impact of airport-induced displacement and resettlement.

**Table 4.15: Trends in the Ownership of Homestead Before and After Displacement**

Nature of Ownership of Home	Pre-displacement Phase		Post-displacement Phase	
	Number of Households	Percent	Number of Households	Percent
Own	70	51.9	130	96.3
Jointly Owned	65	48.1	2	1.5
Rented	0	0	3	2.2
Total	135	100	135	100

Source: Primary Data

Table 4.15 represents the changes in the housing ownership pattern between two phases. It shows that a marked change happened in this regard as the jointly owned ownership pattern declined drastically from 48.1 percent before relocation to 1.5 percent in the post-displacement phase. Many of the households became nuclear families after displacement. The head of the household took the decision of sharing compensation amount among family members that enhanced the proportion of own ownership of home from 51.9 percent to 96.3 percent after displacement. The percentage of households who failed to construct their own home and leading their life in a rented home after a long period of displacement is only 2.2 percent. A disaggregate analysis shows that the whole households displaced from KIAL project site constructed their own home in the post-displacement phase and 4.2 percent of the households, who are evacuated from Calicut Airport site, are living in rented houses. In essence, the surrender of self-built houses to the airport authorities was a great loss to the owners even though they have new residences now. Table 4.16 reveals the way of owning a house before and after displacement.

**Table 4.16: Specification of the Way of Owning House Before and After Displacement**

Way of Ownership of Home	Pre-displacement Phase		Post-displacement Phase	
	Number of Households	%	Number of Households	%
Inherited	95	70.4	17	12.6
Self-built / Bought	38	28.1	118	87.4
Govt. Provided	2	1.5	0	0
Total	135	100	135	100

Source: Primary Data

The percent of households who got home ownership through inheritance was 70.4 in the pre-displacement site which steeply declined to 12.6 percent in the post-displacement phase. At the same time, the households who purchased or self-built home group increased drastically from 28.1 percent to 87.4 percent between these two phases. The noted thing here is that households have strong emotional bondage or deep sentiments attached with the inherited home, no one can estimate this psychological aspect in monetary terms. The pain or sacrifice or mental stress is beyond the level of materialistic measurement parameters. It manifests the real costs of airport-induced displacement and resettlement. It was heart-breaking when the researcher heard the real story directly from the householder, who was forced to surrender his homestead to Calicut Airport expansion, who collected soil from the foundation of his old home in memory of his homestead when the authority demolished the home with JCB. His broken words and tears distressed the researcher deeply. Some households lost their common property resources (CPRs) such as traditional burial places and worship centres.

#### **4.4.1 Oldness of the Acquired Residences: A Project-wise Analysis**

Indeed, it is really very difficult to digest the news of acquisition of his/her homestead for developmental projects of the country. Every member of the family has a high degree of emotional attachments with home where he or she was born, spent his/her childhood, his/her ancestors lived and also ancestors' physical body was buried in the nearest area of their home especially among Hindu communities. Some heads of the households spoke about their huge loss (economic and social costs) when the authority acquired their houses in which they had been living for 45 years. A few of them complained that they were forcefully evicted from their newly built houses. Table 4.17 shows this very clearly.

**Table 4.17: Approximate Oldness of Acquired Residential Building**

Years	Calicut Airport		Kannur Airport	
	Frequency	%	Frequency	%
< 5 years	3	4.2	6	9.4
between 5 and 10 years	9	12.7	10	15.6
between 10 and 15 years	6	8.5	9	14.1
between 15 and 20 years	5	7.0	6	9.4
between 20 and 25 years	9	12.7	9	14.1
between 25 and 30 years	7	9.9	7	10.9
between 30 and 35 years	14	19.7	8	12.4
between 35 and 40 years	11	15.4	3	4.7
> 40 years	7	9.9	6	9.4
Total	71	100.0	64	100.0
Mean Years of the old of home	26.04*		20.52*	
Minimum Years	3		2	
Maximum Years	55		45	
Std. Deviation	12.56		12.51	
Variance	157.84		156.54	

Source: Primary Data

\* The p-value (.012) is significant at 5% significance level as per the t-test (2.557) for equality of means, we can reject the null hypothesis ( $h_0$ ).

Table 4.17 indicates that the average old of acquired residences in the Calicut Airport site is 26.04 and the mean years of the houses for the KIAL project are 20.52. Interestingly, 4.2 percent of the total acquired homes for the CCJ project was recently constructed and this figure for the KIAL site is 9.4 percent. 19.7 percent of the acquired home's old is between 30 and 35 years in the CCJ site. Above 40 years include 9.9 and 9.4 percent in the project site of Calicut Airport and KIAL respectively.

#### 4.4.2 Status of Residence of the Households in the Transition Stage

The most difficult part of airport-induced land acquisition and displacement is the transition stage as far as the displaced households are concerned. This phase indicates an interim period from displacement to resettlement of evictees in the new sites. It is observed that the socio-economic parameters of quality living standards of most of the displaced households are extremely poor during this transition phase. Table 4.18 reveals the home status of displaced persons during the transition phase. It reveals that the displaced households forced

to stay in tents / temporary shed set up either in the new rehabilitated site or land area near the airport site which is the balance of the acquired land, rented homes, relatives' house and the remaining households got the opportunity to stay in the acquired home till the accomplishment of their new houses in the rehabilitation sites.

**Table 4.18: Residence Status of Households during the Transition Phase**

Housing status during the interim period	Calicut Airport		Kannur Airport		Aggregate (CCJ + KIAL)	%
	Number of Households	%	Number of Households	%		
Rented house	21	29.6	20	31.3	41	30.4
Relative's house	15	21.1	5	7.8	20	14.8
Temporary shed (Tent)	28	39.4	8	12.5	36	26.7
Stay in the acquired home	7	9.9	31	48.4	38	28.1
Total	71	100	64	100	135	100

Source: Primary Data

The project-wise analyses show that 29.6 percent of the displaced households from the Calicut Airport site lived in rented houses during the interim period. This percentage for the KIAL site is slightly higher, that is, 31.3. The aggregate level (CCJ + KIAL) percentage of this case is 30.4 percent. Indeed, the intensity of homelessness and uncertainty among displaced households can be seen from table 4.18. A segment of airport-induced displaced households led a pathetic life in the temporary sheds that contributed 26.7 percent at aggregate level and the disaggregate level analysis shows that 39.4 percent and 12.5 percent for Calicut Airport and KIAL sites, respectively. It reveals the intensity of distress faced by these households immediately after their displacement from their old homes. There was a huge uncertainty and chaos in the case of Calicut Airport as many of the displaced households (39.4 percent / 28 out of 71 total samples) lived in tents during the transition phase. It can be seen that 21.1 percent of households from the Calicut Airport site lived in relatives' homes during the interim period and this figure for the KIAL site is only 7.8 percent.

Another salient feature of the transition phase is that a number of displaced households (48.4 percent) from KIAL site got the chance to stay in their old homes that were acquired by the authority and gained the permission to live there till the completion of their new home in the rehabilitation site. This generous and humane approach was very little in the project site of Calicut Airport. Only 9.9 percent of the households from the Calicut Airport site got the permission to stay in their acquired home. Some of them got this rare chance in



the Calicut Airport site because of their relentless resistance to move out from their acquired residence. Finally, the authority sanctioned permission to stay in their old homes till the completion of their new home. Contrary to this, the authority extended its helping hand towards the victims of KIAL airport by giving permission to stay there. Additionally, they granted consent to take all movable building materials and to cut trees from their homestead. They were allowed to transport them to their new rehabilitation centres. Hence, many of the relocated households from the KIAL project site shifted to new places with smiling faces or at least they faced less trouble when compared to the displaced households from the Calicut Airport site.

In addition to these, the displaced households from the Calicut Airport site were denied permission to take building materials and trees from their acquired homestead by the authority. Surprisingly, the concerned authority auctioned all these materials to an external group. It is noticed that the majority of the displaced persons purchased their own materials from this third party by paying higher prices. Undeniably, these middlemen, between the authority and the displaced households, grabbed handsome margins from these transactions. Hence, the majority of displaced persons were extremely dissatisfied with these haughty actions of the authority.

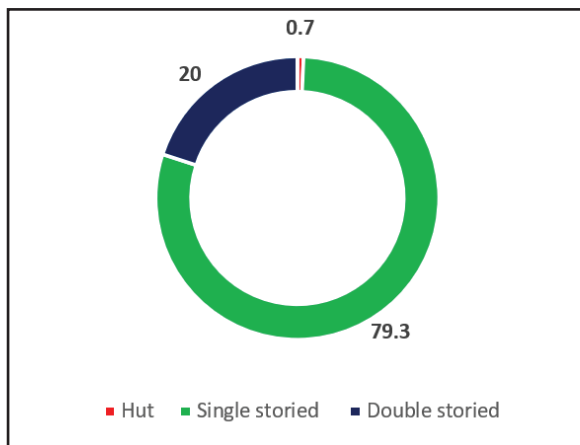
In reality, the authority created a space for exploitation of displaced households by another external group. At the same time, the authority from KIAL project, a PPP led airport, practiced more humane and sagacious approaches like land-based resettlement, public supply of water, permission to take materials from their old home at free of cost, etc. This aspect of DIDR in different models like public-led project and PPP led project will be elaborately discussed in chapter 5. In brief, to expect that DPs/PAPs, where the acquiring authority or developer offer a generally inadequate compensation and unfair rehabilitation packages, will be able to lead a better life in the post-relocation phase, is unrealistic.

#### **4.4.3 Structure of Home Before and After Displacement**

This section is looking at the structure of houses possessed by the households in the pre-displacement and post-displacement phases. The average age of the heads of the households is 44 which revealed that affected households are still in the middle age who were forced to build at least two houses in their life span on account of airport-induced land acquisition and displacement. The supervision and management of construction of their own houses in new sites troubled their life and many of them halted their usual jobs to supervise the progress of the work of their homes and very often they worked there as labourers. Many

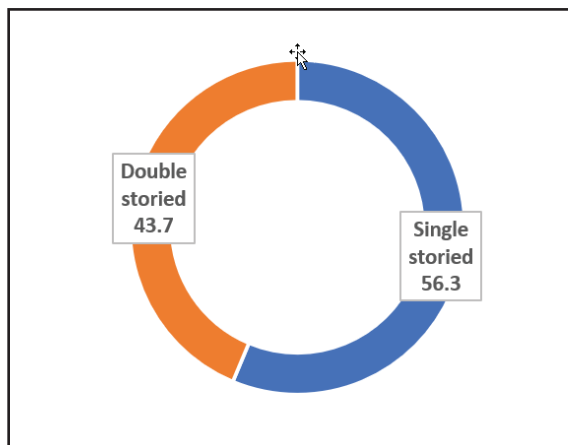
of the households responded that the compensation amount received from the authority was not enough to build new homes that resulted in taking loans from both formal and informal sources. The rocket wise increase of the costs of building materials as well as the wages of labourers worsened the situation further.

**Figure 4.4: Structure of Houses before Displacement**



Source: Survey Data

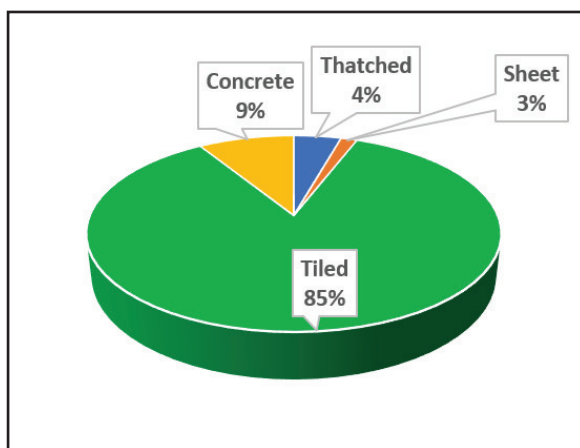
**Figure 4.5: Structure of Houses after Displacement**



Source: Survey Data

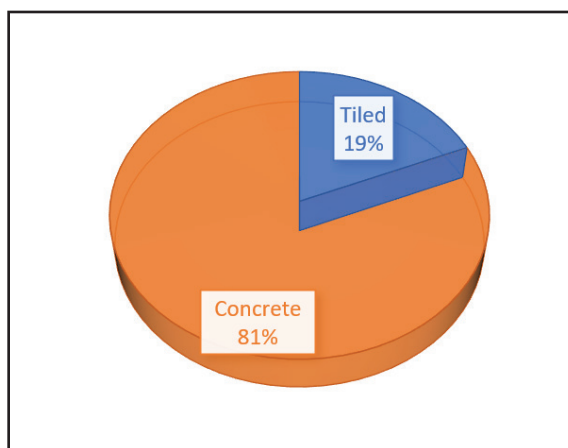
Interestingly, the percentage of double storeyed houses increased to 43.7 in the post-displacement phase from 20 percent in the pre-displacement phase. The figures show that 79.3 houses were single storeyed before displacement and this figure decreased to 56.3 percent after the displacement. The following figures show the type of roof of houses occupied by the households before and after displacement.

**Figure 4.6: Roof of the House before Displacement**



Source: Survey Data

**Figure 4.7: Roof of the House after Displacement**



Source: Survey Data

The majority of households (85 percent) possessed tiled roof houses during the pre-displacement phase that declined to 19 percent in the post-displacement phase. That is, 81 percent of the households occupied concrete roof houses after displacement. It shows that the displaced households constructed new homes with roofs of concrete that were consistent with the current trend of the region. We can say, based on the data analyses, that there is a drastic change in the structure of homes including roof of the house between pre-displacement and post-displacement phases.

#### **4.5 Livelihood Status of Households: Magnitude of Job Loss**

The unanimous view is that there was socio-economic development due to new policy-initiatives that created plenty of job-facilities in the economy. The system stimulated allied sectors also. Indeed, airport projects have created job vacancies immensely for job seekers directly and have played a decisive role for creating a conducive atmosphere to flourish allied activities including cargo business. However, the valid question in the perspective of DIDR is what types of benefits were derived by the displaced households, who were forced to relinquish everything for commissioning these projects, from the airport operations. To understand this, we must consider the percent of displaced workforce that got jobs inside the project, overall unemployment rate before and after displacement, gender-wise work force participation rate, changes in the nature of jobs or shifting of jobs, employment status in the transition stage and so on.

##### **4.5.1 Status of Economic Activities of Households Before and After Displacement**

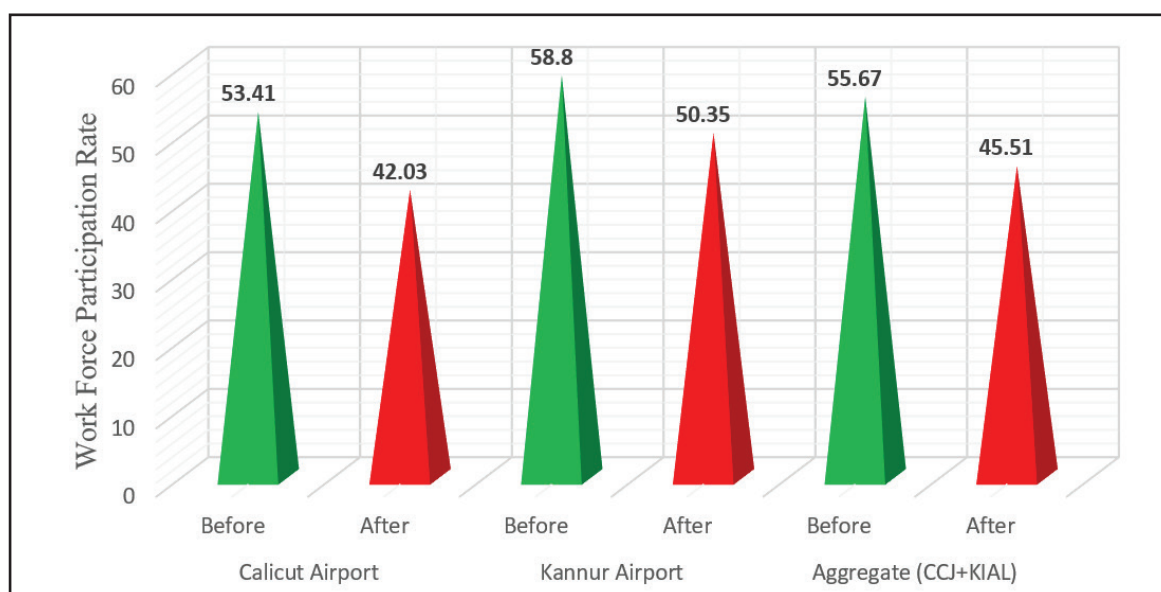
There exists a strong positive relationship between the standard of living of the members and the number of income earners or working persons in a household. Indeed, getting suitable jobs for people in accordance with their qualifications is considered one of the vital indicators of a growing economy. It is instrumental to enhance the purchasing power of the people, create effective demand in the system, boost further investment, and also to reduce the level of poverty at micro as well as macro levels. It is better to consider the workforce participation rate<sup>7</sup> (WFPR) before and after displacement of households to understand the impact of airport-induced land acquisition and displacement of inhabitants.

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<sup>7</sup> The formula to calculate WFPR is the work force divided by the size of the population aged between 15 and 64. The workforce includes all those persons who are actively engaged in economic activities. This group belongs to the age group between 15 and 64 as per the definition of International Labour Organisation (ILO).

Figure 4.8 reflects the workforce participation rate (WFPR) of households which accounts for 55.67 percent before displacement and declined to 45.51 percent after displacement. It shows that there is a significant reduction in the WFPR between these two phases. The project wise analyses indicate that the WFPR dwindled from 53.41 percent to 42.03 percent in the Calicut Airport site while this figure for KIAL manifests a little bit lower declining trend when compared to Calicut Airport, that is, from 58.8 percent to 50.35 percent. Additionally, it is visible from the figure that the WFPR is higher among the households from KIAL site in both the phases when compared to Calicut Airport site.

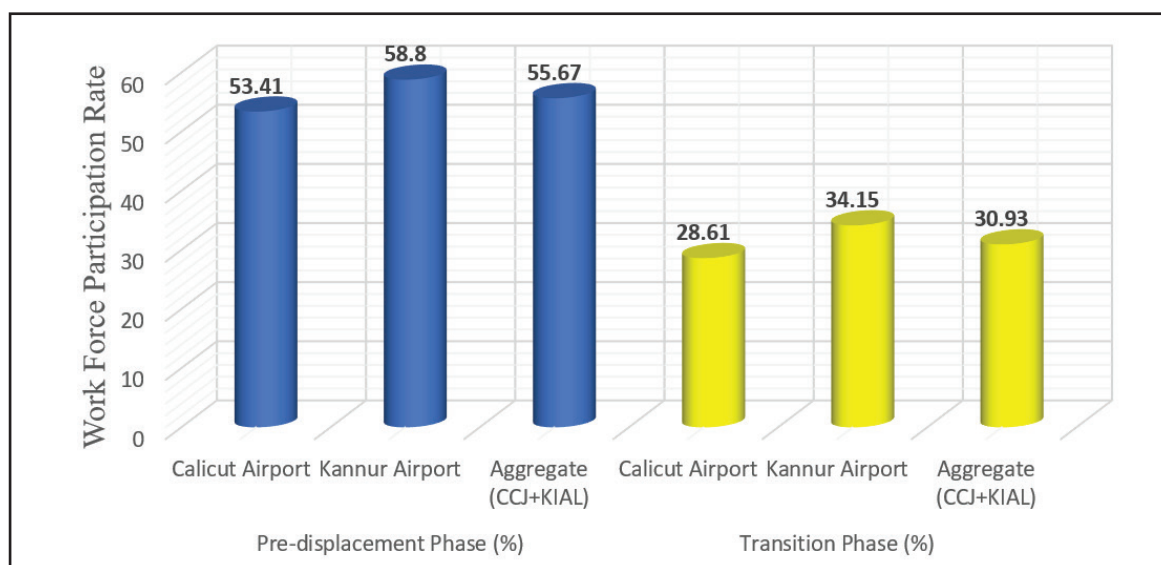
**Figure 4.8: WFPR of Households before and after Displacement**



Source: Survey data

The WFPR of displaced households in the transition stage reveals the immediate ramifications of airport-induced land acquisition on the status of economic activities of the persons. It is logical to make a comparative analysis of changes of WFPR between pre-displacement and transition phases as the alarming growth of unemployment rate can be seen in this phase of DIDR. The WFPR has drastically declined from 55.67 percent before displacement to 30.93 percent in the transition phase as shown in figure 4.9. This is the phenomenon of livelihood displacement as mentioned in the report of World Commission on Dams (WCD, 2000). Many of the household members, who were actively engaged in economic activities before displacement, lost their jobs on account of land acquisition for airport projects and relocation. The size of land area has declined in the post-displacement phase that resulted in the reduction of employment opportunities to majority of the members of the households, especially in the transition stage.

**Figure 4.9: WFPR of Households Before Displacement and Transition Phase**



Source: Survey data

The project-wise analysis shows that the WFPR has substantially declined to 28.61 percent in the transition stage from 53.41 percent in the pre-displacement phase at the site of Calicut Airport project. This figure for the KIAL project is 34.15 percent in the transition stage, declined from 58.8 percent. Not surprisingly, the transition phase registers a steep decline in the WFPR of households both in Calicut and Kannur airport project sites.

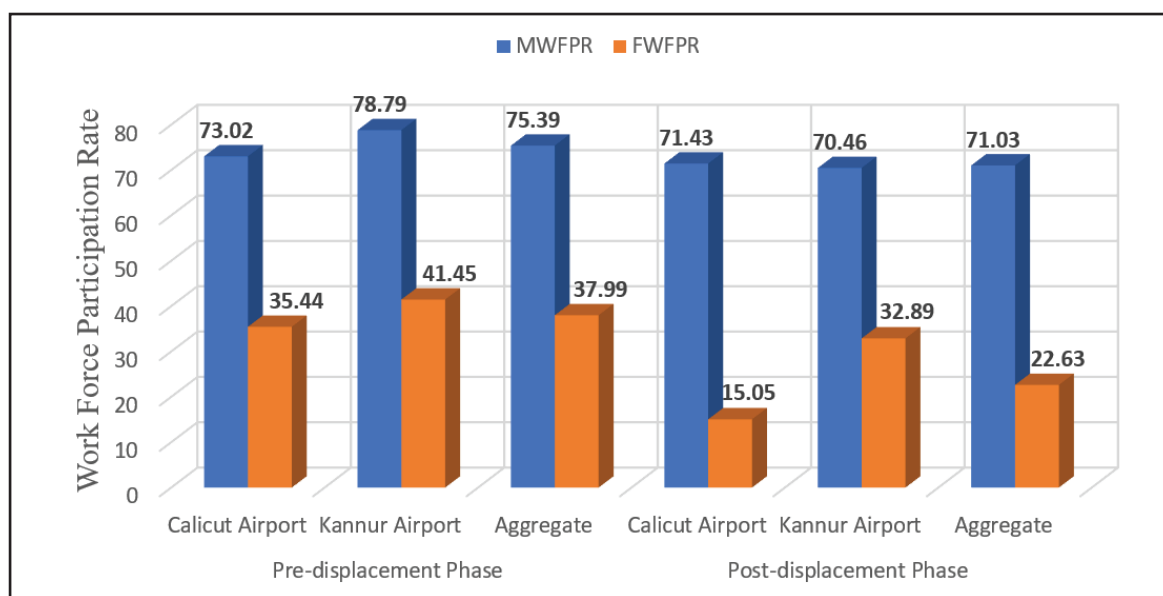
#### **4.5.2 Land Acquisition and Displacement due to Airport Projects: Gender-wise Changes in WFPR**

Undoubtedly, gainful employment, especially for women, is one of the prerequisites for maintaining and sustaining a family and for a society as a whole. It is one of the leading parameters for measuring the level of standard of living of the people. No women in the society can attain true empowerment without a suitable job. In this section, the researcher is endeavouring to find out the gender-wise changes in workforce participation rate between pre-displacement and post-displacement phases. This section will reflect the impact of airport-led land acquisition and relocation on livelihoods of males and females separately. The trend from Figure 4.10 reveals that the section of women confronted a huge loss of jobs on account of land acquisition and relocation.

Shockingly, the aggregate level analyses show that the female work force participation rate (FWFPR) has declined steeply from 37.99 percent before displacement to 22.63 percent in the post-displacement phase. At the same time, the male work force participation rate (MWFPR) declined marginally compared to FWFPR, that is, from 75.39 percent to 71.03 percent between two phases. Interestingly, the survey data shows that the MWFPR has

declined slightly (that is, from 73.02 percent to 71.43 percent) as far as the Calicut Airport site is concerned. Surprisingly, the same project site shows a huge reduction in the FWFPR from 35.44 percent to 15.05 percent. This figure for the KIAL project reflects a different scenario. That is, MWFPR has declined to 70.46 percent from 78.79 percent. At the same time, the FWFPR has decreased from 41.45 percent to 32.89 percent. It shows that the fall in WFPR is predominant in the case of the women segment and it was marginal for men.

**Figure 4.10: Gender-wise Changes in WFPR**



Source: Survey data

The project-wise data analyses manifest that the rate of reduction of WFPR is prominent among women in the regions of Calicut Airport when compared to Kannur Airport project. It is correct to state that the airport-induced land acquisition has a significant adverse impact on the women section as the action of land acquisition paved the way for massive job losses for females and resulted in their economic disempowerment and impoverishment. The important question here is that - why is there a huge difference of FWFPR between Calicut Airport and KIAL projects in the post-displacement phase?

The significant reason for this disparity is pertaining to the difference that existed in the rehabilitation packages that were implemented by the authority for these two projects. The displaced households (at least one member from a family) from the KIAL project site got jobs in the airport as a part of rehabilitation packages. This provision was also added to the rehabilitation packages announced for displaced families from Calicut Airport but miserably failed to implement it properly. Moreover, in the pre-displacement phase, women were actively engaged in the activities of animal husbandry along with other works including kitchen garden, farming, woods collection and so on. This opportunity was absent in the

post-displacement phase as most of the households' land availability declined significantly. This declining trend of land availability has already been analysed in the preceding section of this chapter. Currently, these people are leading their life with less land and some of them described their life as in cages after the displacement. The number of marginal landholders increased tremendously after displacement. In fact, this trend transformed households, especially women, from self-reliance to one of the vulnerable segments of the society (Fernandes & Raj, 1992). The changes in the status of project-wise economic activities in relation to animal husbandry is shown in table 4.19.

**Table 4.19: Ownership of Cattle & Poultry during Pre-displacement and Post-displacement Phases**

Responses of Households	Pre-displacement Phase (%)			Post-displacement Phase (%)		
	CCJ	KIAL	Total	CCJ	KIAL	Total
	Frequency	Frequency	Frequency	Frequency	Frequency	Frequency
Ownership of cattle & poultry	47 (66.2)	31 (48.4)	78 (57.8)	8 (11.3)	2 (3.1)	10 (7.4)
Not owned any cattle & poultry	24 (33.8)	33 (51.6)	57 (42.2)	63 (88.7)	62 (96.9)	125 (92.6)
Total	71 (100)	64 (100)	135 (100)	71 (100)	64 (100)	135 (100)

Source: Primary Data

Note: Figures in parentheses are percentages to the total

The disaggregate level analyses manifest that the households from the site of Calicut Airport hold the largest share in maintaining animal husbandry activities. It was 66.2 percent (47 households) in the pre-relocation phase that declined to 11.3 percent (8 households) in the post-relocation phase. In the KIAL project site, the proportion of families, who reared domestic animals as a part of livelihood measures, was 48.4 percent (31 households) that dramatically declined to 3.1 percent (2 households) after displacement. It is absolutely right to observe that the land acquisition for airport projects resulted almost in the loss of economic activities of animal husbandry which became a primary reason of fall in the female workforce participation rate.

An analysis of the above table clearly shows the drastic reduction in the number of households engaged in the economic activities of animal husbandry after displacement. In the pre-displacement phase, 78 households of the total of 135, that is, 57.8 percent, adopted the work of animal husbandry along with other economic activities, which was one of the primary sources of supplementary income, especially for women. This number massively

declined to 10 households (7.4 percent) in the post-displacement period. Land acquisition for developmental projects adversely affected the project impacted persons in terms of fall in the level of income on account of reduction of cattle population / live stock after relocation as seen from the project site of Ramagundam National Thermal Power Corporation, located in the district of Peddapalli, Telangana (Parasuraman, Singh & Prasad, 1995). This project had acquired the land areas of mainly grazing pastures. The survey data reflect that at least one member of the majority of displaced households received a job from KIAL project, interestingly, many of them were women. The poor implementation of this provision in the Calicut Airport site resulted in a drastic reduction of FWFPR as shown in table 4.20.

**Table 4.20: Households Got Jobs Inside the Airport Project Before and After Displacement (Number of Persons)**

Airport Projects	Pre-displacement Phase			Post-displacement Phase		
	Male	Female	Total	Male	Female	Total
Calicut Airport	2	0	2	4	2	6
Kannur Airport	2	2	4	23	32	55
Aggregate	4	2	6	27	34	61

Source: Primary Data

The argument for a low reduction in the female workforce participation rate in the KIAL project is the effective ground level implementation of the provisions of the rehabilitation package for the displaced households. This provision is vividly articulated in clause 9 as per the rehabilitation package of the State Government: “Preference will be given to one member of evicted family while considering for appointment in the vacancies arising in the proposed Airport and its associate concerns according to his/her educational qualification.”<sup>8</sup> Table 4.20 reveals that only a few job seekers (6 members of the sampled households) got jobs in the airport during the pre-displacement phase. That is, only 2 and 4 persons were employed in Calicut and KIAL projects respectively.

Apparently in the post-displacement phase, the authority of the KIAL project offered jobs in the airport to 55 displaced persons. This number is very low in Calicut Airport, that is, the authority provided jobs to only 6 displaced members. It shows the shocking difference in deriving benefits by the displaced persons from the projects. In fact, the displaced persons were forced to surrender their livelihood, homestead and also social capital for realising these projects, but majority of them failed deplorably to absorb benefits from airport projects. It is rational to make a gender-wise analysis of the beneficiaries (job holders) from the project of KIAL.

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<sup>8</sup> Government of Kerala vide GO (MS) No. 07/2008/Transport Dated 01/02/2008 under clause IX.

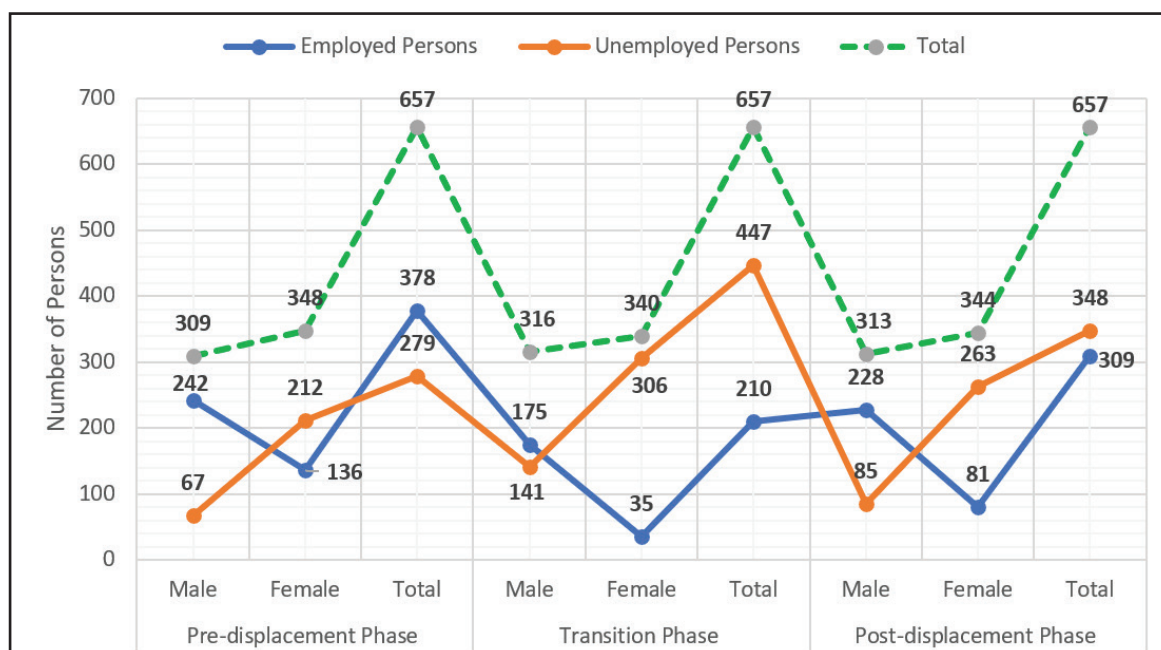


It is also clear from the analysis of collected data (also see table 4.20) that the percent of displaced females who got jobs in the KIAL project in the post-displacement phase outnumbered the displaced men job holders (23 males – 42 percent). The percent of displaced women job holders in the KIAL project is 58 (32 females out of 55 displaced job holders). The majority of the heads of displaced households assigned jobs to women in the KIAL project that was offered as a part of rehabilitation packages. This trend reduced the rate of fall in the FWFPR in the KIAL project site when compared to the Calicut Airport project.

### 4.5.3 Employment Status Before and After Displacement

The levels of employment and unemployment among displaced persons in the working age group of 15-64 give more insight into the impacts of airport-induced land acquisition and evacuation of inhabitants. The comparative analyses of these variables between pre-displacement, transition and post-displacement phases are depicted in figure 4.11. It reveals the activity status of the labour force at aggregate level. Indeed, the level of employment was low and the level of unemployment was high in the transition and post-displacement phases when compared to the pre-displacement phase. The gender-wise analysis shows that the number of unemployed females increased from 212 to 263 persons in the post-relocation period while this number for males enhanced moderately from 67 to 85 persons.

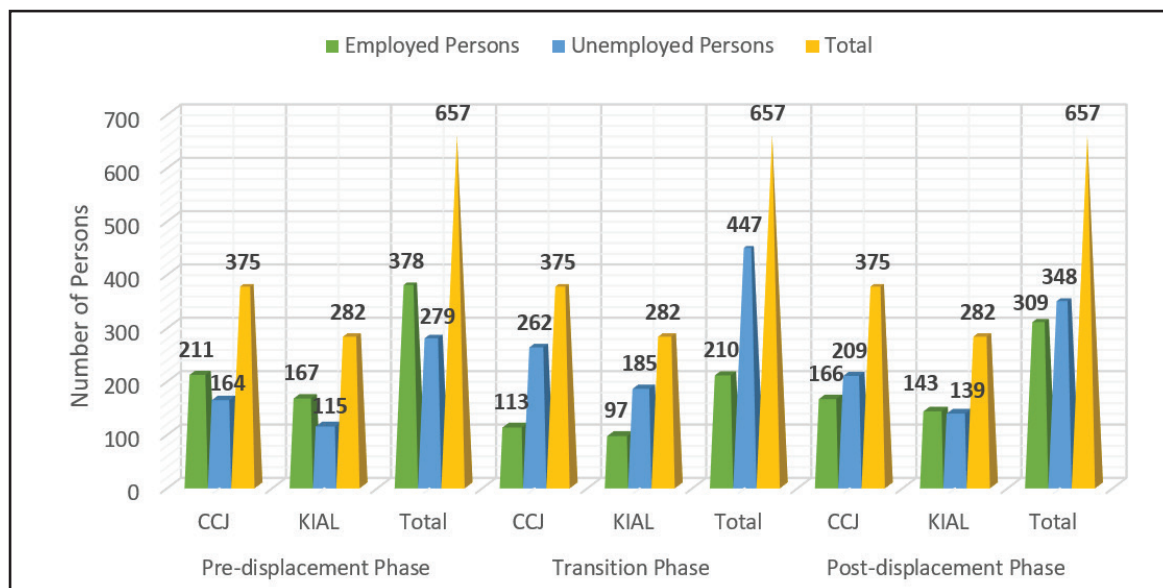
**Figure 4.11: Number of Employed and Unemployed Persons in the Pre-displacement, Transition and Post-displacement Phases: Gender-wise Aggregate Analyses**



Source: Primary Data

The number of employed females steeply declined to 35 in the transition phase. In essence, airport-induced displacement has an increasingly negative impact on employment among displacees in general and among women in particular. The trends of project-wise analysis are portrayed in figure 4.12.

**Figure 4.12: A Disaggregate Level Analysis of Employed and Unemployed Persons in the Pre-displacement, Transition and Post-displacement Phases**



Source: Survey Data

At aggregate level, the number of employed persons is 309 after the displacement period which was 378 before displacement. Similarly, the number of unemployed persons increased from 279 to 348. The number of unemployed persons increased dramatically to 447 during the transition phase. Figure 4.12 reflects the trend of higher number of unemployed persons during the post-displacement phase of both the projects. More surprisingly, this figure is alarmingly on a higher level during the transition phase of both the projects. The number of unemployed persons in the pre-displacement phase of Calicut Airport was 164, which drastically increased to 262 persons in the transition phase and declined to 209 persons in the post-displacement phase. This figure for the KIAL project site was 115, 185 and 139 during pre-displacement, transition and post-displacement phases respectively.

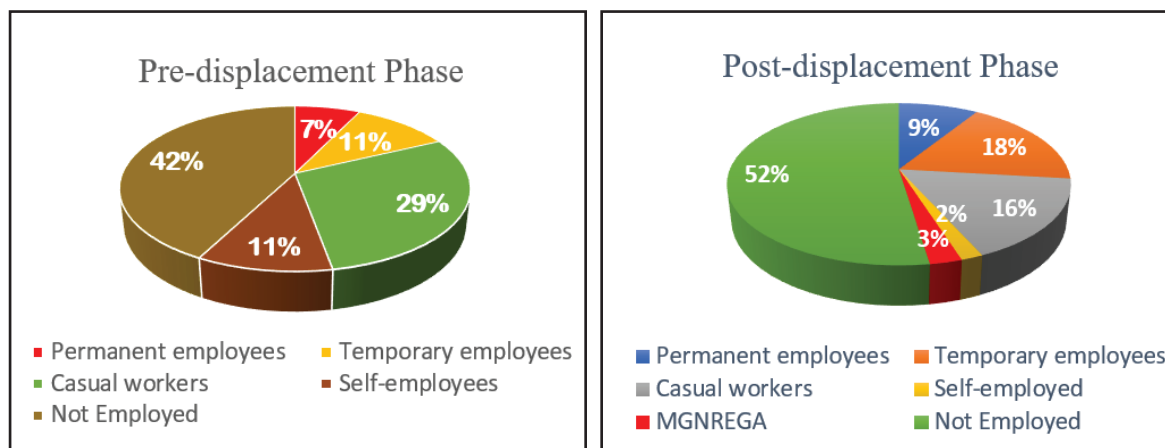
Additionally, the interesting trend derived from figure 4.12 is that the number of employed persons in both the projects is higher than the number of jobless people during the pre-evacuation phase. This trend is reversed in the subsequent phases of evacuation, that is, transition and post-displacement phases. It is witnessed that the number of employed persons is smaller than the number of unemployed persons. Additionally, the number of

jobless people is more than double of employed persons in the transition phase. Indeed, this phenomenon reduces the earnings of the displaced households and also erodes their purchasing power which results in economic impoverishment.

#### 4.5.4 Livelihood Measures and Occupational Shifts

The involuntary occupational shift among displaced persons is another adverse impact of DIDR. The phenomenon of involuntary displacement and resettlement of local people have a profound adverse impact on those regions where the economic activities are largely inclined to land and also the degree of flexibility in occupation is very low (Terminski, 2013). The project-wise and aggregate level analyses of occupation of displaced members before and after the relocation will provide more information regarding the nature of jobs and shift in occupation. The categorisation of employed persons based on the nature of their jobs include permanent and temporary employees, self-employed persons, casual workers and works in government schemes like MGNREGA as shown in figures 4.13 and 4.14.

**Figures 4.13 & 4.14: Livelihood Loss and Occupational Shifts**



Source: Survey Data

Source: Survey Data

It is noticed from the above figures that the percent of permanent (regular) employees increased marginally from 7 in the pre-relocation phase to 9 percent in the post-relocation phase. Similarly, the proportion of temporary workers also increased from 11 percent to 18 percent. These trends happened mainly because 11 displaced persons got permanent jobs in the KIAL project. Additionally, 44 displaced persons acquired jobs in the KIAL project on contract basis. The total number of displaced persons who received jobs in the KIAL project is 55 as per the provision of the rehabilitation packages - one job to one member of the displaced households. The heavy shift in occupation occurred in the self-employment category, that is, its percentage declined drastically from 11 percent to mere 2 percent in the

post-displacement phase. The MGNREGA job holders account for 3 percent in the post-relocation phase. The segment of jobless persons enhanced from 42 percent to 52 percent.

On the other hand, the project-wise analyses of occupational shifts reveal that the number of permanent employees remained constant in the Calicut Airport in both the phases while this figure increased from 23 to 34 persons in the project site of KIAL on account of regular jobs offered to 11 displaced persons by its authority. The increase in the number of temporary workers is much higher in the KIAL site (from 24 to 59 persons) than Calicut Airport site (from 46 to 56). The number of casual workers declined considerably in the KIAL project to 38 from 90 and this declining trend was comparatively lower in the Calicut Airport (from 101 to 71). The number of self-employed persons declined significantly in the post-displacement of both the projects.

#### **4.6 Social Impacts of Airport-Induced Displacement and Resettlement**

Indeed, the role of social capital, for example, shared values and norms, neighbourhood, community networks, social fabrics, trust and unity, cooperation, reciprocity, etc. is decisive in building a quality life and also imperative for fostering well-being of the people. There exists a positive association between social capital and well-being of the people (Helliwell & Putnam, 2004; Cramm, Moller & Nieboer, 2012). Loss of social capital, on account of a host of factors including development-induced land acquisition and evacuation, is one of the most difficult parts and is an incurable ailment as far as the affected persons, both DPs and PAPs, are concerned. Social scientists highlighted in their studies that the loss of social capital is treated as human rights violations (Downing, 1996), results in mental shock (Fernandes, 2001), disorder, loss of education (Mathur, 2008), and social impoverishment (Cernea, 1995). In fact, displaced persons may be able to reconstruct homesteads and restore livelihood measures in the new resettlement areas but to rebuild social capital is a complex task and will take multiple years. Many of the displaced persons viewed that the loss of homestead is temporary but the loss of social capital is permanent and irreversible. In this section, the researcher is attempting to trace out the social ramifications of airport project-induced land acquisition and relocation on inhabitants and also to sketch the demographic profile of the DPs.

##### **4.6.1 Demographic Profile of the Displaced Households**

The religion-wise classification of surveyed displaced households shows that 60.0 percent families belong to Hindu religion and the remaining 40.0 percent constitute Muslim religion as shown in table 4.21.

**Table 4.21: Religion and Caste-wise Classification of Displaced Households**

Airport Projects	Religion		Caste		
	Hindu	Muslim	SC	OBC	General
Calicut Airport	22 (31.0)	49 (69.0)	17 (23.9)	52 (73.2)	2 (2.8)
Kannur Airport	59 (92.2)	5 (7.8)	19 (29.7)	38 (59.4)	7 (10.9)
Aggregate	81 (60.0)	54 (40.0)	36 (26.7)	90 (66.6)	9 (6.7)

Source: Primary Data

Note: Figures in parentheses are in percentages

At the disaggregate level analyses indicate that 69.0 and 31.0 percent displaced households from Calicut Airport site belong to Muslim and Hindu religions, respectively. Unlike Calicut Airport site, lion's share of the evacuated households from KIAL site belong to Hindu religion (92.2 percent) and only 7.8 percent constitute Muslim community. The caste-wise classifications reflect that 66.6 percent represent the OBC category, 26.7 percent Scheduled Caste (SC) and 6.7 percent General community category. The OBC category (73.2%) is higher in the Calicut Airport site than the KIAL (59.4%) while the SC category is higher in the KIAL (29.7%) when compared to Calicut Airport (23.9%). The proportion of General category in the KIAL is 10.9% while the Calicut Airport supports only 2.8%.

**Table 4.22: Marital Status of Displaced Households**

Marital Status	Number of Persons		
	Calicut Airport	Kannur Airport	Total
Married	298	231	529
Unmarried	92	61	153
Widow	22	29	51
Divorced	11	1	12

Source: Primary Data

The majority of displacees are married (529 persons). The total number of widows is 51 and separated members are 12, of which 11 persons are from CCJ site. The sampled households' age-wise classification reflects the magnitude of children, senior and super senior citizens (dependent people) and also the size of the labour force as shown in table 4.23. The number of children (below the age of 15) among the sampled households is 152, of which 62 children come under the age group of below 5 and the remaining 90 belong to the age group between 6 and 14. There was not much difference between the projects in this regard.

**Table 4.23: Age Group of Displaced Households**

Age-wise Classification	Number of Persons		
	Calicut Airport	Kannur Airport	Total
Age group 0-5 years	25	37	62
Age group 6-14 years	54	36	90
Age group 15-64 years	395	284	679
Age group 65-80 years	46	29	75
Age group Above 80 years	4	11	15
Total	524	397	921

Source: Primary Data

The impact of DIDR on education in the form of dropouts, loss of schooling years, delay in students' enrolment, and so on are visible in this group more profoundly. The displaced members who form the working age group (15-64) is large, that is, 679, of which 395 are from Calicut Airport site and the remaining 284 persons are from KIAL site. The access to suitable and qualified jobs is indispensable for this job seekers group. It is interesting to look at the average age of the heads of the displaced households at the time of their relocation.

**Table 4.24: Mean Age of Heads of the Evicted Households at the Time of their Displacement**

Age Group of Heads of the Family	Number of Persons		
	Calicut Airport	Kannur Airport	Aggregate
Age group 25-35 years	3	4	7
Age group 36-45 years	42	41	83
Age group 46-55 years	22	17	39
Age group 56-65 years	4	2	6
Total	71	64	135
Mean Age*	44.89	43.09	44.04
Std. Deviation	6.06	6.05	6.09
Minimum	33.00	29.00	29.00
Maximum	63.00	65.00	65.00
Range	30.00	36.00	36.00

Source: Primary Data \*t-test p-value is .088 (Not significant at 5% level of significance)

Table 4.24 shows that the majority of heads of households belonged to the age group of 36-45 years at the time of their relocation. The t-test value manifests statistically not a significant difference between the mean age of the heads of the households when displacement occurred

between Calicut Airport and Kannur Airport. Table 4.23 shows that the total number of senior citizens (above 64) is 90 and this group is more prone to disabilities including high rate of morbidity, which highlights the need for effective social security measures to protect the vulnerable segments of the displaced households. This group is again classified into two groups; namely: senior citizens (between 64 and 80) and super senior citizens (above 80). The group of senior citizens consists of 75 persons and the number of super senior citizens is 15. The number of senior citizens is larger in the Calicut Airport site (46 out of 75) and the number of super senior citizens is more in the KIAL project site (11 out of 15).

**Table 4.25: Educational Level of Displaced Households**

Educational Status	Number of Persons		
	Calicut Airport	Kannur Airport	Total
Illiterates	22	12	34
Primary	63	51	114
Upper primary	88	57	145
Secondary	160	106	266
Higher secondary	103	67	170
Degree	29	48	77
Professional Degree	13	6	19
PG	19	13	32
Total	497	360	857

Source: Primary Data

The categorisation of displaced persons on the basis of the level of education is very helpful to understand the employability of the labour force. It is stated that there is a positive relationship between higher level of educational attainment and the employability of the labour force of the country. It is noticed that 266 displaced members completed secondary education and 170 members retained higher secondary level certificates. The total number of degree and PG holders is 77 and 32, respectively. The number of professional degree holders is 19, of which 13 persons are from Calicut Airport site. The number of degree holders is higher among the displaced households from the KIAL project, that is, 48 out of 77. The total number of illiterates is 34, of which 22 persons are from Calicut Airport site. Table 4.25 shows that qualified members are available among the displaced households to get higher level jobs in the airport sector. Unfortunately, the number of highly paid job holders in the airport sector from the displaced households is meagre, especially in the Calicut Airport. We have already discussed this in the preceding section of this chapter.

#### 4.6.2 Family Set up of the Households Before and After Displacement

The development-induced displacement results in the disintegration of the joint family (Ganguli, 2014) which paves the way for the rapid growth of nuclear families. Indeed, the involuntary displacement and resettlement on account of land acquisition for airport projects had profound ramifications on the structure of family set up of the households. Many of the displaced members, especially women, state that the transformation from joint family set up to nuclear family in the post-displacement phase reduced their job prospects. The primary reason for this joblessness among women is the absence of senior citizens in the post-displacement disintegrated family compelled them to stay at home to take care of their children. The nuclear family set up with less land area in the post-relocation period had adverse impact on gaining jobs, especially to females. The average size of the displaced families has declined substantially and the percent of the nuclear families increased in a manifold manner as shown in table 4.26.

**Table 4.26: Type of Family before and after the Displacement**

Airport Projects	Type of Family (Before*)			Type of Family (After*)			Percent of Nuclear Families	
	Joint	Nuclear	Single	Joint	Nuclear	Single	Before	After
Calicut Airport	49	21	1	16	54	1	29.6	76.1
	(69.0)	(29.6)	(1.4)	(22.5)	(76.1)	(1.4)		
Kannur Airport	23	40	1	7	56	1	62.5	87.5
	(35.9)	(62.5)	(1.6)	(10.9)	(87.5)	(1.6)		
Total	72	61	2	23	110	2	45.2	81.5
	(53.3)	(45.2)	(1.5)	(17.0)	(81.5)	(1.5)		

Source: Primary Data

Note: Figures in parenthesis are in percentages

\* Chi-Square Tests p-value is .000 at 0.05 significance level (significant)

The proportion of nuclear families has increased from 45.2 percent in the pre-displacement phase to 81.5 percent in the post-displacement phase. This trend that substantiates the argument of disintegration of families is one of the by-products of DIDR. This drastic change is more visible in the Calicut Airport site where its percentage enlarged from 29.6 percent to 76.1 percent. Unlike the Calicut Airport site, there was a higher percent of nuclear families in the pre-relocation phase of KIAL, which increased from 62.5 percent to 87.5 percent in the post-evacuation phase. The Chi-Square Tests p-value is .000 in both the projects



during pre-displacement as well as post-displacement phases. The test statistics indicates an association between airport projects and type of family at 5 percent significance level.

#### **4.6.3 Educational Loss on Account of Airport-Induced Displacement and Resettlement**

The heads of the evicted households face another serious social issue due to airport-induced land acquisition and displacement in the form of educational loss to their family members. In some extreme cases, children from the displaced families may drop out or interrupt their schooling (Mahapatra, 1999; Cernea, 2000), especially in the transition stage from pre-displacement phase to post-displacement resettlement phase. Many of them give up their cherished dream of doing their courses in the esteemed institutions located inside the country as well as abroad. Some children from the evacuated households face loss of education partially, that is, one year or two years loss of schooling, especially in the process of changing educational institutions from the location of pre-displacement to new schools in the post-displacement areas.

It is also understood from the responses of evicted family-members that their children actively engaged in building their homestead as casual labourers in the new areas after displacement which resulted in their dropping out. That is, parents gave priority to construct homes and restore their normal life after evacuation rather than schooling of their children. Sadly, a number of children entered into the job market early to supplement the earnings of the family as many parents faced severe financial setbacks in the post-displacement phase. Let us observe the social ramifications of airport-induced displacement and resettlement in terms of educational loss that happened to evicted families.

**Table 4.27: Households' Trouble in Relation to Educational Access to Children After Displacement**

Magnitude of Educational Loss	Calicut Airport		Kannur Airport		Total (CCJ+KIAL)	
	Frequency	%	Frequency	%	Frequency	%
1 year loss	4	5.6	1	1.6	5	3.7
2 years loss	11	15.5	7	10.9	18	13.3
3 years loss	5	7.0	0	0	5	3.7
Drop-outs	2	2.8	0	0	2	1.5
Total	22	31.0	8	12.5	30	22.2

Source: Primary Data

Table 4.27 reflects the extent of educational loss faced by the sampled displaced households from the project site of Calicut and Kannur Airports. At aggregate level, 22.2 percent of the

total displaced households confronted this serious issue of educational loss. The project-wise analyses show that this concern is prominent in the site of Calicut Airport where 31.0 percent households responded to the loss of education of their children and this figure in the KIAL site is only 12.5 percent. This loss is comparatively negligible in the KIAL site mainly because of the practice of its fair and participatory rehabilitation packages which included the main provision of the land-to-land based resettlement of displaced households in the nearest areas of their original places. This step helped to prevent considerably the incidence of shifting of schools of their children after displacement.

Contrary to this, the scattered nature of resettlement of displaced households that happened in the site of Calicut Airport, where there was no such package of land-based resettlement, resulted in the loss of access to education to many of their children after displacement. One of the primary reasons for this trend is the increase of distance to reach educational institutions after displacement and also the troubles associated with the transfer of students from their previous school in pre-displacement place to new one after evacuation. The dropping happened to 2.8 percent of families in CCJ project whereas this figure is nil in the KIAL site. The percent of loss of one year, two years and three years of schooling due to displacement from the site of CCJ is 5.6, 15.5 and 7.0 while this figure for KIAL project is 1.6, 10.9 and nil. It is also observed that many of the smart students during the pre-displacement phase became average students after displacement in terms of their academic performance.

#### **4.6.4 The Phenomenon of Stigmatization among Displaced Households**

Stigmatization among the project affected persons, one of the ill-effects of DIDR, happened on account of many factors like family disintegration, loss of neighbourhood, friends and relatives, loss of livelihood measures, feeling of disorder and loneliness, agony and insecurity after displacement. The analyses of collected data revealed that the intensity of stigmatization among evacuated households was very high during the transition stage as many of them lived in temporary sheds, rented homes, etc. and experienced homelessness during this interim period which ranged from one to thirteen years in both the projects of KIAL and Calicut Airport. In addition to these, the level of unemployment rate was very high during this phase.

Not surprisingly, many of the respondents from KIAL project viewed that the degree of stigmatization was comparatively low due to the decision taken by the authority to opt

the adjacent land area for rehabilitation which was close to their original homestead. The affected households demanded the same vehemently and warmly welcomed the decision of the authority as this action prevented the complete loss of neighbourhood and their own social fabrics. Each displaced household from the KIAL project site received 10 cents of land free of cost as a part of rehabilitation packages. However, currently, these displaced persons are confronted with another phase of acquisition as the authority gave the green signal to acquire additional land for the expansion of KIAL project. That is, the possibilities of double displacement or even multiple displacement are still existing in the KIAL project. At the same time, the displaced families from Calicut Airport were resettled in a scattered manner so that they tasted the extreme bitterness of loss of social capital that resulted in stigmatization in higher intensity.

The provision of allocation of free land for displaced families was absent in the rehabilitation package announced for the Calicut Airport project site. Many of them repeatedly heard the term like strangers from the mouths of host people in the new resettlement area. The displaced respondents, especially from the Calicut Airport site reiterated that the calling of strangers still continue even after 10 to 15 years of resettlement. It is a form of status deprivation (Cernea, 2000) which alarmingly strengthens the feeling of vulnerability and insecurity. The host people keep these new settlers away from the core posts in temples, mosques and other social institutions and cultural activities. In addition to these, the resettled people have been facing hostilities frequently from the host community. It is absolutely correct to state that for materialising the expansion of airport projects, the displaced persons sacrificed not only tangible capital but also enormous social capital including voluntary associations, collective actions, mutual benefit groups, trustworthiness and so on. All these unpleasant socio-economic and psychological elements have a huge adverse impact on the displaced households.

In essence, the displaced persons are treated as second graded citizens and many of them felt insecurity in the new settled areas. Moreover, the breaking of kinship status is another reason for stigmatization after displacement. The frequent connections and interactions with peer groups, family members, relatives and friends result in higher well-being and also mutual trust, trustworthiness, reciprocity and a sense of belongingness pave the way for larger happiness and well-being reported by Yip, Subramanian, Mitchell, Lee, Wang and Kawachil (2007) based on a study conducted in rural China.

**Table 4.28: Engagements with Family Before and After Displacement (%)**

Nature of Engagements	Engagements with family before displacement			Engagements with family after displacement		
	CCJ	KIAL	Total	CCJ	KIAL	Total
Regularly	93.0	59.3	77.0	14.1	9.4	11.8
Occasionally	5.6	39.1	21.5	35.2	51.5	43.0
Festival season	0	0	0	26.8	39.1	32.6
Annually	1.4	1.6	0.7	23.9	0	12.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary Data

The declining trends in contacts and visits between the displaced households and relatives in the post-displacement phase are common. Many of the respondents underscored that the regular visits among relatives before displacement became rare visits in the post-relocation phase as shown in table 4.28. The percent of regular visitors drastically declined from 77.8 in the pre-displacement phase to 11.8 percent in the post-displacement phase. This type of loss of social capital is severe in the Calicut Airport site as the percent of regular contacts with the family was 93.0 before displacement which massively declined to 14.1 percent in the post-relocation period.

Another social issue in this regard is the difficulty of getting life partners in the new settlement areas. The local people in the host regions are less interested in making a relationship through marriage with the displaced households. This is the case of marginalisation among displaced households and uprooting of the life of these people for developmental projects. The fundamental question is that - Are there any proper yardsticks to compute all these social costs incurred by the displaced households for realising the airport projects in the state? Table 4.29 reflects the responses of displaced households regarding the social exclusion at aggregate level as well as project-wise manner.

**Table 4.29: Incidence of Social Exclusion Among Evicted Families**

Responses of Households	Calicut Airport		Kannur Airport		Total	
	Frequency	%	Frequency	%	Frequency	%
Experienced Social Exclusion	29	40.8	20	31.3	49	36.3
Not Experienced Social Exclusion	42	59.2	44	68.7	86	63.7
Total	71	100.0	64	100.0	135	100.0

Source: Primary Data

The percentage of households who experienced a higher-level of social exclusion is 36.3 at aggregate level and the project-wise analyses show that 40.8 and 31.3 percent of the households from CCJ and KIAL sites tasted the bitterness of social exclusion in their new resettlement sites. The incidence of social exclusion is severe in the Calicut Airport site mainly on account of the scattered nature of rehabilitation of displaced households that resulted in family disintegration and many of them faced the arrogant attitude of host people. The caste-wise analysis of the incidence of social exclusion among displaced households is depicted in table 4.30.

**Table 4.30: A Disaggregate Analysis of Caste-wise Incidence of Social Exclusion**

Responses of Households	Calicut Airport			Kannur Airport		
	SC	OBC	General	SC	OBC	General
Experienced Social Exclusion	12	17	0	11	8	1
Not Experienced Social Exclusion	5	35	2	8	30	6
Total Households	17	52	2	19	38	7

Source: Primary Data

The general trend in the caste-wise analysis at project level shows that the number of evicted households who have experienced social exclusion in the resettlement site is higher among the SC families when compared to other caste groups such as OBC and General categories. For instance, the evicted households who belonged to the Scheduled Caste community from the site of Calicut Airport reported that 70.6 percent of them (12 SC households) experienced social exclusion. This figure for Kannur airport site is comparatively low, that is, 57.9 percent.

Conversely, table 4.30 reflects that the proportion of evicted households who have experienced social exclusion among OBC and General categories is less than the percent of families who have not experienced any form of social exclusion in the resettlement site. For example, the proportions of socially excluded families among OBC community are 21.1 percent and 32.7 percent in the project sites of Kannur and Calicut airports, respectively. The above figure also shows that the percentage of families that comes under the general category who have experienced social exclusion is 14.2 in the KIAL site and this figure in the CCJ site is zero.

#### **4.6.5 Airport-Induced Double Displacement / Multiple Displacement**

The phenomenon of double displacement or multiple displacement indicates a situation in which he or she is forced to surrender his or her homestead, land and livelihood more than once in their life for the same project. Undoubtedly, this phenomenon is regarded as revictimization which results in the extreme form of disempowerment, marginalisation and impoverishment of displaced members. The incidence of double displacement or multiple displacement is involved in both the projects of KIAL and Calicut Airport. It is not even imagining the volume of distress, intensity of agony and severity of the sacrifice experienced by these displaced families. Sadly, the fate of these people is to build homes, livelihood measures and social capital more than twice in their life span. This is a man-made disaster (Mahapatra, 1999) imposed upon local residents in the name of development. More shockingly, some of the displaced families who are currently residing in the nearest areas of the airport are facing the threat of another displacement as part of run-way expansion, setting up of apron and light house, construction of new terminals, approach roads, etc. An elaborate discussion of the concerns of project affected persons is done in the sixth chapter of this thesis.

**Table 4.31: Incidence of Multiple Displacements Among Evictees**

Nature of Displacement	Number of Households		
	Calicut Airport	Kannur Airport	Total
Double Displacement	3	13	16
Triple Displacement	11	3	14
More than three times	3	0	3
Total	17	16	33

Source: Survey Data

Table 4.31 shows that 24.4 percent of the aggregate displaced households (that is, 33 families) experienced the horrible stage of involuntary double displacement or multiple displacement. The incidence of multiple displacement is larger in Calicut Airport due to the multiple times of land acquisition and displacement of local people for the advancement of this project. This project had finished 12<sup>th</sup> round of land acquisition in 2004 and also received the green signal, for the 13<sup>th</sup> round of acquisition, from the Ministry of Civil Aviation and the State Government to acquire additional 152.5 acres of land which is newly revised land area by the Airport Authority of India (AAI) in 2020 for its further development. The earlier proposal was to acquire 485 acres which scaled down to 152.5 acres on account of strong protests from the local people.

Unsurprisingly, many of the displaced households deeply prefer building homesteads in their own villages to going away from their location. This emotional attachment of the displaced households was exploited by the land brokers / commission agents and land mafia by hiking the price of land. The total number of double displacements is 16, of which 13 households were from the site of KIAL project. Triple displacements were experienced by 14 households, of which 11 were from the project site of Calicut Airport. The very unfortunate incident of multiple displacement (four times) happened to 3 households, all of them were associated with the Calicut Airport site. The incidence of multiple displacements has been experienced largely by the households from the group of marginal landholders in CCJ as well as KIAL sites as shown in table 4.32.

**Table 4.32: Landholding Groups and Incidence of Multiple Displacements: Project-wise Analyses**

Landholding Groups	Incidence of Multiple Displacement			
	Calicut Airport		Kannur Airport	
	Frequency	Percent	Frequency	Percent
Marginal landholders	10	58.82	10	62.5
Small landholders	3	17.65	2	12.5
Medium landholders	3	17.65	1	6.25
Large landholders	1	5.88	3	18.75
Total	17	100.0	16	100.0

Source: Survey Data

Around 59 percent of the total multiple displacements in Calicut Airport site is contributed by the marginal landholders' group. Its proportion in the KIAL site is marginally higher, that is, 62.5. Three evicted households (17.65%) in each of the small and medium landholders from the CCJ site experienced multiple displacements while these figures for the KIAL site are 2 (12.5%) and 1 (6.25%), respectively. At the same time, 18.75 percent of the families from the large landholders' group confronted multiple displacements from the project site of KIAL whereas this figure in the CCJ site is only 5.88 percent.

Another sad side of this incident is that there was no single provision of additional compensation or relief to multiple displaced families in the compensation packages announced by the authority in both the projects. The need of the hour is that the Government should take effective steps to avoid this incident by not giving consent to developmental projects causing multiple displacements of inhabitants. Moreover, the Government must

include fairer and more humanitarian measures and also special packages to those people who are going to experience displacement more than once. These measures may mitigate the intensity of their problems to some extent and may be helpful to lessen their sorrows. A separate act or legislation is required in this regard.

There are several studies in literature that scientifically put forward strategic steps for mitigating the risks associated with the DIDR (Cernea, 2004)<sup>9</sup> and suggest ways not only to restore their normal life but also to ameliorate the living conditions of project affected persons. The multiple factors like dispossession, disempowerment, livelihood loss, social exclusion, loss of social capital, mental shocks (Fernandes, 2001), loss of schooling (Mahapatra, 1999), etc. pave the way for extreme impoverishment of displaced households during the transition as well as post-relocation phases. The negligence from the part of policy-makers / Government including local self-government worsened the situation further. The subsequent section will incorporate the tool of quality-of-life index (QLI) to portray both quantitative and qualitative aspects of impoverishment in a scientific way.

#### **4.7 Changes in the Quality-of-Life Index of Evacuated Households: An Assessment**

Indeed, a good index, extensively used in the research field, can give an exact trend of variables and also one can use it for comparative analyses. The Human Development Index (HDI), annually published in the Human Development Report (HDR) of UNDP<sup>10</sup> since 1990, is the typical example for a development index that consists of both social (health and education) and economic (income) indicators. Similarly, the social scientists invariably adopted the Quality-of-Life Index to understand the impacts of DIDR on inhabitants by comparing the living conditions of the project affected people in the post-displacement phase with their pre-displacement life. There are lots of writings on the parameters of development and impoverishment (Cernea, 1998; Sen 1999 & de Wet 2005) which enable the analysts to construct an index by incorporating suitable socio-economic indicators. The researcher subsumed both quantitative and qualitative variables in the construction of Quality-of-Life Index (QLI). It includes ten variables and assigns equal weightage to them. Its aggregate score is fixed at 100 which ranges from zero to hundred as in the case of Physical Quality of Life Index (PQLI).

The QLI is designed for every sampled household and their acquired scores reflect two phases specifically – pre-relocation and post-relocation stages. Its ten variables are homestead

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<sup>9</sup> Impoverishment Risks and Reconstruction (IRR) model.

<sup>10</sup> United Nations Development Programme, established in 1965 under the aegis of UN, headquartered at New York.

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status; availability of land; livelihood status; annual income; food security; health status; access to education; access to infrastructure; kinship status and community life / social life. The sampled households are categorised into five groups based on their QLI score. These five groups are extreme poor status with a score of less than 30; poor status with a score between 30 and 49; fair status group scored between 50 and 74; good status household scored between 75 and 89 and very good status with a score between 90 and 100. Certainly, the QLI analyses give micro-level insights into the trends of living conditions of displaced families and not expecting the overall impacts of airport projects on the general public. That is, QLI-based analyses focus on the impacts of airport-induced land acquisition and displacement on evacuated persons rather than the overall effects of airport projects on particular regions / states.

**Table 4.33: Quality of Life Index of Sampled Households before and after Displacement**

QLI Groups	Pre-displacement Phase				Post-displacement Phase			
	No. of Families	%	Mean	SD	No. of Families	%	Mean	SD
Extreme Poor Status	0	-	-	-	16	11.9	26.44	1.63
Poor Status	13	9.6	45.38	4.01	36	26.7	42.25	5.12
Fair Status	85	63.0	61.58	6.08	49	36.3	61.08	6.61
Good Status	32	23.7	80.63	4.06	28	20.7	81.32	3.67
Very Good Status	5	3.7	94.00	1.87	6	4.4	93.00	1.55
Total	135	100	65.73	12.75	135	100	57.57	19.57

Source: Survey Data

Table 4.33 represents the QLI scores of two distinct phases, that is, before and after evacuation, of displaced households which enable the researcher to make inferences about the changes of living conditions of project affected persons on account of airport-induced displacement and resettlement. This section attempts to portray the standard of living of the displaced households by analysing both objective and subjective indicators at aggregate level during the pre-evacuation and the post-evacuation phases. The index set a score between 50 and 74 for fair living standards of households and articulates that the scores above ‘fair status’ manifest improvement in the living conditions of the displaced families and, on the other hand, the score below the ‘fair status’ reflect deterioration in their life. The fifth chapter, subsequent chapter of this thesis, incorporates the detailed project-wise analyses of QLI of the evicted households to understand the effectiveness of rehabilitation packages under different airport models and thereby make an airport-wise comparison of resettlement status of displaced families.

The major highlight of table 4.33 is that there were no extreme poor households during the pre-displacement phase. However, this status has changed dramatically in the post-displacement phase where 11.9 percent of the total displaced households (that is, 16 families) fell into the extreme lowest category of QLI (extreme poor status with a score of less than 30) and their mean score is only 26.44. The airport-induced land acquisition and displacement of inhabitants resulted in shifting of households from the 'fair status' and even 'good status' groups to the 'extreme poor status' group. These families have been experiencing the extreme worst sides of the DIDR. This segment of the displaced households is economically devastated and disempowered, mentally deteriorated and marginalised, socially impoverished and side-lined. That is, among other issues, the emergence of a new group of extreme poor households in the post-relocation stage is the catastrophic side effect of airport-induced displacement and resettlement. Moreover, the rehabilitation packages utterly failed to prevent this avoidable negative effect of DIDR as mentioned by social scientists (Cernea, 1998) in their studies that the effective policies, humane approaches and strategic interventions of the concerned authority can prevent the occurrence of risks such as landlessness, homelessness, joblessness, etc. associated with the DIDR. That is, the Government can not only mitigate the adverse impacts of DIDR but also ensure better living conditions for the project affected families in the post-displacement phase.

Additionally, the proportion of households that belongs to the group of 'poor status', with a score between 30 and 49, has increased significantly from 9.6 before displacement to 26.7 percent after displacement. Interestingly, the mean score of this group is 42.25 in the post-relocation phase, which was a higher mean score of 45.38 during the pre-relocation stage. Table 4.33 shows that there were only 13 households that came under the 'poor status' strata during the pre-relocation stage which considerably increased to 36 families after displacement. It is sagacious to argue that the airport-induced land acquisition and displacement ballooned the size of the number of households that belonged to the groups of 'extreme poor status' and 'poor status' and, consequently, dwindled the number of families that came under the segment of 'fair status' as per the QLI score as shown in table 4.33. The percent of families that belonged to the 'fair status' group massively declined from 63.0 in the pre-relocation phase to 36.3 percent in the post-relocation stage. It shows that the majority of sampled families (85) scored a mark between 50 and 74 in QLI during the pre-displacement stage and these households automatically belonged to the QLI's 'fair status' strata.

Table 4.33 reveals that 49 and 36 households represent the segments of 'fair status' and 'poor status' in the post-displacement phase respectively. Surprisingly, there were only 13 households in the 'poor status' group and zero households in the group of 'extreme poor status' during the pre-evacuation period. The material and non-material losses incurred

by the local people on account of airport-induced land acquisition and displacement have reduced the number of households substantially under the ‘fair status’ group. At the same time, the mean score of ‘fair status’ group witnessed only a very mild reduction from 61.58 to 61.08 in the post-displacement phase.

The last two groups with higher scores in the QLI, namely: ‘good status’ with a score between 75 and 89 and ‘very good status’ with a score between 90 and 100, reflect only a mild change in the number of households and also in the mean scores before and after displacement. The proportion of families belonged to the ‘good status’ was 23.7 during the pre-relocation phase. Its percent marginally declined to 20.7 in the post-relocation period. Conversely, the average score of households under the ‘good status’ marginally increased to 81.32 after displacement from 80.63 before displacement. Similarly, the ‘very good status’ group reflects a small change in the percent of the number of households as well as the mean score of displaced families. Its mean score was 94 in the pre-displacement phase which slightly decreased to 93 in the post-relocation stage.

Table 4.33 shows that the number of households coming under the ‘very good status’ group has increased marginally from 5 (3.7%) before displacement to 6 (4.4%) after relocation. In essence, the mean score of the sampled households at aggregate level during the pre-relocation phase was 65.73 with the standard deviation of 12.75 which decreased to 57.57 with the standard deviation of 19.57 in the post-relocation phase. The t-test was adopted to explore the differences in the mean scores of quality-of-life-indices of the households between pre-displacement and post-displacement phases significant. The null and alternative hypotheses are given below:

- $H_0$ : There is no significant difference in the mean scores of QLI between pre-displacement and post-displacement phases.
- $H_1$ : There is a significant difference in the mean scores of QLI between pre-displacement and post-displacement phases.

**Table 4.34: Paired t-test for Means Scores of QLI between Before and After Displacement**

N	135
Standard Deviation	20.78
t-value	4.561
Degree of freedom	134
P-value	.000

Source: Primary Data

The t-test statistics shows that the p-value (.000) is significant at 5% level of significance so

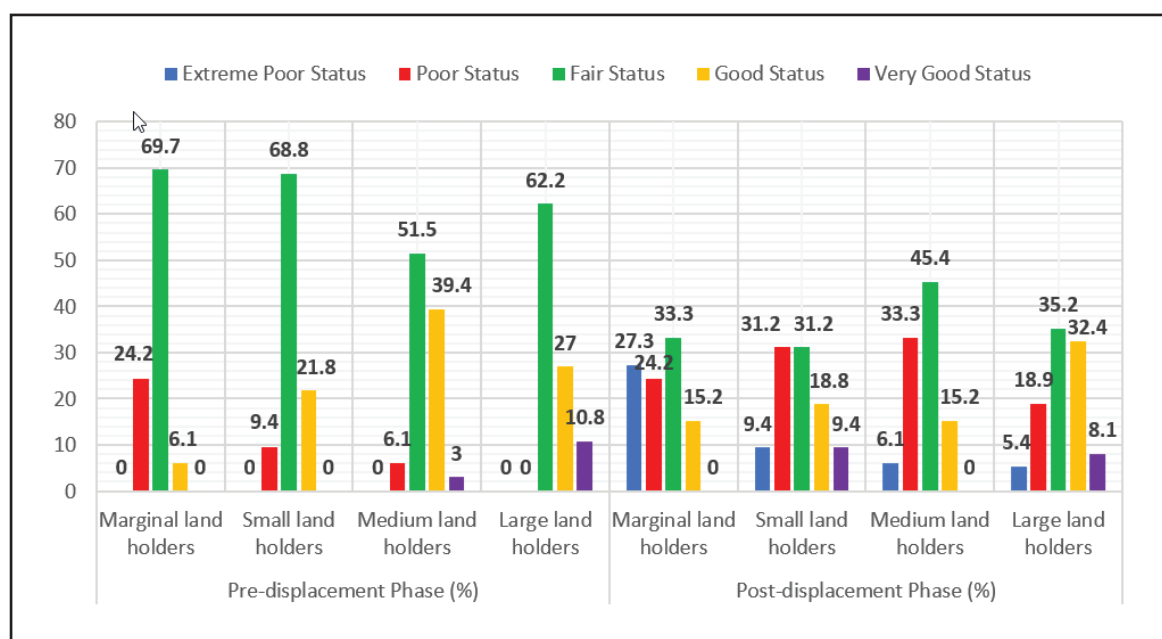
that we can reject the null hypothesis. That is, there exists statistically a significant difference in QLI scores of displaced households between pre-relocation and post-relocation periods.

#### 4.7.1 Households' Landholding Groups and Quality of Life Index Before and After Displacement: A Perspective

We have already discussed the different categories of landholdings of evicted families; namely: marginal, small, medium and large landholders and their changes on account of airport-induced land acquisition and displacement. In this section, an attempt is made to understand the changes in the percent of the sampled households on the basis of their landholdings who constituted five QLI groups as per their respective QLI scores during the pre-displacement and post-displacement periods.

Figure 4.15 shows that the proportion of landholders in the QLI's extreme poor status was nil during the pre-displacement phase. In contrast to this, 11.9% of the relocated families (16 households) come under this extreme poor status in the post-displacement phase, of which 27.3% (9 families) is contributed by marginal landholders, 9.4% (3 families) by small landholders, 6.1% (2 families) by medium landholders and 5.4% (2 households) by large landholders' group. The poor status category shows a tremendous increase in the percent of small, medium and large landholders from 9.4, 6.1 and nil before displacement to 31.2, 33.3 and 18.9 percent after displacement, respectively. However, the percentage of marginal landholders in this regard remains constant (24.2%) during these two distinct phases.

**Figure 4.15: Percent wise Changes in the Landholding Groups and Quality of Life Index of Households**



Source: Primary Date

Indeed, the drastic reduction was happened to the group of fair status where the proportion of marginal landholders was decreased from 69.7 to 33.3%, small landholders from 68.8 to 31.2%, medium landholders from 51.5 to 45.4% and for large landholders, its fall from 62.2 to 35.2% as shown in figure 4.15. Surprisingly, the percent of marginal landholders in QLI’s category of good status enhanced from 6.1 percent to 15.2 percent in the post-relocation phase. In this category, the small and medium landholders’ proportions have decreased from 21.8 and 39.4 to 18.8 and 15.2, respectively. Ironically, this phenomenon is described as the ‘reversal of fortune’ as some of the rich households before displacement became poor after displacement and vice versa. However, the percent of large landholders has increased moderately from 27 to 32.4. The group of very good status, the highest category as per the QLI, was formed by medium (3%) and large landholders (10.8%) during the pre-displacement period while this category in the post-relocation phase was constituted by small (9.4%) and large landholders (8.1%).

**Table 4.35: ANOVA: Landholding Groups and Mean Scores of Quality-of-Life Index**

<b>ANOVA Test Result - Pre-displacement Phase</b>					
	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>P-value</b>
Between Groups	3862.379	3	1287.460	9.418	.000*
Within Groups	17908.480	131	136.706		
Total	21770.859	134			
<b>ANOVA Test Result - Post-displacement Phase</b>					
Between Groups	10092.493	3	3364.164	10.689	.000
Within Groups	41228.589	131	314.722		
Total	51321.081	134			

Source: Primary Data

\*The p-value (< 0.05) is significant at 5% level of significance

The statistical tool of ANOVA is extensively used to understand whether there are any statistically significant differences in mean values between three or more groups as well as within groups. In this section, the ANOVA is employed to trace out the differences in average scores of QLI with respect to four landholdings groups; namely: marginal, small, medium and large and also extended the test to understand this trend in both the phases of land acquisition – before displacement and after displacement. The ANOVA test result indicates that statistically significant differences prevail among landholding groups with regard to the mean scores of QLI. The p-value is .000 which denotes statistically significant at 5 percent level of significance for pre-displacement as well as post-displacement phases. Let us consider the Post Hoc Tests.

As we know, the Post Hoc Tests have been recommended by the experts when an ANOVA is significant to explore which group is different from which other groups. Here, we have used Tukey's Honestly Significant Difference (Tukey's HSD), a popular Post Hoc Tests tool, to understand which landholding group is having more distinct difference or less difference with respect to QLI scores before and after displacement.

Tukey HSD test with respect to pre-displacement phase revealed that the statistically significant differences (the mean difference is significant at 5% significance level) exist between marginal and medium landholders, marginal and large landholders and small and large landholders. Similarly, Tukey HSD test with respect to post-displacement phase manifested that the statistically significant differences (the mean difference is significant at 5% significance level) exist only between marginal and medium landholders and marginal and large landholders.

#### **4.8 Conclusion**

In essence, the primary victims of airport-induced displacement and resettlement are DPs / PAPs. That is, airport-induced land acquisition and displacement have adverse socio-economic impacts on the majority of the displaced households. Many of them deplorably failed to rebuild their normal life even after a prolonged period of ten to fifteen years. Multiple factors, including disintegration of families and loss of social capital, have been contributing to the pathetic state of living conditions of the majority of the DPs in the post-relocation phase. Hence, we can reject the  $H_0$  (there is no significant difference in the socio-economic conditions and living standards of evicted households between pre-displacement and post-displacement phases) of the first main hypothesis. At the same time, some households have been deriving immense benefits from these processes that are reflected in their higher scores of quality-of-life index (QLI) after relocation. Indeed, the use of the technique of QLI helped us to understand the socio-economic transformations of displaced households. The project-wise discussion of the nature of rehabilitation packages, compensation and its spending pattern in the subsequent chapter of this thesis will illuminate more insights regarding the DIDR and its ramifications.

## **CHAPTER V**

### **REHABILITATION AND RESETTLEMENT OF EVICTED FAMILIES: A COMPARISON BETWEEN CALICUT AND KANNUR AIRPORT PROJECTS**

#### **5.1 Introduction**

Needless to say, investment in the physical infrastructure as well as its advancement is important for economic growth, employment generation, connectivity enhancement, tourism development and also for the overall development of the country. The developer or investor of developmental projects may belong either to the sector of public / Government or private or shared investment pattern, popularly known as public-private partnership (PPP). However, the most worrying aspect of this infrastructure-led development of the country, commonly known as development-induced displacement and resettlement (DIDR), is the pathetic living condition of the majority of the displaced households in the post-relocation period. The assessments of number of studies conducted by social scientists concluded with the observation that displaced persons (DPs) are experiencing deterioration, dispossession, disempowerment and impoverishment in their post-displacement life (Cernea, 1997; Mahapatra, 1999; Fernandes, 2001; Mathur, 2011). A poor rehabilitation package may possibly push the majority of displaced households into the margins of subsistence. Compensation in terms of money alone is insufficient to rebuild the socio-economic realms of displacees in sustainable ways (Cernea, 2003).

The subject matter of this chapter is primarily related to the comparative analyses of the nature and pattern of rehabilitation and resettlement (R&R) that were implemented for households who were evacuated by the Kerala State Government for the development of Calicut Airport, a venture under the public sector and for Kannur airport, an entity operating under the aegis of public-private-partnership (PPP). The observations are derived, regarding the R&R and added to the subsequent sections of this chapter, on the basis of the analyses of scientifically selected samples of 71 and 64 evicted households from the project site of CCJ and KIAL respectively. The researcher sets a hypothesis that there are no significant differences in compensation and rehabilitation packages offered to the displaced inhabitants

by the KIAL project, a PPP-led airport compared to the Calicut Airport, a public sector-led project in Kerala. Of course, the tool of quality-of-life index (QLI) will help us to build inferences about the effectiveness of rehabilitation packages of CCJ and KIAL to restore the normal life of the displaced households in the post-relocation phase.

## **5.2 Responses of Households Regarding their Participation in Designing Rehabilitation Packages**

The unanimous view among social scientists is that the meaningful participation of DPs / PAPs in the affairs of the proposed project, right from the conceptual stage of it, such as discussions on land areas for the project, nature of the project, feasibility of the project, socio-economic impact of the project, etc. should be instrumental for designing a good rehabilitation package for project affected persons (Cernea, 1988; Mahapatra, 1999; Fernandes, 2001). The researcher has added here the responses of displaced households regarding their involvement in the discussion of acquiring land area, volume and nature of compensation, types of jobs in the project and its selection process, location of new resettlement sites, etc. The inferences made by the researcher are as shown in table 5.1 which are based on the observations compiled from the question of: ‘Was there any discussion with you by the agent of the authority regarding the acquisition of land and rehabilitation packages?’

**Table 5.1: Households’ Participation Rate in Designing Rehabilitation Packages**

Responses of Households	Calicut Airport		Kannur Airport	
	Frequency	Percentage	Frequency	Percentage
Participated	11	15.5	48	75.0
Not Participated	60	84.5	16	25.0
Total	71	100.0	64	100.0

Source: Primary Data

The analyses of collected data reflect that affected households’ participation was remarkably higher in the project site of KIAL when compared to Calicut Airport site. Around 75 percent of the heads of the households are very much aware of land acquisition of the project and have also actively participated in the discussions and meetings for deciding compensation amount, new resettlement areas and so on. A few households sent their representatives to participate in these discussions. These meetings and public hearings were chaired by the land acquisition officers including District Collector and Tahsildar. Only 25 percent of the families from the KIAL project site responded that they were not interested in participating in any form of discussions or public hearings with the authority.

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Unlike the KIAL project, the majority of affected families (85 percent) from the site of Calicut Airport didn't participate in discussions or meetings convened by the authority. Only 15 percent affected households responded positively in this respect. Some of the heads of the displaced households remarked that they were suddenly informed by the officials to vacate their homes and belongings and many of them had no say in deciding the volume of compensation and other provisions of rehabilitation packages. Obviously, these households were not prepared to face relocation. It is also noted from the responses of some households that the surveyors finished their jobs like classification of lands and estimation of properties by pretending that they were doing those works for supplying drinking water for them. The approach of the authority from KIAL project site, a PPP led airport, in ensuring the participation of affected families helped to convince the natives about the inevitability of land acquisition for the project and also gained the support of the people in deciding more or less fair rehabilitation packages for them.

### **5.3 Mental Stress Borne by Evicted Families: Airport Project-wise Analyses**

There was unrest as well as uncertainty among affected families who were forced to give up their properties including homesteads even before the real acquisition of land for the extension of the airport project. However, the degree of stress as well as risk, a subjective factor, varies from household to household depending on a host of factors. Many studies conducted by social scientists observe that the level of mental stress and the degree of risk are very high among the majority of project affected persons (Guggenheim & Cernea, 1993; World Bank, 1994; Fernandes & Asif, 1997; Terminski, 2014). A flawed rehabilitation package, hasty implementation, non-transparent policy and inadequate compensation escalate the intensity of the degree of mental stress and fear among displaced persons. The researcher initiated the discussion with this question: "Were you afflicted by any mental stress? Subsequently, the responses of affected households regarding the level of mental stress are categorised into five heads on the basis of their reply to the statement of: "Displacement caused higher levels of mental stress in your life." Their responses were marked in a five-point Likert Scale. The project-wise analyses of this variable may reveal the level of stress and uncertainty confronted by affected families regarding their life in the post-evacuation phase. Let us take first the aggregate level analysis of this variable:

The aggregate level discussion on the level of mental stress absorbed by the DPs as shown in table 5.2 reveals that 43.7 percent of the total sampled households strongly agreed with the statement of high level of mental stress in their life especially in the transition process from their original place to new areas. Around 4.4 percent of households registered their

responses as agreeing with the above statement. These observations reflect the fact that these groups of displaced people have been severely hit by airport-induced land acquisition and displacement. The proportion of households who took the stand of neutral was 19.3. Around 10.4 percent of them disagreed with the statement. Surprisingly, 22.2 percent of affected households responded that they had zero mental stress in leaving their homestead for the extension of airport projects (strongly disagreeing group).

**Table 5.2: Mental Stress Among Sampled Displaced Households:  
Airport Project-wise Analyses**

Reactions of Households	Calicut Airport		Kannur Airport		Aggregate (CCJ + KIAL)	
	Frequency	%	Frequency	%	Frequency	%
Strongly Agree	49	69.0	10	15.6	59	43.7
Agree	4	5.6	2	3.1	6	4.4
Neutral	7	9.9	19	29.7	26	19.3
Disagree	3	4.2	11	17.2	14	10.4
Strongly Disagree	8	11.3	22	34.4	30	22.2
Total	71	100.0	64	100.0	135	100.0

Source: Primary Data

The project-wise discussion of this element will give more insights about the level of stress borne by the affected residents. The responses of affected households are compiled and categorised into five groups on the basis of five key variables; namely: any creative discussions with affected families by the authority; nature of involvement of DPs in designing rehabilitation packages; approach of officials towards affected people; institutional and social supports and collective organisation and unity among DPs. The component of high level of mental stress among DPs was very prominent in the project site of Calicut Airport. Its percentage in the CCJ project is 69 while this percentage for the KIAL project site is only 15.6. There is a significant variation in this respect between these two airport projects as shown in table 5.2.

Interestingly, the percentage of households who constituted a strongly disagree group (very low stress) is 34.4 in the KIAL site and 11.3 in the CCJ site. The majority of households from the group of very low stress in Calicut Airport site viewed that the issues like lack of basic facilities in the original place and damages from the airport operations including jerks, high sound, dusts, heavy water flows from elevated areas of the project, contamination of water, etc. are the leading factors that highly influenced in deciding their voluntary relocation with very low stress. Only a few numbers of families viewed this observation in the KIAL project site.

The decisive factors that diluted the possible high mental stress and uncertainty related to the DIDR in the KIAL project are better and fair compensation, ground level launching of land based resettlement, measures to prevent the loss of neighbourhood and social capital, assurance of jobs in the airport projects, generous approaches of the authority towards DPs – for example, relocated families have been permitted to cut trees from their original places and to take all movable materials from their old home, and also allowed to stay in their homestead till the accomplishment of their new homes in the freely allotted land areas. Similarly, the percentage of low-stress group families is larger in the KIAL project (17.2) when compared to the Calicut Airport site (4.2). Around 29.7 percent of the households from the KIAL site expressed their neutral stand while this figure for the CCJ site is only 9.9 percent.

#### **5.4 Official Value of Acquired Land and Monetary Compensation to Displaced Families**

Proper estimation of value of land and allied properties and timely payment of compensation money are the essential ingredients of fair rehabilitation packages envisaged by the developer for DPs / PAPs. The activities of measurement of total land area and homestead owned by the households, categorisation of land (dry land, fertile land, field, barren land, etc.), assessment of the value of trees and other properties are conducted under the aegis of Land Acquisition Officials (consisting of a deputy collector, Tahsildar and two or three surveyors) and the Revenue Department. The concerned District Collector / Tahsildar fix the price of land based on the average prices of officially registered titles of the land in the last three years transactions happened in the periphery of five kilometres of the region. This price is officially known as premium price ('ponnum-vila' in Malayalam language) for displaced households.

The fact in this regard is that people who are involved in the transactions of land report only a lower price officially to evade the stamp duty and registration fee. It reflects only a portion of the actual market value of land. Moreover, the value of land varies based on its location and category in terms of its use. The land areas located nearest to the highway or town command higher prices and, on the other hand, lands situated in the remote areas get only low prices. The officials decide the value of land after its estimation and assessment. It is sagaciously argued that the premium price of the government should be free from all defects including underestimation as well as over estimation of the original value of acquired land. The researcher classified the government's premium price into five groups of values based on its nature and location that was received by the land-holders from the sites of both the Calicut and Kannur Airports as shown in the table given below.

**Table 5.3: Land Value Per Cent Offered to Evicted Households by the Authority**

Land Value Per Cent (in rupees)	Calicut Airport		Kannur Airport		Total (CCJ+KIAL)	
	Frequency	%	Frequency	%	Frequency	%
< 10000	7	9.9	0	0	7	5.2
between 10000 and 20000	38	53.4	11	17.2	49	36.3
between 20000 and 30000	18	25.4	15	23.4	33	24.4
between 30000 and 40000	8	11.3	17	26.6	25	18.5
between 40000 and 50000	0	0	21	32.8	21	15.6
Total	71	100.0	64	100.0	135	100.0

Source: Primary Data

Table 5.3 shows that 9.9 percent of the displaced families from CCJ project received less than Rs.10000 per cent while this figure in KIAL project site is nil. The majority of evacuated households, that is, 53.4 percent, from Calicut Airport got a price between Rs.10000 and Rs.20000 per cent and, interestingly, this percent in the KIAL project site is comparatively meagre, that is, 17.2. It is reflected from the above table that 32.8 percent of the displaced families from KIAL project site received an amount between Rs.40000 and Rs.50000 while this figure for CCJ project is nil. The fact is that the large difference in the value of land for two different airport projects that was assigned by the same government may be on account of variations in the nature of land (dry land, cultivable land, paddy field, barren land, etc.) and its location. Let us look at the responses of households regarding the discrepancy between premium price announced by the authority and prevailing market price of land in the region.

**Table 5.4: Authority's Premium Price & Approximate Market-Value of Land at the Time of Acquisition**

Reactions of Households	Calicut Airport		Kannur Airport		Total (CCJ+KIAL)*	
	Frequency	%	Frequency	%	Frequency	%
Authority's premium price is lower than the market price	60	84.5	7	10.9	67	49.6
Authority's premium price is higher than the market price	2	2.8	50	78.2	52	38.5
Premium price is equal to market price	9	12.7	7	10.9	16	11.9
Total	71	100.0	64	100.0	135	100.0

Source: Primary Data

\* Pearson Chi-Square (86.352) is significant (p-value is .000) at 5% level of significance ( $\chi^2$  (2, N = 135) = 86.352, p = .000)

Table 5.4 reflects that there is a huge discrepancy between the authority's premium price which was applied in the two airport models – CCJ and KIAL projects - and the prevailing market price. The majority of evicted households from the site of Calicut Airport responded that the premium price received from the authority was much lower than the prevailing market price at that time. These owners viewed that their properties were located nearest to town with all facilities. They firmly believed that they would have received more amount if the property could have been sold in the open market. However, this trend that happened in the KIAL project site was exactly opposite to that of the CCJ. That is, 78.2 percent of the displaced households responded with a smiling face that their land value in terms of premium price of the government was attractive and a little bit higher than that of the prevailing market price. There is only 10.9 percent of the displaced households from the KIAL site who viewed that the authority's premium price was lower than the market price.

The interesting thing here is that only two displaced households (2.8 percent) from the CCJ stated that the premium price was higher than the market price. Actually, his property was located nearest to the airport project and was lacking in basic facilities including clean drinking water and proper road network. The remark of this household is that the acquisition and eviction were like a bumper lottery for him as his non-marketable property got handsome price from the authority. At the same time, 12.7 and 10.9 percent of the relocated households from CCJ and KIAL respectively, commented that the premium price was more or less equal to the existing market price.

Another interesting point here is that the collective organisational set up among the affected households in the KIAL project enabled them to make pressure on the officials to award fair value for their land. This trend was absent in Calicut Airport primarily because of multiple rounds of land acquisition for the project which evacuated around 20 to 50 households at a time, except two times in the last 12 times of acquisition. The present proposal of land acquisition for Calicut Airport extension is the 13<sup>th</sup> round, a rare event in the history of developmental projects in Kerala. In fact, this small group of displaced households couldn't organize a mass agitation against the project or to exert a pressure upon the authority to enhance the price of their acquired land. In addition to these, the affected families from the Calicut Airport site terribly failed to attend in the public hearings convened by the authority. Many of them filed cases in law courts for enhancement of compensation amount.

#### **5.4.1 Aggregate Amount of Compensation to DPs from the Projects of CCJ and KIAL**

The revenue officials handed over the compensation amount to the land owners when they submitted all the required documents to the department, after completing the survey process. The authority may deposit the compensation amount with the law court when the

land owners fail to submit either the proper documents or there are any quarrels or disputes regarding the ownership of the property. The monetary compensation, a vital component of rehabilitation packages, to displaced households by the government or developer is insufficient to purchase new land and build new homes there in the post-relocation phase, especially in the project site of Calicut Airport. Many of the dissatisfied households were relentlessly involved in litigation to get fair compensation from the concerned authority (Koenig, 2001). Its outcome was that the displaced households faced stringent financial crises in the post-evacuation phase.

**Table 5.5: Aggregate Amount of Compensation Received by Displaced Households (in Rupees)**

Total Compensation	Calicut Airport		Kannur Airport		Total (CCJ+KIAL)	
	Frequency	%	Frequency	%	Frequency	%
< 500000	28	39.4	5	7.8	33	24.4
Between 500000 and 1000000	18	25.4	8	12.5	26	19.3
Between 1000000 and 1500000	13	18.3	9	14.1	22	16.3
Between 1500000 and 2000000	6	8.5	6	9.4	12	8.9
Between 2000000 and 2500000	0	0	6	9.4	6	4.4
Between 2500000 and 3000000	4	5.6	7	10.9	11	8.1
Between 3000000 to 3500000	0	0	6	9.4	6	4.4
Between 3500000 to 4000000	0	0	4	6.2	4	3.0
Between 4000000 and 4500000	1	1.4	2	3.1	3	2.2
Between 4500000 and 5000000	0	0	2	3.1	2	1.6
>5000000	1	1.4	9	14.1	10	7.4
<b>Total</b>	<b>71</b>	<b>100.0</b>	<b>64</b>	<b>100.0</b>	<b>135</b>	<b>100.0</b>

Source: Primary Data

The aggregate amount of monetary compensation received by the displaced families from the site of CCJ and KIAL projects is given in table 5.5. It shows that 39.4 percent of households from the CCJ project received less than five lakh rupees as compensation from the authority while this percentage in the KIAL project site is only 7.8. The proportion of displaced households who received an aggregate amount between 500000 lakhs and 1000000 lakhs is 25.4 in CCJ project and 12.5 in KIAL site. We can make a constructive and comparative analysis of this component in the following ways: The monetary compensation amount was between 5 lakhs and 25 lakhs received by 91.6 percent of the total sampled households, that is, 65 families from the project site of Calicut Airport while there was only 53.2 percent

of the total sampled families (34 households) from KIAL site who earned this volume of compensation. Surprisingly, 46.8 percent of evacuated families (30 households) from KIAL site got an amount above 25 lakhs and this percent in CCJ site was only 8.4 (6 households).

Indeed, the affected residents from the KIAL project site succeeded in earning a larger monetary compensation when compared to the CCJ project. Variations in the size of properties and their location partially influenced in deciding the compensation amount. We have already discussed systematically the area and types of land that was acquired by the authority in the previous chapter of this thesis. The acquisition of land for the project has changed the land base ownership of the displaced persons. The general trend in this respect is that the large landholders become medium or small holders and the medium and small landholders become marginal landholders after displacement. The extent of land and its values are considered not in terms of their quantity alone but their qualitative aspects are also a crucial factor. The discussion of dissatisfied households with this compensation amount and their involvement in litigation will give more information about this key variable.

#### **5.4.2 Time Lag to Receive Compensation Money by Affected Households**

The time period involved in the disbursement of compensation amount to airport project-impacted families is analysed in table 5.6. The average time lag (mean value) between the date of land acquisition and the payment of compensation to the heads of the displaced households is 13.09 months in the Calicut Airport project while this time period is lower in the KIAL project, that is, 9.56 months. The undue delay in the distribution of compensation amount worsened the situation further and became one of the primary reasons for protests from the side of local people.

**Table 5.6: Months were Taken to Get Compensation**

Periods	Calicut Airport		Kannur Airport	
	Frequency	%	Frequency	%
6 months	29	40.8	47	73.4
12 months	23	32.4	4	6.3
18 months	8	11.4	7	10.9
24 months	5	7.0	4	6.3
30 months	2	2.8	2	3.1
36 months	2	2.8	0	0
42 months	2	2.8	0	0
Total	71	100.0	64	100.0
Average time lag (Mean)	13.09 Months		9.56 months	

Source: Primary Data

Clearly, 40.8 percent of the evicted households (29 families) from the project site of CCJ received compensation within a time span of 6 months whereas this figure is significantly higher in the KIAL project site, that is, 73.4 percent (47 families). Another 32.4 and 6.3 percent of the relocated families from CCJ and KIAL projects respectively, required 12 months to get it. Also, a period of 18 months was needed by 11.4 percent of the evicted families in the Calicut Airport project and 10.9 percent in the Kannur Airport project. The factors like the slow progress in the assessment of properties by the officials, need of more time to finish the task of scrutinising the property titles and also disputes regarding the measurement of value of properties resulted in delay in the disbursement of compensation to the affected families. Let us conduct t-test for equality of means to explore whether the difference in average months for receiving compensation money between these two projects is statistically significant.

$H_0$ : There is no significant difference in average period for getting compensation money between CCJ and KIAL projects.

$H_1$ : There is a significant difference in average period for getting compensation money between CCJ and KIAL projects.

**Table 5.7: Independent Samples Test: Months were Taken to Get Compensation in CCJ and KIAL Project Sites**

t-test for Equality of Means					
t	df	p-value (sig.)	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
2.589	133	.011	3.536	.834	6.238
				.873	6.199

Source: Primary Data (Significant at 5% level of significance)

The independent t-test statistics reveals a significant difference in the average period of receiving compensation amount between Calicut Airport and Kannur Airport. That is,  $t(133, N= 135) = 2.589, p = .011$ . We can reject the null hypothesis.

Surprisingly, two evicted families from the CCJ site took a maximum period of 42 months for getting the compensation fund. The maximum period taken in the KIAL site is 30 months by two displaced families (3.1 percent). The main reason for this exceptional delay is the inability of the heads of the households to produce sufficient documents before the revenue department regarding the titles of their land and other properties. The quarrels among family members in relation to the sharing of the property resulted in civil cases in law courts which



paved the way for an uncommon delay in getting compensation amount from the authority. Some of the heads of the households filed civil cases against the authority indicating the underestimation of value of their properties. They demanded a hike in the compensation amount. All these factors led to the delay in getting the compensation money to displaced households.

### **5.4.3 Degree of Households' Satisfaction with Monetary Compensation**

The responses of households regarding their level of satisfaction with the volume and components of rehabilitation packages are categorised into five heads according to five-point Likert Scale technique; namely: highly satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied and extremely dissatisfied. The categorisation and their values are assigned on the basis of six statements correlated to their satisfaction regarding the compensation. The statements including the compensation are enough to purchase new land, adequate to build a new house, there was reasonable land price in suburbs of the project (zero role of land mafia), proper estimation of the values of assets, prompt disbursement and humane approach of the officials. Table 5.8 manifests the responses of displaced households in project-wise manner as well as aggregate format.

**Table 5.8: Households' Satisfaction Level with the Compensation (%)**

Reactions of Households	Calicut Airport		Kannur Airport		Aggregate (CCJ + KIAL)	
	Frequency	%	Frequency	%	Frequency	%
Highly Dissatisfied	18	25.4	3	4.7	21	15.6
Dissatisfied	35	49.3	4	6.3	39	28.9
Neutral	11	15.5	9	14.1	20	14.8
Satisfied	6	8.5	32	50.0	38	28.1
Highly Satisfied	1	1.4	16	25.0	17	12.6
Total	71	100.0	64	100.0	135	100.0

Source: Primary Data

Regarding the components of compensation money, the proportion of highly satisfied group is very low (1.4 percent) and the percentage of dissatisfied group is very high (49.3 percent) as far as the displaced households from Calicut Airport site is concerned. Contrary to this, the responses of relocated households from the site of KIAL project manifest the larger proportion of satisfied group (50.0 percent) and their share in the extremely dissatisfied group is very low, that is, 4.7 percent. Its share in the highly satisfied group is 25.0 which is significantly higher than that of CCJ. In the head of neutral (neither satisfied nor dissatisfied) category, the percentage of KIAL (14.1 percent) is lower than that of CCJ (15.5 percent).

One Mr. Kummali Abdul Rahman’s experience is worth mentioning at this juncture. After acquisition of his house and other properties by the Calicut Airport authority, he had bought a piece of land, constructed a house in it and settled somewhere near Feroke. Even after spending a long period of fifteen years with the people there, he realized that the native people were reluctant to mingle with him freely. They had a tendency to consider him as a ‘stranger’ who had settled in their region. As this sort of feeling of alienness was on a steady increase, he disposed of the entire properties in his possession and came back to his native place.

**Table 5.9: Independent Samples Test: Level of Satisfaction Among Evictees from CCJ and KIAL**

Mean		SD		t-test for Equality of Means					
CCJ	KIAL	CCJ	KIAL	t	df	p-value (sig.)	Mean Difference	95% Confidence Interval of the Difference	
								Lower	Upper
1.88	3.50	.848	.983	-10.258	133	.000	-1.61711	-1.92894	-1.30529
								-1.93152	-1.30271

Source: Primary Data (Statistically significant at 5% level of significance)

The independent t-test statistics reveals a significant difference in the mean score of the level of satisfaction derived from the compensation between Calicut Airport and Kannur Airport. That is,  $t(133, N= 135) = -10.258, p = .000$ . Hence, we can reject the null hypothesis. It is also interesting to look at the association between the participation of households in meetings and also in designing rehabilitation packages and their satisfaction level with the compensation.

**Table 5.10: Households Participation in Discussions with the Authority and the Level of Satisfaction with Compensation (%)**

Level of Satisfaction	Participated Group		Not Participated Group	
	CCJ	KIAL	CCJ	KIAL
Highly Dissatisfied	-	-	30.0	18.8
Dissatisfied	45.5	4.2	50.0	12.4
Neutral	27.3	10.4	13.3	25.0
Satisfied	18.2	60.4	6.7	18.8
Highly Satisfied	9.1	25.0	-	25.0
Total	100.0	100.0	100.0	100.0

Source: Primary Data

Note: Statistically significant at 5% level of significance (Pearson Chi-Square, p-value = .000)

It is seen from table 5.10 that the majority of displaced households belonged to the groups of satisfied and highly satisfied with the monetary compensation have actively participated in discussions with the authority, meetings convened by the officials including District Collector and also in designing rehabilitation packages. For instance, 60.4 and 25 percent of the participated group come under the satisfied and highly satisfied categories in the KIAL site respectively. These figures in the CCJ site are 18.2 and 9.1 percent. Around 50 percent of the group that did not participate expressed their dissatisfaction and 30 percent of them reported highly dissatisfaction with the packages. We are able to observe one thing from the above table that the authority as well as officials succeeded to convince the group that participated about the need for the project and anticipated benefits out of the projects, to some extent.

**Table 5.11: Land Holding Groups, Compensation and the Level of Satisfaction:  
Project-wise Analyses**

Degree of Satisfaction	Marginal landholders		Small landholders		Medium landholders		Large landholders	
	CCJ	KIAL	CCJ	KIAL	CCJ	KIAL	CCJ	KIAL
Highly Dissatisfied	3 (17.6)	- (-)	6 (35.3)	- (-)	3 (15.0)	2 (15.4)	6 (35.3)	1 (5.0)
Dissatisfied	9 (52.9)	1 (6.3)	9 (52.9)	- (-)	13 (65.0)	1 (7.7)	4 (23.5)	2 (10.0)
Neutral	4 (23.5)	1 (6.3)	2 (11.8)	2 (13.3)	3 (15.0)	1 (7.7)	2 (11.8)	5 (25.0)
Satisfied	- (-)	4 (25.0)	- (-)	11 (73.4)	1 (5.0)	7 (53.8)	5 (29.4)	10 (50.0)
Highly Satisfied	1 (5.9)	10 (62.4)	- (-)	2 (13.3)	- (-)	2 (15.4)	- (-)	2 (10.0)
Aggregate	17 (100)	16 (100)	17 (100)	15 (100)	20 (100)	13 (100)	17 (100)	20 (100)

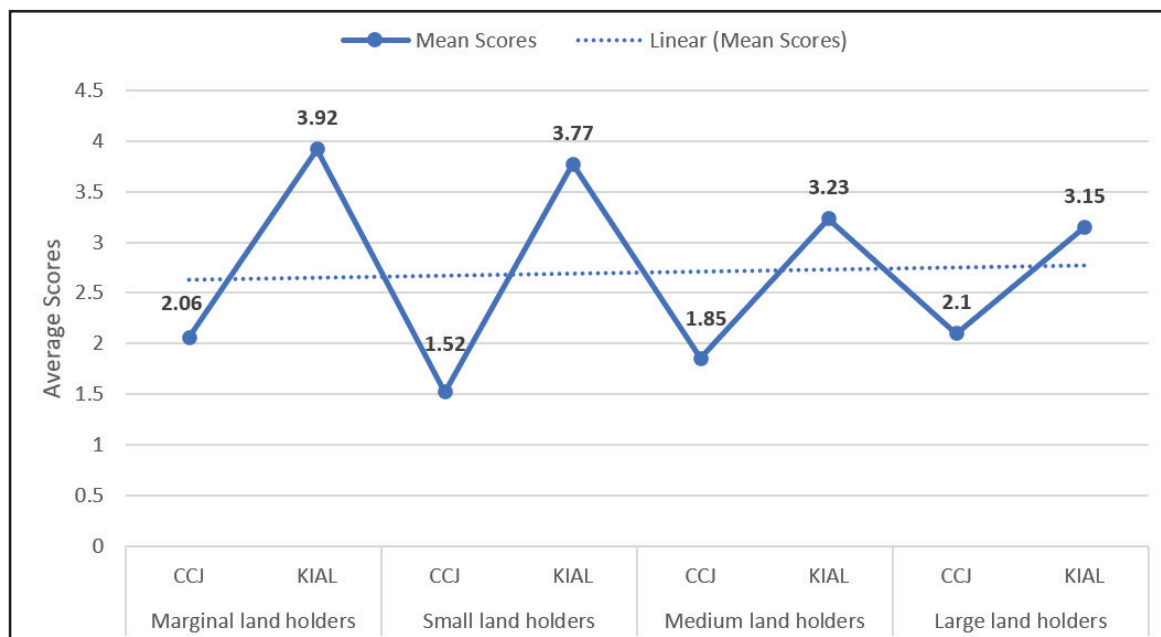
Source: Primary Data

Note: Figures in parentheses are proportions to the aggregate

Interestingly, the above table shows a contradictory observation of the largest percentage of the marginal landholders (52.9%) that come under dissatisfied group in Calicut Airport site while the highly satisfied group is constituted largely by this land holding group (62.4%) in Kannur Airport site. Similarly, 52.9 percent of the small landholders in the CCJ project registered with the dissatisfied group whereas 73.4 of them in the KIAL site belonged to the satisfied group. The medium and large landholders from KIAL site have reported comparatively the lowest percentage in the highly satisfied category. At the same time, 15.4 and 5.0 percentage of them expressed their extreme dissatisfaction with the compensation

money. Their proportion in the CCJ site is 15.0 and 35.3 respectively. The neutral group is consisting of 25.0 percent of the large landholders from KIAL site and 23.5 of the marginal landholders from CCJ site. Other land holding categories also contributed to this group in varying percentages. Let us look at the mean scores of satisfactions among these four landholding groups.

**Figure 5.1: Land Holding Groups and Mean Scores of the Level of Satisfaction with respect to Compensation**



Source: Primary Data

In the case of the CCJ site, figure 5.1 reveals that the lowest average score is reported by the small landholders (1.52) from the CCJ site while the highest score is registered by the large landholders (2.1). In contrast to this, the highest score is secured by the group of marginal landholders (3.92) from the KIAL site and the lowest average score is reported by large landholders (3.15). Let us examine the ANOVA result.

**Table 5.12: ANOVA Test: Level of Satisfaction and Land Holding Groups**

ANOVA Test Result					
	Sum of Squares	df	Mean Square	F	P-value
Between Groups	5.700	3	1.900	1.286	.282*
Within Groups	193.581	131	1.478		
Total	199.281	134			

Source: Primary Data \*The p-value (.282) is not significant at 5% level of significance

Note: df stands for degrees of freedom

The ANOVA test is adopted to understand the differences in average scores of displaced households' level of satisfaction regarding compensation between Calicut Airport and Kannur Airport with respect to four land holdings groups; namely: marginal, small, medium and large. The ANOVA test result indicates that there are no statistically significant differences among land holding groups with regard to the mean scores of the level of satisfaction. The p-value is .282 which reflects statistically not significant at 5 percent level of significance between CCJ and KIAL. In this context, we failed to reject the null hypothesis.

### **5.5 Spending Pattern of Compensation Money by the Displaced Households**

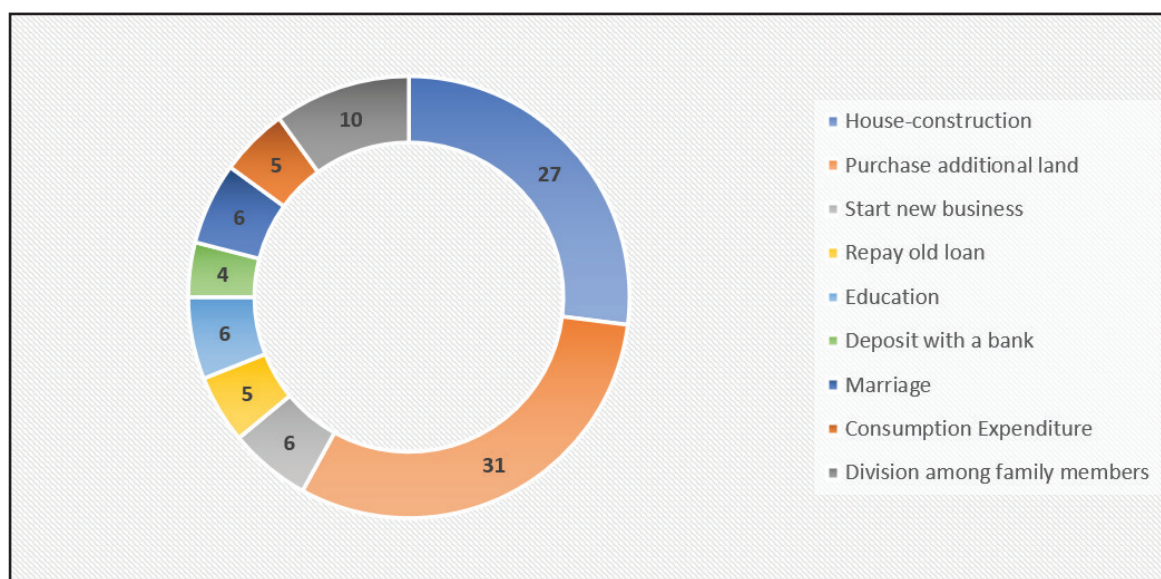
The effective utilization of compensation money or resources by the relocated people is decisive in rebuilding their normal life in the post-displacement phase. Misallocation and misutilisation of compensation funds by the concerned affected households may result in landlessness, homelessness, joblessness and powerlessness among them (Nathan, 2009). A concrete plan and its proper execution are integral elements in ensuring optimum utilization of compensation money. We have already mentioned in the preceding section that the majority of displaced families were not satisfied with the monetary compensation sanctioned by the authority, especially in the site of Calicut Airport. It is also noticed that many of the heads of displaced families were aged, less educated and also responded that they were not in a position to handle the risk of building new homes in the new settlement areas. The size of land and the structure of home were drastically changed in the post-evacuated phase of these affected people. On the other hand, a few of them were very happy in receiving cash from the authority, however, they miserably failed to manage the fund in proper ways. Let us observe and compare the pattern of use of compensation money by the displaced households from the project site of Calicut Airport and Kannur Airport.

#### **5.5.1 Displaced Households from CCJ and Spending Pattern of Compensation Money**

It is clear from the below figure that 31 percent of the heads of the total sampled households from the site of Calicut Airport utilized the lion's portion of compensation money to purchase additional land to build new homesteads for their families. We have already mentioned in the preceding chapter that most of the evicted households were endowed with cultivable land, homestead and other basic facilities during the pre-displacement phase. However, this situation has changed drastically in the post-evacuation phase as many of them faced a substantial reduction of land area and also faced troubles in enjoying basic facilities including clean and safe drinking water and link roads.

Additionally, it can be seen from table 5.8 that 74.7 percent of the total sampled relocated households from the site of Calicut Airport were dissatisfied with the monetary compensation granted by the authority. The provision of land-based resettlement in the rehabilitation packages was absent in this project site. Hence, the displaced families gave priority to purchase land to build new homes as shown in figure 5.2.

**Figure 5.2: Spending Pattern of Evacuated Households from the CCJ Project Site (%)**



Source: Primary Data

Another main component of the expenditure of the households by using the compensation money is the construction of new houses. Its percentage is 27. Many of the heads of the families responded that the monetary compensation was inadequate to purchase new land and to build new residences. The majority of displaced families from the CCJ project site stayed in temporary sheds for years after displacement (also see Table 4.18 in Chapter 4). The heads of the families said that their financial stringency after displacement resulted in the slow progress of their house-construction. The majority of displaced households from the site of Calicut Airport stated that there was terrible miscarriage of justice in designing rehabilitation packages and the authority's attitude was not at all fair. The fact is that the authority expelled them immediately after the payment of compensation from their old homes. The hasty decision of the authority worsened the living conditions of displaced families in the post-relocation phase. The problem visibly portrays a lot of questions. What will be the adequate amount of compensation and humane resettlement? How can we measure the price of social capital in the assessment of properties?

In addition to these, the presence and active involvement of real estate investors and intermediaries, better to call them as land mafia, escalated the price of land in the adjacent areas of the project which created troubles for genuine buyers and sellers of land. The land brokers exploited both the buyers and sellers and, unfortunately, they enjoyed neither consumer surplus nor economic rent respectively. The inelastic supply of land and highly elastic demand for land along with asymmetric information about the prices of land created additional burden on buyers who sacrificed their homestead for the project and also struggled to get a piece of land at reasonable price to build residences by using the compensation amount. Interestingly, 10 percent of the heads of the displaced families decided to share the compensation money among their children. Actually, these aged heads of the families wanted to retire from active life and they were not in a healthy position, both physically and mentally, to take the huge risk of building a new homestead for their family. Some of them faced the incidence of double or even multiple displacement for the development of the same project.

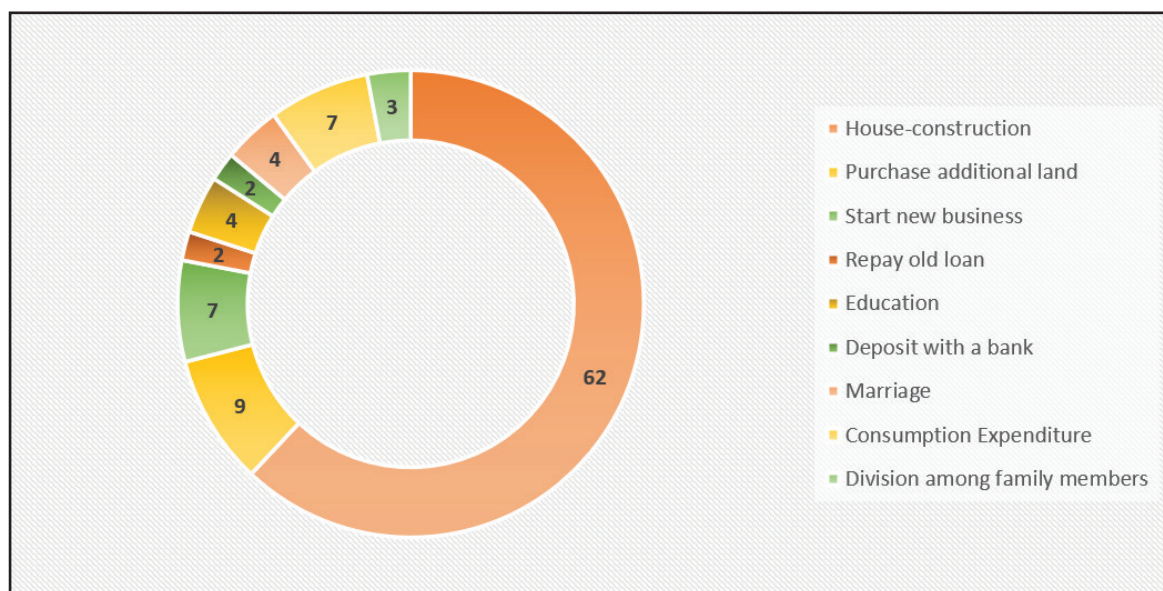
Another striking feature in this regard is that 6 percent of the displaced families spent a major part of their compensation for the purpose of education of their children, an investment in the human capital formation. Only six percent of the households, primarily from the rich families, set aside a part of their monetary compensation to start new business or self-employment initiatives. Other types of expenditure include the repayment of old loans (5 percent) mainly by the poor segments, deposit with a bank (4 percent), marriage of children (6 percent), consumption expenditure (5 percent) including medical treatment, purchase of new vehicles and so on. In essence, the pattern of spending of compensation money reveals the fact that the majority of displaced households utilised the money for meeting very basic needs of their families, that is, setting up shelters for them and also struggled to survive in the post-relocation phase. Unsurprisingly, the absence of proper financial management is visible in their spending pattern.

### **5.5.2 Ousted Communities from KIAL and Spending Pattern of Compensation Money**

The KIAL project, a PPP led project in the State of Kerala, announced a fair rehabilitation package for the displaced families. The main attraction of this package was the provision of 10 cents of land free of cost to all displaced households regardless of their financial position or size of land possessed by them. Moreover, the KIAL project developer has ensured

adequate supply of clean drinking water and other basic facilities including electricity and link roads in its resettlement sites. Here, the role of local self-governments is instrumental to materialise all these promises of the developer as the authority entrusted them with duties to provide all these essential facilities to DPs. Most of the affected people from the KIAL site enjoyed all these amenities except some form of resentments raised by them on account of interruptions in water supply, spending their own money for digging wells, delay in finishing the work of link roads and so on. Let us examine the pattern of utilisation of compensation money by the displaced households from the KIAL site:

**Figure 5.3: Spending Pattern of Evacuated Households from the KIAL Project Site (%)**



Source: Primary Data

Unlike the Calicut Airport site, 62 percent of the displaced families from the site of the KIAL project spent their compensation money for building houses either in the newly allotted free land or in the newly purchased / existing land areas. Its percentage in the Calicut Airport site was only 27. The main reason for this discrepancy between two projects is the differences in the provisions of rehabilitation packages announced by the same authority, that is, Kerala State Government. The survey data shows that 63 families (98.4 percent) out of the total sampled 64 relocated families from the KIAL site got 10 cents of land absolutely free of cost besides attractive monetary compensation.

Only one ousted family (1.6 percent) from the KIAL project site failed to occupy the freely allotted 10 cents of land as some of the members of the family had filed civil cases in law-



courts and those cases were still pending. The head of this family didn't attend the public hearing of the project-impacted families convened by the then District Collector. Moreover, this householder also failed to submit the required documents before the concerned authority. The remaining 98.4 percent of the evacuated households occupied 10 cents of land area free of cost. Indeed, this humane provision in the rehabilitation package imparted a great relief to the displaced families. This initiative of the government had reduced the involvement of land brokers in escalating the prices of land in the adjacent places of the airport as happened in the case of Calicut Airport. Moreover, the KIAL authority permitted the displaced families to reside in their old homes till the completion of the work of their new homes in the freely allotted land areas.

Surprisingly, only 9 percent of the heads of the households utilised their compensation fund to purchase additional land. We have already mentioned in the preceding section that this is the major expenditure item of affected households in the case of Calicut Airport site, its percentage was 31. The researcher, in his field survey, has identified from the rehabilitation site of KIAL that many of the displaced households built double storeyed houses. The households who belonged to the marginal and poor categories with less land area in the pre-displacement stage received ten cents of land free of cost and large compensation money that resulted in some form of extravagance among them. That is, they spent a huge amount for building big houses with all modern facilities. Some of them mortgaged even their newly allotted land titles with banks to raise loans. This spending pattern shows that less funds are utilized for generating income by starting business or other productive activities. For instance, only 7 percent of the displaced households from the site of KIAL focused to start new business or self-employment ventures by using a part of their compensation fund. Another 7 percent used the fund for consumption purposes, mainly to purchase vehicles and durable consumer goods.

There was only 3 percent of the heads of the families who took the decision of partition of compensation amount among family members. This low percentage is primarily because of the free land provision of the authority which registered 10 cents of land per family to the head of the family. Majority of heads of families decided to construct houses in this allotted land area by using compensation money. Its percentage was 10 in the case of the Calicut Airport project site. Other major items of expenditure involved the clearing of old loans (2 percent), deposit with a bank (2 percent), marriage of children (4 percent), education purposes (4 percent) and so on.

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## 5.6 Involvement of Displaced Households in Litigation

Not surprisingly, some of the evicted families from the site of CCJ and KIAL registered civil cases in the respective law courts by claiming that the value of their properties was underestimated by the Revenue Inspectors constituted by the Government of Kerala. The dissatisfied households raised their resentments and protests against the authority which resulted in clashes between officials and displaced households. The protest was strong in the site of Calicut Airport, where the number of extremely dissatisfied households is significantly high when we compare it with the KIAL project (also see table 5.8). It is also observed from the respondents of the sampled households that some families, especially from the rich segment, managed to appease the government officials and succeeded to reap maximum benefits from the estimation of their properties, that is, overestimation of their homestead, trees, and other assets. In addition to this, the leaders of the different anti-land acquisition forums have been accused of receiving an attractive compensation for their properties.

Some of the displaced households seriously alleged that the privileged segments got fair value from the authority and the downtrodden families received unattractive packages and hence they faced discrimination in this regard. The project-wise analyses of incidence of litigation among the displaced households manifest the level of resentments against the valuation of their assets and the fixing of premium prices by the authority. We know that the involvement of litigation is a cumbersome job and its final verdict may take much time and very often lead to undue delay in getting the compensation money.

**Table 5.13: Litigation for Getting Enhancement of Compensation: Project-wise Analysis**

Reactions of Households	Calicut Airport		Kannur Airport		Total (CCJ+KIAL)	
	Frequency	%	Frequency	%	Frequency	%
Households' idea about getting enhancement through litigation	66	93.0	54	84.4	120	88.9
Households' involvement in litigation	63	88.7	19	29.7	82	60.7
Families got additional amount through litigation	60	84.5	11	17.2	71	52.6

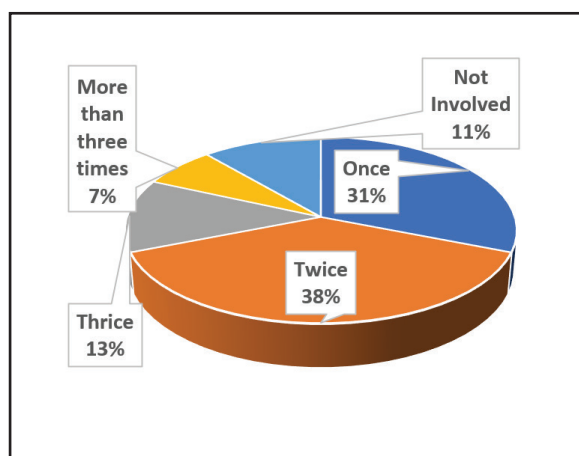
Source: Primary Data

Table 5.13 shows that 88.9 percent of the total sampled households at aggregate level have a clear-cut idea about the procedures of filing civil cases in a law court for getting an enhancement in the compensation amount. This percentage in the Calicut Airport site is 93.0 and 84.4 percent in the KIAL site. The active involvement of Samara Samithi leaders

and local politicians was decisive in creating awareness in this regard among the displaced families. Moreover, the agents of lawyers also encouraged them to file cases for getting fair compensation and they gave a guarantee of a large hike in the compensation money. The fact is that these agents and barristers grabbed a commission of 20 to 30% of the total money at the time of final verdict of the case from the respective households.

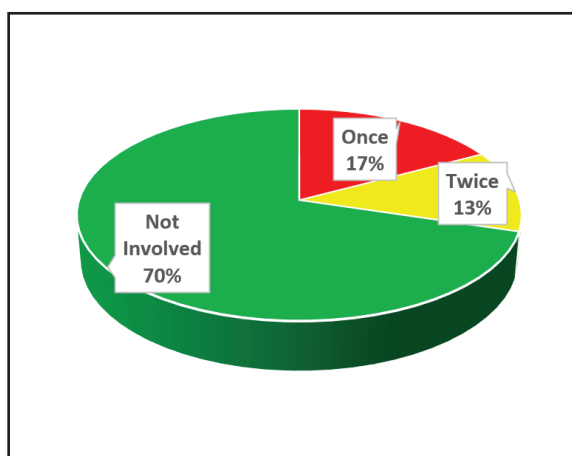
At the same time, the number of affected households who were involved in litigation for getting an enhanced compensation amount is 82 (that is, 60.7 percent) at aggregate level. The project-wise analyses reflect a significant difference in this regard between two projects. Sixty-three displaced families (88.7 percent) from the CCJ site registered cases in a law court while only 19 evicted households (29.7 percent) from the KIAL site approached the court to enhance their compensation money. More interestingly, some heads of the households repeatedly filed cases in the law-courts by accusing that the compensation money offered by the authority was inadequate. The project-wise analyses of the number of times households filed suits in law courts for getting additional compensation are reflected in figures 5.4 and 5.5:

**Figure 5.4: Litigation from the CCJ**



Source: Primary Data

**Figure 5.5: Litigation from the KIAL**



Source: Primary Data

The households' involvement in litigation is largely projected in the site of the Calicut Airport when we compare it with the KIAL site. The percentage of households who filed cases once after displacement for getting additional amounts is 31 and this figure for the KIAL site is only 17 percent. The heads of families, who were dissatisfied with the marginal hike in the compensation amount in the verdict of the first-time case, filed a second complaint in the law court for further hike in the compensation money. This percentage is 38 and 13 in the project sites of CCJ and KIAL respectively. Additionally, 13 percent of the displaced families from the Calicut site filed cases for the third time. Unsurprisingly, 7 percent of the heads filed cases in the law court for more than three times after their relocation. More

interestingly, 70 percent of the heads of the total sampled households from the site of the KIAL were not involved in any form of litigation after their relocation while only 11 percent of the heads of families from the Calicut Airport site were reluctant to file suits for getting additional compensation. We have already mentioned that the civil cases take much time to declare the final verdict.

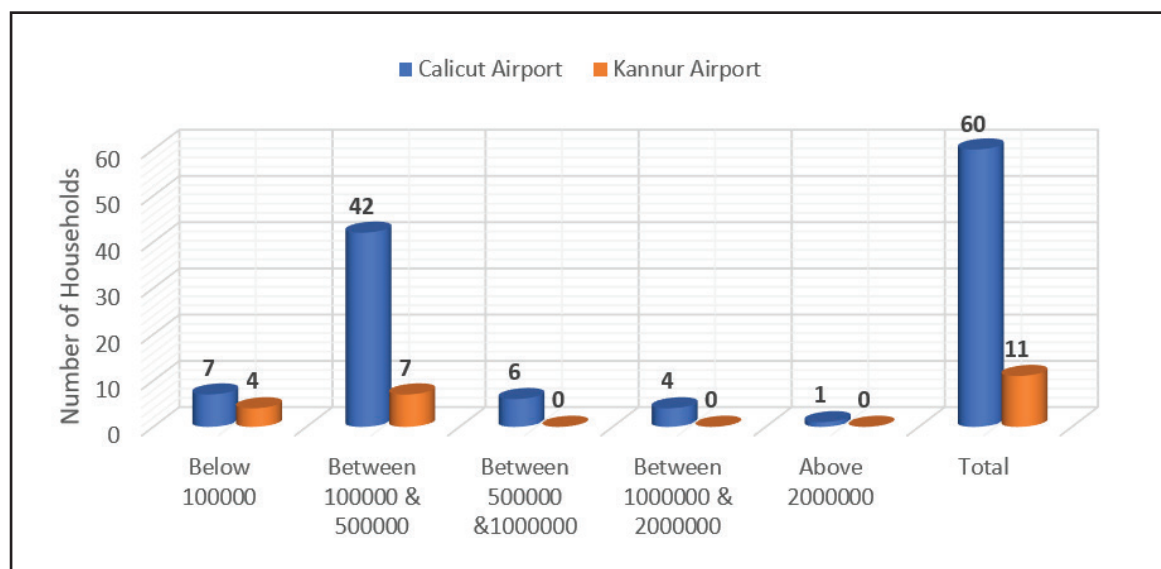
**Table 5.14: Time Taken to Get the Compensatory Amount through Litigation (%)**

Period	Calicut Airport		Kannur Airport		Total (CCJ+KIAL)	
	Frequency	%	Frequency	%	Frequency	%
< 1 year	1	1.4	-	-	1	0.7
between 1 and 5 years	5	7.0	5	7.8	10	7.4
between 5 and 10 years	32	45.1	6	9.4	38	28.1
> 10 years	22	31.0	-	-	22	16.3
Total	60	84.5	11	17.2	71	52.6

Source: Primary Data

The sampled households (45.1 percent) from Calicut Airport site responded that it took five to ten years for settlement of the cases filed and 31 percent of the heads stated they had to wait for more than ten years to get an enhancement through the case in the law courts. A duration of one to five years was spent for getting the compensation amount through litigation as replied by 7.0 percent from the CCJ site and 7.8 percent from the KIAL site. The aggregate monetary amount that was received by the displaced households through litigation is portrayed in figure 5.6.

**Figure 5.6: Trends of Enhancement in the Compensatory Amount through Litigation**



Source: Primary Data

It can be seen from figure 5.6 that the majority of households (59.2 percent) from the site of the CCJ who were involved in litigation got an enhancement in the compensation money between one lakh and five lakhs. In the case of KIAL project site, 4 households (6.3 percent) received a meagre amount of less than one lakh and 7 heads of the families (that is, 10.9 percent) gained an amount between one lakh and five lakhs. Seven households (9.9 percent) from Calicut Airport site have received an amount of less than one lakh. An enhancement of the compensation money between 500000 and 1000000 was received by 6 heads of the relocated households (8.5 percent) from the site of CCJ. Another 4 households (5.6 percent) got an enhancement between 1000000 and 2000000 from Calicut Airport site. Only one household from the CCJ got an amount above twenty lakhs through litigation.

It is right to articulate that the displaced households from the site of the Calicut Airport collectively succeeded in gaining additional amount of compensation money through litigation. Undoubtedly, the intervention of law courts in response to the suits filed by the displaced households was helpful to get additional monetary amounts to them. In essence, the factors like time-lag in the acquisition of land, bottlenecks in the disbursement of compensation, non-redressal of concerns of the affected people and also undue delay in resolving litigation aggravated the miseries of project affected and displaced persons. The Calicut Airport Authority has been criticized by the social scientists on account of the surplus land it retains as unused, still demanding additional land for further expansion of the project. The local people and green activists accused the Government for speedy notification of land acquisition when the authority asks for additional land without insisting them to utilise the already acquired land in a sagacious way.

### **5.7 Nature of Jobs Offered by the Airport Authority to Displaced Persons**

The provision of a job to a person of displaced household in the airport and allied sectors is one of the prominent promises of the Airport Authority in the announcement of rehabilitation packages to the evicted families. The job assured in the project must be equivalent to his or her qualifications. This provision is not the generosity of the concerned authority but it is the right of the displaced and project affected persons. Generally, the rehabilitation packages include attractive measures like fair compensation, land to land compensation, permanent jobs to displaced persons, right to cut and use all the trees in the premises of affected families, help to construct houses, provision of ensuring all basic amenities in the new settlement areas and so on. However, the significant question here is: Is there any gap between the authorities' promises and their ground level implementation? Let us observe the trends of attainment of one of the promises of the Authority – one permanent job in the airport project to a person per displaced household.

**Table 5.15: Nature of Airport Jobs Gained by the Evicted Households in the Post-Relocation Phase**

Airport Job holders	Calicut Airport	Kannur Airport	Total
		6	55
Nature of Airport Jobs			
Handy man / Handy woman	0	42	42
Security guard	0	1	1
Taxi driver	0	2	2
Cleaner	2	2	4
Technician / Fire and Safety	1	7	8
Contract works	3	1	4
Total	6	55	61

Source: Primary Data

Table 5.15 shows that 61 members of evicted households gained jobs in the airport project of which a major portion of it was absorbed by the family members from the KIAL site. That is, only 6 displaced members from the Calicut Airport site got jobs in the project after their relocation, a negligible figure when we compare it with the KIAL site. Indeed, it shows a huge difference between these two projects in absorbing benefits from airports by the DPs. The interesting fact here is that 42 DPs in the KIAL site got jobs in the section of handy man / handy women. The KIAL's section of technicians including Fire and Safety absorbed seven DPs and the cleaning section selected two displaced family members. The category of taxi in the KIAL project has selected two DPs. One displaced member works as a security guard and another one is working on contract basis in the KIAL project. In the case of Calicut Airport site, three DPs are handling contract works, two members are working as cleaners and one displaced person is employed in the Fire and Safety department. It is interesting to look at the types and nature of jobs occupied by the DPs outside the project which are closely related to the airport projects.

**Table 5.16: Displaced Persons' job Outside the Project which is Related to the Airport**

Job holders	Calicut Airport	KIAL	Total
		1	10
Nature of Airport Jobs			
Cargo business	0	7	7
Shops (nuts, dates, etc.)	0	1	1
Hotel near the Airport	1	2	3
Total	1	10	11

Source: Primary Data

We have already mentioned that the commissioning of new developmental projects or modernisation and the expansion of existing projects open enormous opportunities to the society. The valid question here is that how many DPs who were forced to surrender their homestead, field and other assets including livelihood measures succeeded in mopping up all these opportunities. The main promise of the Government or developers to the DPs/PAPs is that they would have been the main beneficiaries of splendid chances that would be emerged from the coming projects. However, the studies on DIDR show that only a fraction of the affected persons got benefits from the developmental projects (Jayal, 1998; Modi, 2004).

In the case of airport projects, we can see a number of economic activities that are exclusively associated with the airport operations. The cargo business, shops and restaurants including residential apartments are the principal economic oriented activities related to the airport projects. A number of persons from different places of the country are actively engaged in these operations. Unfortunately, we can see only a marginal participation of DPs in the aforementioned activities. Table 5.16 shows that a total of 11 DPs has engaged in different jobs outside the project which are predominantly related to the Airport projects. The project-wise analyses reveal that seven DPs have been working in the segment of cargo business in the KIAL project, while this figure for Calicut Airport is nil. Only three DPs, two from KIAL site and one from Calicut Airport project, are running restaurants close to the respective airport sites. Let us examine the number of job-holders, from the group of relocated households, who were engaged in temporary Jobs that emerged during the multi-stages of progress in the work of the airport projects.

**Table 5.17: Number of Evicted Persons Got Project Related Temporary Jobs**

Temporary Job holders	Calicut Airport	KIAL	Total
		5	11
Nature of Airport Jobs	Calicut Airport	Kannur Airport	Total
JCB operators	1	2	3
Lorry drivers	2	4	6
Land surveyors	1	2	3
Sub-contractors	0	2	2
Casual labourers	1	1	2
<b>Total</b>	<b>5</b>	<b>11</b>	<b>16</b>

Source: Primary Data

A number of job opportunities are created in different stages of the work of any developmental projects. This statement is also applicable to airport projects like Calicut Airport and KIAL project. Thousands of people got jobs as JCB operators, lorry drivers, land surveyors, sub-contractors, casual labourers and so on which are temporary in nature allied to the progress of the work of these airports. At the same time, only 16 displaced members at aggregate level are engaged in these temporary jobs. Three displaced members worked as JCB operators, of which, one member is in the Calicut Airport site and the remaining two persons are in Kannur Airport project. Two or four displaced persons got jobs as lorry drivers in CCJ and KIAL projects respectively. The land surveyor's department hired a total of three sampled displaced persons, of which one person is in Calicut Airport site and two persons are in KIAL site. Additionally, two DPs from the KIAL site got contract works in the project. One displaced person each from the project site of CCJ and KIAL got job as casual labourers.

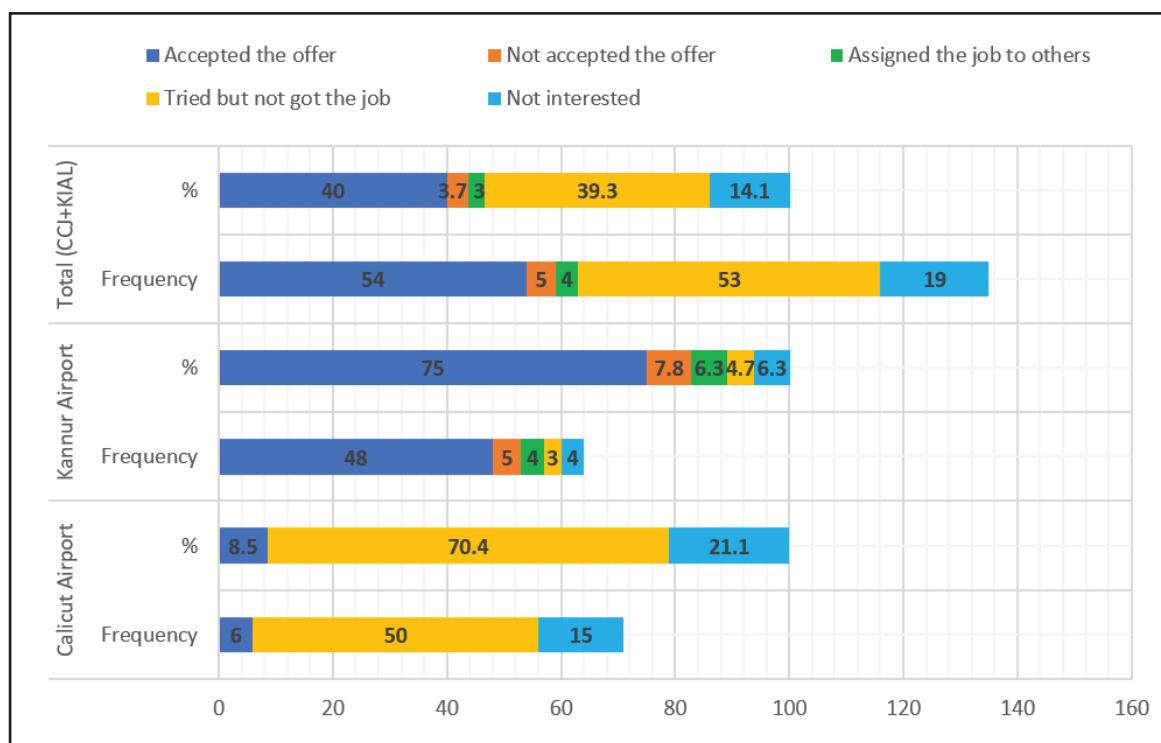
### **5.7.1 Approach of Households towards the Jobs Offered by the Airport Authority**

Can the authority train local people or DPs/PAPs to get jobs inside the project? It is noted that most of the PAPs are lacking in adequate skills to absorb jobs generated by the project. However, the developer can appoint local trainees to impart the required skills to DPs as done by the Odisha Government in the NALCO Project in the Koraput district of the state. Subsequently, this project had accommodated a number of DPs (semi-skilled workers) to this project (Stanley 1996). In essence, there is underrepresentation of DPs in job-market opened by the airport sector. This underrepresentation is alarmingly serious in the project of Calicut Airport when compared to the little bit comfort position of KIAL project.

In the case of airport-induced land acquisition and displacement of inhabitants, the KIAL project accommodated at least one member from each displaced families, except a few of affected families on account of host of reasons, as shown in figure 5.7. It can be seen that 75.8 percent (that is, 47 households) of the total sampled population of KIAL project has accepted jobs that were offered by the airport authority as per the rehabilitation packages. Interestingly, some households managed to occupy jobs in the KIAL project for two members of their family. They responded that this job is instrumental for leading a normal life in the post-displacement stage. Many heads of the displaced households said that the jobs in the airport project were the only source of income for their family. It is not an exaggeration to state that keeping the promise of the authority by giving jobs in the project to displaced families became one of the crucial factors in enlarging the number of satisfied people in the KIAL project.



**Figure 5.7: Households’ Approach towards Job Offered by the Airport Authority as Part of Rehabilitation Packages**



Source: Primary Data

Conversely, a number of job-opportunities were created in Calicut Airport but the displaced persons were not benefitted by them. That is, only 8.5 percent (6 DPs) of the total sampled households of this site got jobs inside the project. The majority of displaced families applied several times for the job in the CCJ project as it was one of the main promises of the authority. It is really painful to note that the authority miserably failed to keep its promises. Figure 5.7 shows that 70.4 percent of the relocated households tried their best to get jobs in the CCJ project, but in vain. Indeed, this broken promise of the Calicut Airport authority paved the way for increasing the frequency of extremely dissatisfied families after their relocation which resulted in growing protests against the project. One senior respondent said that the benefits in the form of jobs in Calicut Airport, by and large, are enjoyed by the people other than DPs / PAPs, keeping away the displaced households among the weak and impoverished segments and leaving the fortunate layers to consume the whole cake. Unlike the CCJ project site, only 4.7 percent of the evacuated families from the KIAL site responded that the authority badly failed to grant jobs to them.

Surprisingly, some displaced households, particularly from the segment of large land area holders and Good & Very good status groups as per the QLI, responded that they were not

interested in receiving jobs in the airport project that were offered as per the rehabilitation packages of the authority. Its percentage in CCJ project (21.1) is higher when we compare it with the KIAL site (6.3). The fact is that they did nothing, that is, they were not interested even in filling application forms for getting jobs in the project. This segment of displaced families from the CCJ site underlined that the travel distance from the new settled place to the airport project has increased considerably and, thereby, it is not economical to occupy jobs in the project. At the same time, this group from the KIAL site stated that the jobs offered by the authority were not equivalent to their educational qualifications and also the salaries offered by the employer were very low. Additionally, 7.8 percent of the evicted families refused to accept the job offer letters from the KIAL authority. Another 6.3 percent of the displaced households from the site of KIAL project assigned the job to others, especially to their relatives. It is the discretion of the head of the displaced households to choose a person for the job.

### **5.8 Grave-Yards and Shrines Taken by the Authority for the Airport Expansion**

Very often, land acquisition for developmental projects includes the areas of common property resources (CPRs) such as mosques, temples, churches, graveyards and so on (Sharma, 2014). The intensity of emotional attachment of local people towards their shrines (centres of worship) and graveyards is very high. The social and emotional attachment attributed to such shrines can never be calculated in terms of money, especially compensation packages usually offered by the acquiring authorities. The affected people raise their strong voices against land acquisition proposals mainly because of the incidences of loss of these common property resources.

Around 73.2 percent of the total sampled displaced households (52 families) from CCJ site responded that their shrines and graveyards were acquired by the authority which aggravated their agonies as well as frustrations. They responded that the adverse impact of changing of worship centres including graveyards (popularly known as “Mahallah” among Muslims and “smashanam” / crematorium among Hindu communities) is lasting as many of them experienced loneliness and also faced arrogant attitudes of the host people in the new settled areas where the receiving community was reluctant to share common property resources. In addition to these, it is also expensive to get membership in shrines located in the new areas where these people resettled after their relocation. Moreover, the loss of their family oriented old worship-centres and traditional graveyards where their ancestors’ dead bodies had been buried inflicted in them incurable wounds. Many of them wished to bury

their body nearest to the places where their dearest and nearest had been buried but the area was acquired by the airport authority where the aircrafts are landing now on their traditional graveyards.

At the same time, this adverse effect was very low when we compare it with the KIAL project where only 14.1 percent of the total sampled households (9 families) responded to the loss of common property resources. The KIAL authority has taken possible steps to avoid the acquisition of shrines and graveyards by making small changes in the alignments of the land acquisition plan. More interestingly, one temple is located inside the project and the authority arranged a separate passage to enter this temple for believers and another wall is constructed to separate it from the airport boundary.

### **5.9 Nature of Rehabilitation and Resettlement of Airport-Induced Evicted Households**

Rehabilitation packages, primarily linked to the development-induced displacement and resettlement (DIDR), are announced by the authority for those families who have been evicted from their native places and have been forced to resettle in new areas. In a broad perspective, the term rehabilitation implies all possible measures including compensation money, land-based resettlement, offering jobs in the project, etc., initiated by the developer / authority to restore at least displaced persons' normal life in the post-relocation phase by mitigating all forms of risks associated with the DIDR. Certainly, a good rehabilitation package ensures not only the restoration of evicted households' conducive living atmosphere but also ameliorates their living conditions in the post-evacuation stage. However, in reality, the majority of displaced people are leading a penurious life after evacuation when we compare their post-relocation living conditions with the pre-relocation period (Somayaji & Talwar, 2011).

It is right to state that development-induced displaced people are incapable of restoring their fair living conditions that were enjoyed by them before displacement despite the prevalence of provisions in different legislations for proper rehabilitation of project affected persons. In this context, the researcher is attempting to make a comparative study on resettlement status of displaced households from the airport projects of CCJ and KIAL, located in two districts of the state of Kerala, the former one is working under the public sector and the latter one is operating under the PPP framework. The interesting phenomenon in this regard is that the state government is the entrusted authority to acquire land for the development of these two airport projects and also responsible for declaring rehabilitation packages for those affected families. Generally, we are expecting a uniform pattern in the provisions

of rehabilitation packages announced for airport-induced displacement and resettlement. Surprisingly, we can see a huge discrepancy in the implementation of the provisions of rehabilitation packages between these two airport projects. These differences are visible in the responses of displaced families which manifest in the living conditions of displaced families after their displacement. Some evacuated people were forced to build temporary sheds as they had been suddenly evicted from their residences. Mr. Keeran, a poor Dalit labourer in the locality of the CCJ site brings back to his memory the sorrowful days of his life when he had to shift to a small shed thatched with palm-leaves with his small children and aged parents. Let us take first the period taken by the households for their resettlement after displacement.

**Table 5.18: Project-wise Analyses of Years Taken by Households for their Resettlement**

Years Needed for Households' Resettlement	Calicut Airport		Kannur Airport		Total (CCJ+KIAL)	
	Frequency	%	Frequency	%	Frequency	%
Between 1 and 2 years	14	19.8	17	26.6	31	23.0
Between 2 and 3 years	11	15.5	30	46.9	41	30.4
Between 3 and 4 years	17	23.9	10	15.6	27	20.0
Between 4 and 5 years	13	18.3	5	7.8	18	13.3
>5 years	16	22.5	2	3.1	18	13.3
Total	71	100.0	64	100.0	135	100.0
Mean	4.296		2.688		3.533	
SD	2.2671		1.0370		1.9597	
Minimum period of rehabilitation	1.0		1.0		1.0	
Maximum period of rehabilitation	13.0		6.0		13.0	
Range	12.0		5.0		12.0	

Source: Primary Data

Indeed, the displaced households' first priority after relocation is to build homesteads in the new places of their resettlement. The process of resettlement will not be finished until and unless the completion of construction of their homes in the resettled areas with at least minimum basic amenities like clean and safe drinking water, sanitation facilities, link roads and so on. The best yardstick, in which we can conduct the analysis of the status of resettlement of displaced families, is the time that is taken by them to finish their resettlement in new areas. Of course, the risks of DIDR and associated impoverishment will be severe if the

evacuated households need more time for their resettlement. The aggregate level analyses show that the average period of resettlement of displaced households is 3.533 years. The project-wise analyses reflect that Calicut Airport site took more years for resettlement, that is, 4.296 when compared to the KIAL project where the mean years is only 2.688 as shown in table 5.18. Interestingly, both maximum and minimum period of resettlement happened in the site of Calicut Airport, that is, 13.0 years and 1 year, respectively. Unlike the CCJ site, the maximum years for resettlement in the KIAL site is 6 years.

Table 5.18 shows that 19.8 percent of the households completed their resettlement within two years after their relocation from the project site of Calicut Airport; all of them belonged to the good and very good categories in the pre-displacement phase as per the QLI. This figure for the KIAL site is higher (26.6 percent), where the authority envisaged the provision of land-based resettlement successfully and, thereby, people were less panicky about resettlement as many of them didn't experience the pain of searching suitable new land areas for building their homestead. Moreover, the majority of displaced households from the KIAL site got permission from the authority to stay in their acquired homestead till the completion of the construction of their new houses in the freely allotted land areas. Hence, 46.9 percent of the evacuated households from the KIAL project resettled within a time span between 2 and 3 years. Unlike the KIAL project site, 23.9 percent of the displaced families from CCJ project required a period of 3 to 4 years and 18.3 percent used a time between 4 and 5 years for their resettlement. Shockingly, more than one fifth of total displaced households (22.5 percent) from CCJ site required a longer period of more than 5 five years for resettlement, majority of them belonged to the segments of extremely poor and poor status as per the quality-of-life index (QLI). This figure in the KIAL site is only 3.1 percent.

**Table 5.19: Independent Samples Test: Years Taken for Resettlement by the Evictees**

t-test for Equality of Means					
t	df	p-value (sig.)	Mean Difference	95% Confidence Interval of the Difference	
5.204	133	.000	1.6083	Lower	Upper
				.9970	2.2195
				1.0158	2.2008

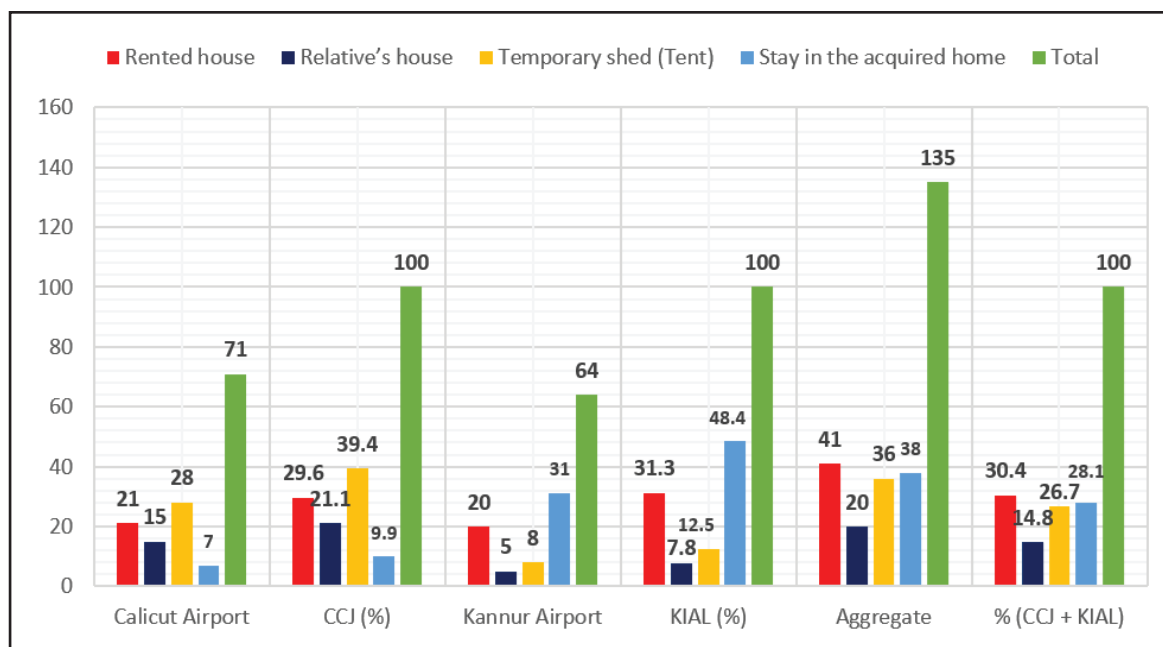
Source: Primary Data

\*The p-value (.000) is significant at 5% level of significance

The independent samples t-test manifest a statistically significant difference,  $t(133) = 5.20$ ,  $p = .000$ . Thus, the displaced households from the CCJ site were associated with a statistically

significantly larger mean years for resettlement than the evictees from the KIAL site. That is, we can reject the null hypothesis. It can be observed from the above analyses that the disparity is more visible among the displaced households from Calicut Airport project in the resettlement process as the poor households became more vulnerable to fulfil their basic needs after their relocation while there was less discrepancy in taking years for resettlement of evacuated families from KIAL project site. It is an idea that is worth taking a glimpse of the residential status of displaced families in the transition phase, an interim period between relocation and new settlement in the post-displacement stage, as shown in figure 5.8.

**Figure 5.8: Nature of Stay of the DPs during the Transition Phase**



Source: Primary Data

The risks associated with the airport-induced displacement and resettlement are severe in the transition phase which we have already discussed thoroughly in the preceding chapter of this thesis (also see table 4.18). It can be seen from figure 5.8 that 48.4 percent of the households from the KIAL site stayed in their acquired houses during this transition phase. This figure in the CCJ site is only 9.9 percent. Sadly, 39.4 percent of the displaced families from the CCJ project stayed in temporary sheds. Undoubtedly, it is really very shocking to hear the miserable state of living conditions of DPs, especially during the transition phase of the DIDR. Many of them stayed in the temporary shed for years. We cannot call it a residential home. Tarpaulin and flex sheets were strung as walls. This period marked the terrible phase of their entire life and they had not even imagined to experience such an

unfortunate situation in their life. The head of the household, in his discussions with us, said that the living conditions of affected people would become more deteriorated unless the concerned authority implements more effective measures for ameliorating their state of living conditions. Let us consider the land holding groups of the families to get a holistic idea of the rehabilitation pattern of the displaced households at disaggregate level.

**Table 5.20: Land Holding Groups and Resettlement of Displacees: A Project-wise Analysis**

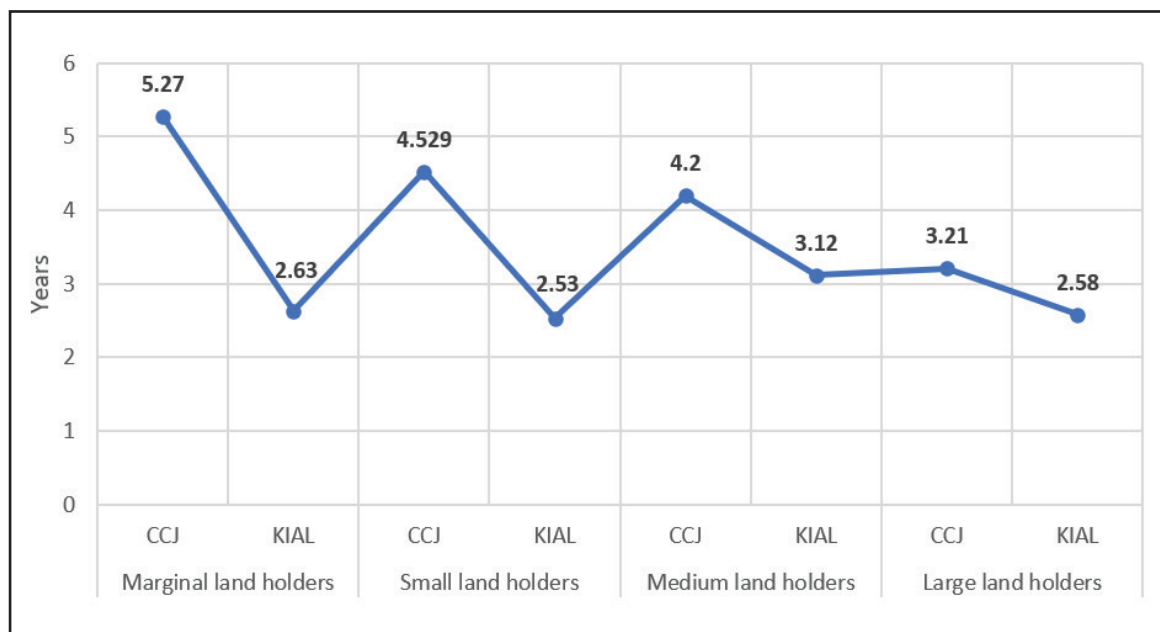
Years for Resettlement	Marginal landholders		Small landholders		Medium landholders		Large landholders	
	CCJ	KIAL	CCJ	KIAL	CCJ	KIAL	CCJ	KIAL
Between 1 and 2 years	-	4	4	5	3	1	7	7
	(-)	(25.0)	(23.5)	(33.3)	(15.0)	(7.7)	(41.2)	(35.0)
Between 2 and 3 years	4	10	2	6	2	7	3	7
	(23.5)	(62.5)	(11.8)	(40.0)	(10.0)	(53.8)	(17.6)	(35.0)
Between 3 and 4 years	6	1	2	2	5	2	4	5
	(35.3)	(6.3)	(11.8)	(13.3)	(25.0)	(15.4)	(23.5)	(25.0)
Between 4 and 5 years	2	1	3	2	6	2	2	-
	(11.8)	(6.3)	(17.6)	(13.3)	(30.0)	(15.4)	(11.8)	(-)
>5 years	5	-	6	-	4	1	1	1
	(29.4)	(-)	(35.3)	(-)	(20.0)	(7.7)	(5.9)	(5.0)
Total	17	16	17	15	20	13	17	20
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Source: Primary Data

Note: Figures in parentheses are proportions to the aggregate

It can be seen from the above table that the whole marginal landholders from KIAL site took less than five years to their resettlement, of which 25.0 percent of them required a period between one and two years and 62.5 percent took a period between 2 and 3 years. However, the marginal landholders from the CCJ site took a comparatively larger period to their resettlement. For instance, 35.3 percent of them needed 3 to 4 years and 29.4 percent took more than five years. Similarly, 35.3 percent of the small landholders from CCJ site took more than five years to resettle in new areas while this figure in KIAL site is nil. Around 15.0 and 41.2 percent of the medium and large landholders in Calicut Airport site finished their resettlement within two years whereas this proportions in KIAL site are comparatively lower, that is, 7.7 and 35.0 respectively. The project-wise analyses of the average years of resettlement of evicted families in terms of the aforementioned four categories of landholders are portrayed in the figure given below.

**Figure 5.9: Land Holding Groups and Average Years Taken for Resettlement**



Source: Primary Data

Regarding the average years required for evictees' resettlement, the above trend line clearly shows the larger discrepancy among marginal landholders between Calicut Airport site (5.27 years) and Kannur Airport site (2.63 years). Similarly, there exists a considerable difference among small landholders. The gap is comparatively low among large landholders and subsequently among medium landholders. The mean years of resettlement were low among four land holding groups of KIAL project site when compared to the CCJ project site.

### 5.9.1 Provisions of Financial Aids to Displaced Households to Pay Rent

The rehabilitation packages announced by the concerned District Collector for the displaced families from the project sites of CCJ and KIAL also included the provision of the payment of financial aids in the form of special monetary compensation to pay rent for one year from the date of their displacement. It is observed from the responses of the affected families that the apartment owners hiked the rent for rooms as many of the displaced families demanded rooms immediately after their displacement. The government allocated financial aid to those relocated families as a relief package to them. The ground level implementation of this provision is depicted in table 5.22 which is designed on the basis of the responses of sampled displaced households from these two project sites.

It can be seen from table 5.22 that only one displaced family (that is, 1.4 percent) from CCJ site got some form of financial aid from the state Government to pay rent, especially



during the interim period. At the same time, 42.2 percent of the total sampled families (27 households) from the project site of KIAL received monetary assistance from the authority to pay rent in the transition phase. This allowance was initially for six months and was further extended to one year from the date of their displacement. It is also important to remember the facility given by the KIAL authority to around 48.4 percent of the displaced families to stay in the acquired homes during the interim period.

### **5.9.2 Differences in the Approaches of Officials in Giving Permission to Take Movable Materials from the Acquired Land**

The heads of the relocated households stated that the authority guaranteed them to take materials including trees from the acquired land in the initial stages of discussion of the acquisition of land for the airport projects. This provision was added into the rehabilitation packages of the projects. As per this provision, the affected families could transport all movable materials and cut down trees from the site and use them extensively for the construction of their new houses in the new resettled areas. Table 5.22 represents the ground level implementation of this provision in the project site of KIAL and CCJ.

In most of the cases, the cash-based compensation to evictees is inadequate to restore even their normal life in the post-relocation phase (World Commission on Dams, 2000) on account of host of factors including improper estimation of assets, undue delay in the disbursement of monetary compensation, malpractices of officials, hike in the price of nearby lands and building materials, issues related to the inclusion or exclusion of movable as well as immovable properties in the assessment process of one's assets, etc. The generous approaches of the officials towards DPs from the project site of Kannur Airport are reflected in table 5.22.

Around 87.5 percent of the total sampled evicted families (56 households) from KIAL site got permission to take all materials including trees from the acquired land areas. In contrast, the concerned officials of Calicut Airport site auctioned all these acquired materials to third parties. The unfortunate incident in this case is that many of the displaced households purchased these materials from intermediaries by paying higher prices. It can be seen from table 5.22 that only 9.9 percent of the total sampled households (7 families) from CCJ project managed to collect their materials free of cost. The harsh approaches of the officials towards DPs from the Calicut Airport project site multiplied their miseries. This auction method also gave an opportunity to third party to exploit the already frustrated displacees.

### **5.9.3 Extent of Institutional Support to Construct Home in the Post-relocation Phase**

Indeed, public action and institutional and social support are essential to prevent development-induced impoverishment of DPs/PAPs. Many of the respondents reveal that the rise in the prices of land in the adjacent places of the airport immediately after the Government's decision regarding the land acquisition for the projects refrained them from purchasing additional land. The involvement of land mafia translates the situation into a more pathetic plight. The sudden rise in the cost of building materials and wages of labourers also created troubles in constructing new home in the new settlement areas. Moreover, there was a hike in the rent for rooms / apartments.

The project impacted families working relentlessly to sustain their previous status or to prevent deterioration in their living conditions in the post-displacement phase. Most of the evicted households urgently demand financial support, especially to set up a homestead, either from formal sources or non-institutional lenders. Undoubtedly, the adequate institutional and social support that was extended to the displaced families, especially to vulnerable segments of them, helped to restore their previous state of living conditions. The majority of the heads of displaced households responded that they were rigorously attempted to get housing loans from financial institutions, but many of them failed to obtain finance from them.

**Table 5.21: Responses of Households Regarding Availing Loan for Constructing New Dwellings**

Loan for Constructing the New House	Calicut Airport		Kannur Airport	
	Frequency	%	Frequency	%
Attempted to Get Loan / Aid	31	43.7	18	28.1
Not Attempted to Get Loan / Aid	40	56.3	46	71.9
Total	71	100.0	64	100.0

Source: Primary Data

It can be seen from table 5.21 that around 43.7% of the displaced households from the CCJ project seriously attempted to get loan or financial assistance from different sources. Similarly, 28.1% of the total evicted families from Kannur Airport site tried continuously to get loans, especially to finish their home construction in the new settlement areas. These households managed to mobilise additional funds from multiple sources, the proportion of loans from financial institutions is significantly high. A few of the heads of the sampled displaced households got financial assistance from the local self-governments (LSGs) as shown in table 5.22.

**Table 5.22: Progress of Rehabilitation and Resettlement Components:  
Project-wise Analyses**

Sl. No	Components	Beneficiaries			
		Calicut Airport		Kannur Airport	
		Frequency	%	Frequency	%
1	Cash-based Compensation	71	100	64	100
2	Land-based Compensation	0	0	63	98.4
3	Airport Job holders among displacees	6	-	55	-
4	Authorities' Financial Aids to Displaced Households to Pay Rent	1	1.4	27	42.2
5	Households Get Permission to Take Materials from the Acquired Land	7	9.9	56	87.5
6	Financial Aid to Construct Home from the Local Self Governments	9	12.7	2	3.1
7	NGO's aid to evicted families to build home	7	9.85	-	-
8	Involved in litigation to get hike in compensation	63	88.7	19	29.7
9	Gained additional amount through litigation	60	84.5	11	17.2
Mean Values					
Sl. No.	Time Periods	Calicut Airport		Kannur Airport	
1	Average time lag to receive compensation	13.09 Months		9.56 months	
2	Time lag in getting amount through litigation	8.9 Years		6.5 Years	
3	Average Years taken by Households for Rehabilitation	4.3 Years		2.7 Years	

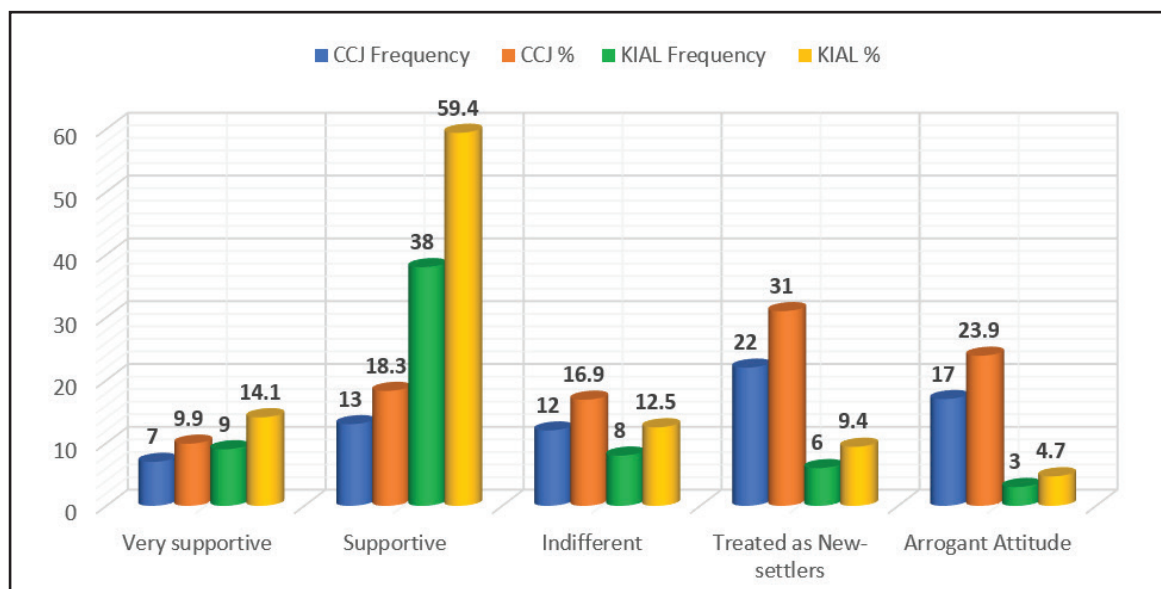
Source: Primary Data

Only 2 displaced families (3.1 percent) from the KIAL site have received financial assistance from the Panchayat to complete the work of their home construction. This number is higher in the project site of Calicut Airport where 9 evicted households (12.7 percent) got financial aid from the LSGs. Moreover, 9.86 percent of the total sampled displaced households from Calicut Airport site have received an amount between Rs. 40000 and 60000 as aid to build home after displacement. It was contributed by an NGO, Malabar Airport Development Action Committee (MADAC), to those families endowed with less than 10 cents of land. The overall progress of rehabilitation packages announced and implemented by the concerned authority for airport projects impacted families and also the frequency and the percentages of beneficiaries of displaced persons in this regard are clearly depicted in table 5.22.

### 5.9.4 Project-wise Analysis of the Immediate Responses of Host Population

The segment of host population, in relation to DIDR, includes all those families who take the displacees into their areas, either voluntarily or involuntarily, as a part of resettlement of ousted communities. The literature on DIDR clearly articulates that the group of host population strictly comes under the definition of project-impacted persons even though they are not directly displaced or adversely affected by the projects (Scudder, 1996). The problems associated with the sharing of basic facilities including drinking water and link roads are the major issues that exist between ousted communities and host population. It results in quarrels between these two communities. Let us observe the immediate responses of the host population in relation to the project sites of CCJ and KIAL.

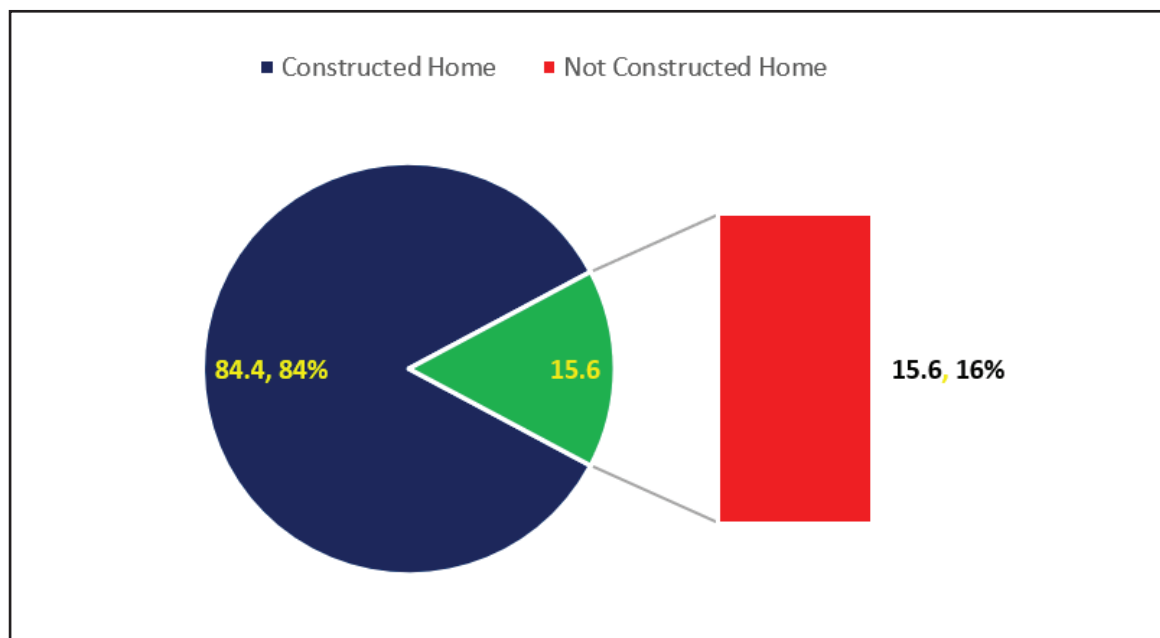
**Figure 5.10: Immediate Responses of Host Population: Responses of Displaced Households**



Source: Primary Data

Figure 5.10 indicates that 59.4 percent of the total sampled ousted households from the KIAL project site received support and cooperation from the side of the host population in the new settlement areas. Additionally, 14.1 percent of them have enjoyed a very supportive approach from the host community. It shows that there exists a friendly atmosphere between the host population and relocated families in the resettlement site of the project of KIAL. Of course, it is one of the positive by-products of the provision of the land-based resettlement in the rehabilitation packages of KIAL project. Most of the displaced families from this site decided to build their homestead in the allotted 10 cents of land free of cost as shown in figure 5.11.

**Figure 5.11: Households' Responses Regarding the Construction of New Home in the Freely Allocated Land (KIAL Project)**



Source: Primary Data

It is clear from the above figure that 84.4 percent (that is, 54 households) of the sampled displaced families built their homesteads by using the land area given by the authority free of cost. The highlighted event in this regard is that the government acquired an additional 150 acres of land nearest to the KIAL project site for the resettlement purposes of relocated households. It was one of the strong demands of native people to prevent the situation of shifting their homestead to strange places. This step also helped them to avoid the anticipated huge loss of social fabric including neighbourhood to some extent. The remaining 15.6 percent of the households (10 families) refused to construct homes in this allotted free land area. They opted to settle in new places where they faced the arrogant attitude of the host population and also heard the title of strangers from them. The heads of these households responded that the 10 cents of land area are not enough to build homesteads for them. Many of them sold their land in the open market where the construction of multi-layer buildings is progressing during the time of our data collection.

The provision of the cash-based resettlement was one of the primary features of the rehabilitation packages announced for the displaced households from the site of Calicut Airport. It paved the way for the resettlement of displaced communities in a scattered

manner. The sampled ousted communities from this site resettled mainly in three districts of the state; namely: Malappuram, Kozhikode and Wayanad. Figure 5.10 shows that 31 and 23.9 percent of these displaced households experienced the hostile approach as they were treated as new-settlers and arrogant attitude from the host population and also called them as strangers. Unsurprisingly, this figure for the KIAL project is only 9.4 and 4.7 percent. It is really interesting to note that some of the heads of the displaced families from Calicut Airport site decided to build their homestead nearest to their acquired land areas either by utilising their vacant land areas after acquisition or buying new land areas from the adjacent places of the airport without considering the loss they would face on account of the real estate boom happened there subsequent to the land acquisition for further development of the project. Additionally, the indifferent approach of the host population was experienced by 16.9 and 12.5 percent of the total displaced households from the project sites of Calicut and Kannur Airports respectively.

### **5.10 Project-wise Changes in the Quality-of-Life Index of Evicted Families**

In this section, the researcher is attempting to conduct the project-wise analyses of the Quality-of-Life Index (QLI) which is constructed for every sampled displaced family and their value reflects two distinct stages, that is, before and after displacement. We know that the QLI consists of ten socio-economic indicators with equal weightage and its maximum score is fixed at 100 and minimum score is zero. This technique is effective to conduct the project-wise analyses of the ramifications of airport-induced displacement and resettlement. The sampled ousted communities are classified into five groups based on their QLI score:

- ✎ Extreme poor status with a score of less than 30
- ✎ Poor status with a score between 30 and 49
- ✎ Fair status group scored between 50 and 74
- ✎ Good status household scored between 75 and 89
- ✎ Very good status with a score between 90 and 100

Indeed, the project-wise analyses of QLI of the evicted communities will help us to understand the effectiveness of rehabilitation packages announced by the concerned authority and will assist us to make an inference about the airport-wise progress of the resettlement status of relocated households. The elaborate analyses are depicted in the subsequent tables and figures.

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**Table 5.23: Project-wise Analyses of Quality-of-Life Index of Evicted Families**

QLI	Pre-displacement Phase												Post-displacement Phase											
	Calicut Airport				KIAL				Total				Calicut Airport				KIAL				Total			
	No.	%	Mean	SD	No.	%	Mean	SD	No.	%	Mean	SD	No.	%	Mean	SD	No.	%	Mean	SD	No.	%	Mean	SD
Ex-treme poor	-	-	-	-	-	-	-	-	-	-	-	-	15	21.1	26.4	1.68	1	1.6	27.0	-	16	11.9	26.4	1.63
Poor	6	8.5	44.7	4.72	7	10.9	46.0	3.56	13	9.6	45.4	4.01	23	32.4	42.3	5.18	13	20.3	42.1	5.22	36	26.7	42.3	5.1
Fair	40	56.3	60.8	6.68	45	70.3	62.3	5.46	85	63.0	61.6	6.08	22	31.0	56.8	4.44	27	42.2	64.6	6.03	49	36.3	61.1	6.61
Good	21	29.6	81.4	4.35	11	17.2	79.0	3.01	32	23.7	80.6	4.06	10	14.1	81.9	3.60	18	28.1	81.0	3.77	28	20.7	81.3	3.67
Very Good	4	5.6	94.3	2.06	1	1.6	93.0	-	5	3.7	94.0	1.87	1	1.4	96.0	-	5	7.8	92.4	0.55	6	4.4	93.0	1.55
Total	71	100	67.3	14.2	64	100	63.9	10.7	135	100	65.7	12.7	71	100	49.8	18.6	64	100	66.2	16.9	135	100	57.6	19.6

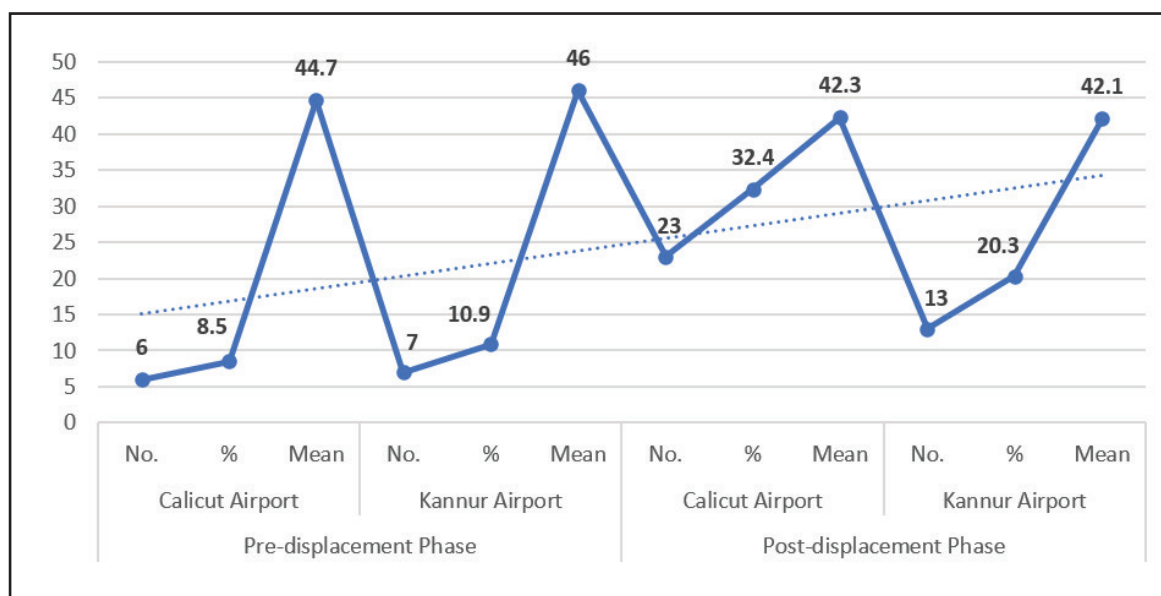
Source: Primary Data

Note: SD stands for Standard Deviation

Table 5.23 indicates that the number of extreme poor families as per the QLI in the pre-relocation phase is zero in both the projects. This trend has changed substantially in the post-displacement phase of the Calicut Airport project as the number of households that come under the category of extreme poor status has increased from zero to 15, that is, 21.1 percent of the total sampled population of this project. Unlike the CCJ project, its number for the KIAL site is only one or mere 1.6 percent of the sampled ousted communities of this project. Moreover, this group’s mean score is 26.4 in the case of CCJ which is marginally less than KIAL project’s score of 27.0. This trend reveals that approximately 93.75 percent of the contribution towards the total number of displaced households under the segment of extreme poor status is derived from Calicut Airport site and the remaining 6.25 percent is from KIAL project. It is right to state that the impact of Calicut Airport-induced displacement and resettlement on inhabitants is severe when we compare it with the KIAL-induced displacement and resettlement.

The next category as per the QLI index is poor status with a score between 30 and 49. Its percentage has significantly enlarged from 8.5 (6 families) during the pre-displacement phase to 32.4 percent (23 families) in the post-relocation stage of CCJ site. In contrast, its figure in the KIAL site has moderately increased from 10.9 percent (7 households) in the pre-evacuation phase to 20.3 percent (13 families) in the post-evacuation phase as reflected in figure 5.12.

**Figure 5.12: Project-wise Trends in the QLI's Poor Status Group**



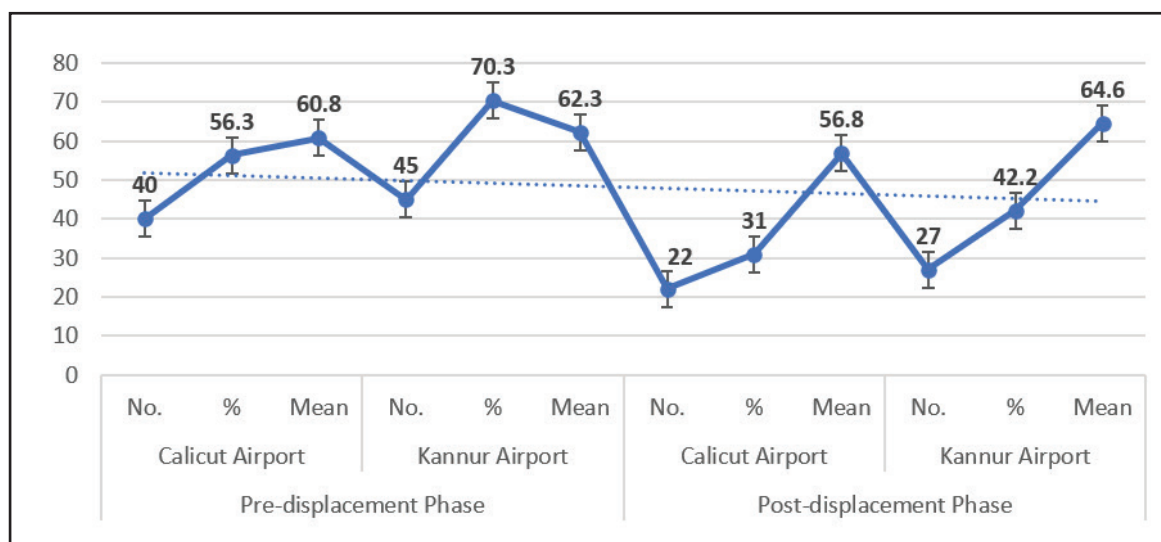
Source: Primary Data

The interesting thing here is that the number of poor people was marginally higher in the KIAL site than the CCJ site ( $7 > 6$ ) in the pre-relocation period which had turned into the opposite in the post-relocation period. That is, the number of poor status people is larger among the displaced families from the Calicut Airport site than the KIAL site ( $23 > 13$ ). The trends in declining the mean score of this group from the pre-displacement stage to post-displacement stage reflect the uniform pattern. That is, the mean score has declined from 44.7 to 42.3 in the CCJ site while this score for the KIAL site fell from 46.0 to 42.1. It is also noted that 63.89 percent of the total poor people in the post-relocation phase is contributed by the Calicut Airport project and the remaining 36.11 percent is shared by the KIAL project. Interestingly, the Calicut Airport site contributed only 46.15 percent to the poor group in the pre-relocation phase and 55.85 percent by the KIAL site.

The category of “fair status” reflects differences in the number of families in this group between two airport projects and also manifests sea changes in these figures between pre-displacement phase and post-displacement phase. The proportion of sampled families from the site of KIAL project has decreased from 70.3 (45 households) in the pre-relocation period to 42.2 percent (27 families) in the post-relocation period. Interestingly, almost a similar pattern of KIAL project is reflected in Calicut Airport site’s fair status group as shown in figure 5.13.



**Figure 5.13: Project-wise Changes in the Category of Fair Status Based on the QLI**



Source: Primary Data

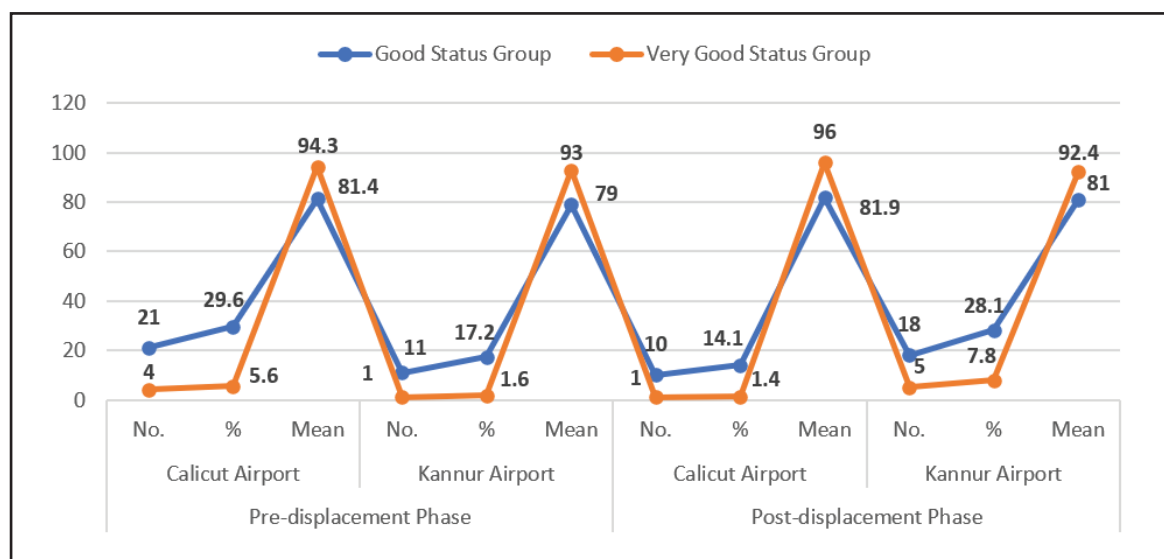
It shows a drastic reduction in the percentage of families which belonged to the fair status group from 56.3 (40 families) in the pre-evacuation stage to 31.0 percent (22 families) in the post relocation stage of CCJ project. Moreover, the mean score of this group is higher in the KIAL project site in both phases. However, there is a reduction in this average score from 63.0 before displacement to 61.1 after displacement at aggregate level. The project-wise changes in the mean score show a contradictory result between Calicut Airport site and KIAL site. That is, the mean score under the fair status category has declined in Calicut Airport site from 60.08 in the pre-displacement phase to 56.8 in the post-displacement phase. In contrast to this, the mean score of KIAL project site has increased from 62.3 percent before displacement to 64.6 percent after displacement. The fact is that the marginal increase in the mean score of the KIAL project prevented the steep fall in the mean score of this group at aggregate level in the post-relocation phase as shown in figure 5.13. Additionally, the number of families in this group is higher in the KIAL site than the CCJ project in both phases.

The trends of changes in the category of “good status” group, scored between 75 and 89 in the QLI index, between the CCJ and the KIAL projects are stated in the following ways. The percentage of the number of households in this group has declined from 29.6 (21 families) before displacement to 14.1 percent (10 families) in the post-displacement phase of the Calicut Airport site. Interestingly, we can observe an inverse trend in the case of the KIAL site. That is, the proportion of the households belonged to this category has increased significantly to 28.1 percent (18 families) in the post-displacement stage from 17.2 percent (11 families) in the pre-evacuation phase. There were no substantial changes to the mean

scores of these two projects in both the cases. The mean scores of CCJ and KIAL projects before displacement were 81.4 and 79 respectively. These scores slightly changed to 81.9 in CCJ site and 81 in KIAL project after displacement.

In fact, there was only a marginal decrease in the percentage of the number of households in this upper group, only next to “very good status” strata, between these two phases at aggregate level, that is, from 23.7 percent to 20.7 percent. However, the share of families from the Calicut Airport Site to the total number of households of this good status category has substantially declined from 65.63 percent in the pre-relocation phase to 35.71 percent in the post-relocation phase. On the other hand, the share of KIAL site has increased considerably from 34.37 percent (11 families) to 64.29 percent (18 families) as shown in figure 5.14. Finally, the trends of changes in the very good status category, an elite group as per the QLI Index, show discrepancy between the airport projects of CCJ and KIAL as shown in figure 5.14.

**Figure 5.14: Project-wise Changes in the Upper Categories of QLI – Good Status and Very Good Status**



Source: Primary Data

The proportion of the number of households in the very good status group has declined from 5.6 percent (4 families) during pre-displacement period to mere 1.4 percent (1 household) in the post-displacement phase of CCJ site. At the same time, its percentage in KIAL project site has increased from 1.6 percent (1 household) to 7.8 percent (5 households). The mean score increased from 94.3 to 96 in CCJ site whereas its score fell to 92.4 from 93 in the Kannur Airport project.

### 5.10.1 Paired Samples Test: Average Scores of Quality-of-Life Index

We can adopt the statistical tool of paired t-test for understanding whether there exists or there doesn't exist any difference in the mean scores of QLI significant between pre-displacement and post-displacement phases for each project. Let us build the null and alternative hypothesis for the Calicut Airport project as follows:

$H_0$ : There are no significant differences in the mean scores between pre-displacement and post-displacement phases of Calicut Airport site.

$H_1$ : There are significant differences in the mean scores between pre-displacement and post-displacement phases of Calicut Airport site.

Now we can frame the null and alternative hypothesis for Kannur Airport project as follows:

$H_0$ : There are no significant differences in the mean scores between pre-displacement and post-displacement phases of Kannur Airport site.

$H_1$ : There are significant differences in the mean scores between pre-displacement and post-displacement phases of Kannur Airport site.

**Table 5.24: Paired Samples Test: Project-wise Tests of Average Scores of QLI**

Paired Samples Test – Calicut Airport Project						
Mean	Std. Deviation	t	df	p-value (sig.)	95% Confidence Interval of the Difference	
17.61	16.56	8.958	70	.000*	Lower	Upper
					13.68588	21.52538
Paired Samples Test – Kannur Airport Project						
Mean	Std. Deviation	t	df	p-value (sig.)	95% Confidence Interval of the Difference	
-2.33	20.03	-.930	63	.356**	Lower	Upper
					-7.33151	2.67526

Source: Primary Data

\*Significant at 5% level of significance

\*\*Not significant at 5% level of significance

To test the hypothesis that the pre-displacement average QLI scores (M = 67.3, SD = 14.2) and post-displacement (M = 49.8, SD = 18.6) were equal in the CCJ site, a dependent (paired) samples t-test was performed. The null hypothesis was rejected on the basis of the p-value (.000) which is statistically significant at 5% level of significance. That is,  $t(70) =$

8.958,  $p < 0.001$ . However, in the KIAL site, the pre-displacement average QLI scores ( $M = 63.9$ ,  $SD = 10.7$ ) and post-displacement ( $M = 66.2$ ,  $SD = 16.9$ ), the mean difference is not significant at 5% level of significance ( $p$ -value = .356). Hence, we failed to reject the null hypothesis. That is,  $t(63) = -.930$ ,  $p > 0.05$ .

### 5.11 Scaling of Resettlement Sites by the Displaced Households

The tool of Likert scale is adopted to rank the resettlement sites of the evicted households who were evacuated from the project sites of the two international airports in Kerala located at Kannur and Malappuram districts. The scaling is based on seven key questions regarding the resettlement sites of the sampled displaced households. The questions include the basic facilities of the new settled areas, approaches of the host population, availability of jobs and livelihood security, access to worship centres and graveyards (access to common property resources), availability of public utility-services, access to educational institutions and healthcare centres and finally the degree of neighbourhood cooperation. The ratings of households who are residing in the new settlement areas are arranged in table 5.25.

**Table 5.25: Ratings of Evicted Households Regarding the Look and Feel of the New Settlement**

Responses of Households	Calicut Airport		Kannur Airport	
	Frequency	Percentage	Frequency	Percentage
Very Bad	18	25.4	2	3.1
Bad	23	32.4	5	7.8
Neither Good nor Bad	17	23.9	11	17.2
Good	8	11.3	35	54.7
Very Good	5	7.0	11	17.2

Source: Primary Data

The above table shows that many of the displaced households from the resettlement site of CCJ project come under the bottom level of the Likert scale, that is, “very bad” that was formulated by 25.4 percent of the families (18 ejected households) from this project site. On the other hand, a larger proportion of the sampled households from the site of Kannur Airport belonged to the scale of “Good.” That is, 54.7 percent (35 families) from the KIAL site formed the scale of “Good” about the resettlement sites in terms of the aforementioned seven key statements. The highest percentage of the displaced families from Calicut Airport site is 32.4 percent (23 families) who constituted the scale marked “Bad” about the resettlement site while the percentage of KIAL in this respect is only 7.8 (5 families). The

scale at “Very bad” point is reported in the KIAL site is only by 3.1 percent (2 families). The “Good” and “Very Good” scales are designed by 11.3 and 7 percent (8 and 5 households) from the CCJ resettlement site respectively. The middle of the scale, that is neither “good” nor “bad” (indifferent attitude) is framed by 23.9 percent and 17.2 percent of the sampled households from the project sites of CCJ and KIAL respectively.

The mean scores of the summation of Likert scale are 2.099 and 3.409 for CCJ site and KIAL site respectively. Similarly, the Std. Deviation for the CCJ site is 1.029 and for the KIAL site, it is 0.982. Let us make an independent samples t-test to explore whether the differences in the mean values of responses of the households regarding the resettlement sites are significant between Calicut Airport and Kannur Airport sites.

**Table 5.26: Independent Samples t-test: Displaced Households’ Resettlement Site**

t-test for Equality of Means					
t	df	p-value (sig.)	Mean Difference	95% Confidence Interval of the Difference	
-7.127	133	.000*	-1.327	Lower	Upper
				-1.69590	-.95903

Source: Primary Data      \*The p-value (.000) is significant at 5% level of significance

To test the null hypothesis ( $H_0$ ), there is no statistically significant difference in the mean values with respect to the resettlement site between CCJ and KIAL projects, an independent samples t-test was performed. The independent samples t-test manifests a statistically significant difference,  $t(133) = -7.127$ ,  $p = .000$ . Thus, the displaced households from the KIAL site were associated with statistically significant larger mean values with respect to the resettlement site than the evictees from CCJ site. That is, we can reject the null hypothesis.

## 5.12 Conclusion

Indeed, the land-based resettlement system of the KIAL project site is instrumental in preventing impoverishment of DPs who were relocated from this site. It is very apt to state the often-quoted saying, “Land is like diamonds but money is like ice.”<sup>1</sup> The jobs guaranteed in the KIAL project helped them to earn a stable income and also enabled them to prevent a steep fall in WFPR, especially among women. On the other hand, the absence of

<sup>1</sup> Mariella 1990, cited in Guggenheim 1990: 32, Development and the Dynamics of Displacement. Paper prepared for Workshop on Rehabilitation of Displaced Persons, sponsored by Institute for Social and Economic Change and Myrada, Bangalore, India.

land-based resettlement provision in the CCJ project site resulted in deteriorating the living conditions of the majority of displaced families from this site and the failure of the authority to provide jobs to them worsened their life further in the post-relocation phase. Additionally, the troubles from the new resettlement sites, especially from the CCJ project, increased their risks, uncertainty and also enlarged the gravity of their frustrations. The R & R packages should be implemented for DPs after a thorough consultation meeting with all stakeholders, including DPs and PAPs.

In a nutshell, it is quite evident from the analysis that airport-induced displacement causes untold miseries to the majority of the displaced inhabitants. Many of them are marginalized and economically weak. Definitely, they are relegated to the back in the socio-economic realms. However, the analysis also reveals that the rehabilitation and resettlement packages are more effective in the project site of the KIAL, a PPP model airport, when we compare them with the Calicut Airport site, a public led airport model. Hence, we can reject the  $H_0$  of the second hypothesis. Interestingly, a significant difference in the standard of living of the evicted families is visible between the two airport models despite the fact that the same state government announced and implemented the R & R packages in these two projects. The presence of the private sector as stakeholders and their direct and indirect role in policy making by using the strategy of lobbying acting as pressure groups may influence in designing a better R & R in the KIAL project site compared to the CCJ site.

## CHAPTER VI

### AIRPORT-INDUCED LAND-ACQUISITION AND PROJECT AFFECTED PERSONS: THE WAY FORWARD

#### 6.1 Introduction

The Kerala state government has released new notifications for land acquisition for the airport projects aimed at bringing more investment in the developmental projects including airways infrastructure of the state by strengthening linkages and also proliferating the mode of PPP framework. Surprisingly, the area of economic displacement, one of the components of the development-induced displacement and resettlement (DIDR), is under-represented in discussions and studies conducted by policy-makers and social scientists. The developer and the policy-makers gave only a little attention to redress the grievances of economic displacees, generally called as project-affected persons (PAPs) (Fernandes, 1998). The phenomenon of economic displacement represents all those people who are living in the adjacent places of the project by absorbing all types of repercussions (benefits as well as damages) without experiencing physical displacement. In this chapter, the researcher is endeavouring to incorporate holistically the socio-economic profiles of PAPs, who may face airport-induced land acquisition and displacement in the not-too-distant future as the government has already designed new proposals for further development of the airport projects; viz., Calicut International Airport (CCJ) and Kannur International Airport (KIAL). Additionally, this chapter incorporates the approach of PAPs towards the extension of airport projects in the region.

Interestingly, the adjacent places of the airport, which are notified for the land acquisition for the extension of Calicut Airport under public sector, have been rocked by nearly 12 years of increasing protests and unrest against the authority demanding the droppage of the proposal of project expansion. Environmentalists and social scientists including poet Sugathakumari, Madhav Gadgil and Medha Patkar extended their solidarity with the project affected people. They urged the government to drop its decision of Calicut Airport extension by acquiring additional land as it would lead to ecological imbalances and displacement of thousands of people. That is, the Calicut Airport-induced land acquisition is back in the news and, of course, deep attention has willy-nilly turned on the Kerala State Government

as well as land-owners of the region. Contrary to this, the local people from the nearest areas of KIAL project, a PPP model airport, are constantly demanding to speed up the land acquisition process for its extension. It is highly relevant to identify the factors that resulted in contradictory approaches towards the project-induced land acquisition by the PAPs who reside in proximity to these two airports. This would lead us to recognise what the State Government has decided to do with the new Act of 2013<sup>1</sup> and assess how much of its objectives can be achieved.

## **6.2 Economic Displacements Among Affected Households: A Disaggregate Level Analysis**

The affected people living in the vicinity of the project site who have experienced the loss of either land or livelihood measures or both on account of land acquisition for the developmental project without being physically relocated from their homestead are generally denoted as project affected persons (Murickan, 2003; Fernandes, 2006). In this scenario, the economic displacements occurred among local households primarily in the forms of loss of lands, jobs and dairy farms or animal husbandry on account of land acquisition for further development of Calicut and Kannur International Airports as shown in table 6.1.

**Table 6.1: Components of Economic Displacement: Project-wise Analysis**

Components	Calicut Airport		Kannur Airport	
	Number of Households	%	Number of Households	%
Loss of land	36	53.7	34	63.0
Loss of job	16	23.9	9	16.7
Loss of dairy farms	15	22.4	11	20.4
Total	67	100.0	54	100.0

Source: Primary Data

Around 54 and 63 percent of the affected people from the CCJ and the KIAL sites have surrendered their land to the airport authority. They have received monetary compensation from the authority. Majority of them were extremely dissatisfied with the compensation, especially in the CCJ project site. There was no provision of allocation of land free of cost in the KIAL site for economic displacement category. This provision was restricted to the category of physical displacement. The extent of land loss to the project affected households is given in table 6.2.

<sup>1</sup> The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 has been enacted by Indian Parliament to address mainly the concerns of project-impacted persons by replacing the old Land Acquisition Act, 1894.



**Table 6.2: Extent of Land Loss to Project Affected Households: Descriptive Statistics**

<b>Airport Projects</b>	<b>Acquired Land (in cents)</b>	<b>Mean Value*</b>	<b>SD</b>	<b>Min. Land</b>	<b>Maxi. Land</b>	<b>Range</b>
Calicut Airport	152.50	4.24	2.51	1.50	12.00	10.50
Kannur Airport	256.00	7.53	4.57	3.00	24.00	21.00
Total	408.50	5.84	3.99	1.50	24.00	22.50

Source: Primary Data

\*Statistically significant at 5% level of significance

Note: SD stands for Standard Deviation

The Mann-Whitney U test revealed that there exists a statistically significant difference in the extent of land loss on account of economic displacement between Calicut Airport and Kannur Airport. That is, Mann-Whitney U test = 262.00,  $Z = -4.15$ ,  $p = .000$ . Thus, the null hypothesis ( $H_0$ ) that there is no significant difference in the loss of affected households' land area between CCJ and KIAL sites can be rejected.

### **6.3 Socio-Economic Profile of Project Affected Persons (PAPs)**

This section includes the demographic profile of the PAPs, their occupational status, land use pattern, categorisation of PAPs based on the size of land ownership, home structure, nature of family and so on. The required data is collected from 121 households who are living in the adjacent places of the airport projects of CCJ and KIAL. An in-depth interview with the members of affected families along with the structured questionnaire helped the researcher to gather more details from them. Besides, the techniques of Focus Group Discussions (FGDs) have been extensively adopted to mobilise relevant information from the heads of affected families. The socio-economic status of PAPs is depicted in the following tables and figures.

The sampled data consists of 121 households at aggregate level of which 67 families are from the site of Calicut Airport and the remaining 54 are from the site which is in close proximity to the KIAL project. The number of affected persons is 763 at aggregate level. A disaggregated view of the data shows that the number of females is greater than that of males in both the projects. The males' number in the CCJ site is 192 and females' count is 217. The KIAL site consists of 156 males and 198 females.

The gender-wise discussion of the heads of affected households, their marital status and economic status are given in table 6.3. There is a considerable difference in the gender-wise ownership pattern of homesteads between Calicut Airport and Kannur Airport. It can be seen from table 6.3 that 89.6 percent of the heads of households belong to males' group in the case of Calicut Airport project site. At the same time, only 53.7 percent of the heads of the households is male in the project site of KIAL.

**Table 6.3: Gender, Marital Status and Economic Status of Heads of Affected Households**

Airport Projects	Sex of the house owner			Marital status of Heads			Economic Status		
	Males	Females	Total	Married	Widow / Widower	Divorced	APL	BPL	Total
Calicut Airport	60	7	67	60	6	1	24	43	67
	(89.6)	(10.4)	(100)	(89.6)	(9.0)	(1.5)	(35.8)	(64.2)	(100)
Kannur Airport	29	25	54	36	18	-	28	26	54
	(53.7)	(46.3)	(100)	(66.7)	(33.3)	(-)	(51.9)	(48.1)	(100)
Total	89	32	121	96	24	1	52	69	121
	(73.6)	(26.4)	(100)	(79.4)	(19.8)	(0.8)	(43.0)	(57.0)	(100)

Source: Primary Data

Note: Figures in parentheses are percentages to the aggregate

On the other hand, 25 females (46.3 percent) in the KIAL site retain the status of heads of the households, that is, homestead in women's name. In this case, there is only a moderate gender gap in the KIAL site when compared to the CCJ site. Undoubtedly, we can observe from this data that there is a significant gender gap in the ownership pattern of homesteads in the Calicut Airport project sites as there are only 7 women (10.4%) who enjoy the position of heads of the family in contrast to 60 males.

The common perspective, as mentioned by social scientists in their studies, is that the commissioning of any developmental projects, say, dams, airports, etc. adversely affect many of the residences who are living nearest to the project irrespective of the level of their income (Cernea, 2004). However, the type and extent of damages on account of them are different from project to project. Additionally, they would face displacement; either economic or physical, when the authority takes a decision to expand them. Moreover, they can also derive benefits immensely from the developmental projects. But the question here is that how much benefits do project affected persons really reap?

### **6.3.1 Economic Status of Project Affected Households: Project-wise Analyses**

The disaggregate level analyses of the economic status of the PAPs indicate that the number of families below poverty line (BPL) is higher among the PAPs from CCJ site when compared with the KIAL project as shown in table 6.3. The BPL families' percentage is 64.2 and 48.1 in the project site of CCJ and KIAL respectively. It shows that the APL category, which includes both blue and white ration card holders, in the KIAL site outweighed the number of BPL households, which involves yellow ration card holders as well as pink card holders, in this project site. The detailed classification of project-affected families in terms of the colour of ration-card held by them is depicted in table 6.4.

**Table 6.4: Categorisation of Project Affected Families Based on Types of Ration Cards**

Groups of Land Holders	Calicut Airport		Kannur Airport	
	Frequency	Percentage	Frequency	Percentage
Antyodaya Anna Yojana	11	16.4	6	11.1
Priority	32	47.8	20	37.0
Non-priority subsidy	10	14.9	17	31.5
Non-priority and non-subsidy	14	20.9	11	20.4
Total	67	100.0	54	100.0

Source: Primary Data

The number of extremely poor families in terms of the colour of ration card (yellow card) held by them is larger in the CCJ site (16.4%) when compared with the KIAL project site (11.1%). At the same time, the percentage of white card holders (rich category) is marginally higher in the CCJ site (20.9%) when compared with the Kannur airport site (20.4%). The pink card holders are larger in both the projects. Its percentage in the CCJ site is 47.8 and in the KIAL site, it is 37.0. The blue colour card holders, that is, non-priority subsidy category, retain 31.5 percent in KIAL site which is significantly higher when compared with the CCJ project where its proportion is only 14.9 percent.

### **6.3.2 Classifications of Project Affected Families on the Basis of Religion and Caste**

The religion-wise classification of the sampled project-affected families shows that the majority of households from CCJ project belong to the Muslim community. Its percentage is 70.1. Unlike the Calicut Airport site, the major community in the KIAL project site is the Hindu community which retains 83.3 percent of the total sampled population as shown in table 6.5. The representation of Christian community is meagre in CCJ site (3.0%) whereas this proportion is nil in KIAL site. Table 6.5 also shows the caste-wise analysis of the sampled project-impacted families.

**Table 6.5: Religion and Caste-Wise Classification of the Respondents**

Religion	Calicut Airport		Kannur Airport	
	Frequency	Percentage	Frequency	Percentage
Hindu	18	26.9	45	83.3
Muslim	47	70.1	9	16.7
Christian	2	3.0	0	0
Total	67	100.0	54	100.0
Caste-wise Classification of Affected Households				
SC	13	19.4	18	33.3
OBC	53	79.1	32	59.3
General	1	1.5	4	7.4
Total	67	100.0	54	100.0

Source: Primary Data

A disaggregated view of table 6.5 also reflects that the category of other backward class (OBC) is dominated in both the projects. Its proportion is 79.1 and 59.3 in CCJ and KIAL project sites respectively. The percentage of families who belong to the scheduled caste category is 33.3 percent in the KIAL site which is a notably greater figure when compared to the CCJ site, where its proportion is 19.4 percent. There are only five families in the general category, four of them are from the KIAL site. This analysis shows that the vulnerable segments like the SC community are included in the proposed land acquisition for the extension of runway of both the international airports. Indeed, the rehabilitation packages should include concrete measures to mitigate the adversity of land acquisition and displacement of inhabitants in general and vulnerable segments in particular. The system invariably demands a social-safety measure to safeguard the interests of the SC, women, aged persons and children.

### **6.3.3 Demographic Profile of Project Affected Families / Economic Displacees**

The extent and intensity of ramifications of airport-induced land acquisition and displacement on inhabitants may vary from household to household. The vulnerable segments of the DPs / PAPs will experience its extreme severity in different forms from different phases of the DIDR such as land acquisition, displacement, transition phase, resettlement and so on. Some of the demographic details of airport-wise sampled project-affected persons are portrayed in table 6.6.

**Table 6.6: Demographic Features of Project Affected Persons (number of persons)**

<b>Demographic Features</b>	<b>CCJ</b>	<b>KIAL</b>	<b>Total</b>
Number of males in the household	192	156	348
Number of females in the household	217	198	415
Number of married members	227	183	410
Number of unmarried members	42	57	99
Number of widow/widowers in the family	10	30	40
Number of divorce or separated	3	1	4
Number of students in a family	87	53	140
Details of children (0 - 5 years)	40	30	70

Source: Primary Data

It can be seen from the table that the number of females (415) at project-wise as well as aggregate level surpasses the number of males (348). The category of married people consists of 410 members, of which 183 persons are from KIAL project site and the remaining 227 are from CCJ project site. More interestingly, there are 140 students in the sampled PAPs, at aggregate level, who are studying in different standards. The decision of the Government to acquire land would adversely affect the local students' community also. It may disrupt their schooling and may retard their academic progress. The authority must incorporate effective steps to avoid the chances of loss of schooling years or dropout of these project-affected students at the time of land acquisition and displacement for further development of the airport projects. We have already discussed in the preceding chapter the magnitude of dropout and loss of schooling years that happened in the previous land acquisition and displacement of inhabitants.

**Table 6.7: Age-wise Classification of Project Affected Persons (number of people)**

<b>Age groups</b>	<b>Calicut Airport</b>	<b>KIAL</b>	<b>Total</b>
Age group of 0 - 5 years	40	30	70
Age group of 6 -14 years	78	52	130
Age group of 15 – 64 years	263	234	497
Age group of 65 – 80 years	27	28	55
Age group of above 80 years	1	10	11
<b>Total</b>	<b>409</b>	<b>354</b>	<b>763</b>

Source: Primary Data

The age-wise classification of PAPs is given in table 6.7. The category of working age group (15 to 64 years) commands around 65.57 percent of the total sampled persons at aggregate level. There is a moderate difference in the number of working age groups between these two airport projects. Its number is 263 in the CCJ site and 234 in the KIAL site. There are 70 children below the age of 5 at aggregate level and 130 school going students who are in the age group of 6 - 14 years. The number of senior citizens (65 – 80 years) is 55 at aggregate level and the figure of super senior citizens (above 80 years) is 11, of which 10 persons are from KIAL site as shown in table 6.7. The rehabilitation packages should include special provisions for mitigating the vulnerabilities associated with senior citizens. The overall educational qualifications of PAPs are represented in table 6.8.

**Table 6.8: Educational Qualifications of Project Affected Persons**

<b>Educational Qualification</b>	<b>Calicut Airport</b>	<b>Kannur Airport</b>	<b>Total</b>
Illiterate	9	9	18
Primary school	59	52	111
Upper primary school	50	63	113
Secondary school	135	102	237
Pre-degree / Plus-Two	67	47	114
Degree	34	37	71
Professional degree	9	6	15
PG	5	9	14
<b>Total</b>	<b>368</b>	<b>325</b>	<b>693</b>

Source: Primary Data

It can be seen from the above table that the majority of PAPs have attained a secondary level education. Its figure is 237, of which 135 persons are from Calicut Airport site and 102 people are from KIAL site. More interestingly, 114 affected persons are higher-secondary certificate holders and the number of graduated persons is 71 at aggregate level. The Plus-Two or Pre-degree holders are larger in Calicut Airport site (67) when compared with the KIAL project site (47). At the same time, the number of degree holders is slightly higher in KIAL site (37) when compared with the CCJ project site (34). The total number of PG holders is 14, of which 9 members are from KIAL and the remaining 5 persons are from Calicut Airport site.

Table 6.8 shows that there are qualified candidates among PAPs to absorb the available job opportunities in airports. The fundamental question here is: “Why are the DPs/PAPs not utilising these opportunities to their advantage?” Surprisingly, the policies of the authority, instead of making the betterment of the life of the PAPs, have deteriorated their living conditions. It is also observed from table 6.8 that there are 18 illiterate people in the sampled PAPs at aggregate level, CCJ and KIAL projects contributed 9 persons each to this category.

#### **6.4 Size and Nature of Land Possessed by the Project Affected Families**

Indeed, the paramount questions that may emanate from our minds when we hear about the news of land acquisition for developmental projects include how this proposal affects the inhabitants, what types of land would be acquired, how it affects cultivable land areas, when this project commissions and so on. These types of questions are also applicable to the proposal of the extension of Calicut Airport as well as Kannur Airport projects. Recently, the Government of Kerala has given green signal to acquire additional land for augmenting the airway’s infrastructure of CCJ and KIAL. The discussions of types and size of land held by the PAPs and the pattern of land use are imperative to understand the possible ramifications of land acquisition for the projects on inhabitants. It can be seen from table 6.9 that the sampled project-affected families occupied a total of 3062.73 cents or 30.6273 acres of land. It includes 531 cents of paddy field and 2531.73 cents of dry land.

The project-wise break up analyses indicate that 1391.48 cents of land were occupied by the PAPs from Calicut Airport site and the remaining 1671.25 cents of land were occupied by the project-affected households from Kannur Airport site. That is, the share of land area held by the sampled families from the CCJ site is only 45.44 percent and this figure for the KIAL site is 54.56 percent. Interestingly, the aggregate level analysis shows that the size of land area held by the households is ranging from a minimum of 3 cents to a maximum of 250 cents. The dry land area is primarily used to plant trees like coconut trees, cashew trees, areca palms, teak, mango trees, jack fruit trees and other plants in both the projects. The paddy field is mainly used to grow rice and areca palms in these regions. Surprisingly, the mean values of all categories of land possessed by the PAPs from KIAL project are higher when compared to the mean values of land held by PAPs from Calicut Airport site. For instance, the mean score of total land area of the family from KIAL site is 30.95 cents whereas CCJ site retains only 20.77 cents per project affected family.

**Table 6.9: Size, Nature and Use of Land Area Held by the Project-Affected Households (in cents)**

Nature of Lands	CCJ Project Site			KIAL Project Site			Aggregate (CCJ + KIAL)		
	Area in Cents	Mean*	SD	Area in Cents	Mean*	SD	Area in Cents	Mean	SD
1. Total paddy field	170.00	2.54	8.59	361.00	6.69	18.37	531.00	4.39	13.93
a. Cultivated area of paddy field	110.00	1.64	6.87	326.00	6.04	16.23	436.00	3.60	12.13
b. Area of barren paddy field	60.00	0.89	3.79	35.00	0.65	3.37	95.00	0.79	3.59
2. Total dry land area	1221.48	18.23	24.76	1310.25	24.26	34.83	2531.73	20.92	29.70
a. Cultivated area of dry land	644.00	9.61	20.80	718.00	13.30	29.04	1362.00	11.26	24.78
b. Homestead area of dry land	577.48	8.62	5.07	592.25	10.97	6.46	1169.73	9.67	5.82
3. Aggregate land area (1+2)	1391.48	20.77	30.95	1671.25	30.95	42.65	3062.73	25.31	36.82

Source: Primary Data

\*Statistically significant at 5% level of significance (Mann-Whitney U test)

Note: SD stands for Std. Deviation

To test the null hypothesis ( $H_0$ ) that there is no statistically significant difference in the average (mean) land holdings among project affected families between Calicut Airport and Kannur Airport, the Mann-Whitney U test was performed as the sampled data follows non-normal distribution. The Mann-Whitney U test manifests a statistically significant difference,  $U(121) = 1287.500$ ,  $p = .006$ . Thus, the project affected households from the KIAL site were associated with a statistically significant larger mean values with respect to land holdings than the affected households from the CCJ site. Here, we can reject the null hypothesis.

The mean value of paddy fields in the regions of Calicut Airport (2.54) is significantly lower when compared to the adjacent places of KIAL project (6.69). The proposed acquisition of land for the runway extension of KIAL project includes more paddy land area (361 cents) than Calicut Airport, where the total paddy field held by the sampled PAPs is only 170 cents. Additionally, the mean value of total dry land is much lower in the project site of CCJ (18.23 cents) when compared to KIAL project (24.26 cents). The same trends can be seen in the rest of the categories of land as shown in table 6.9. Indeed, it is the responsibility of the requisition authority to take measures to avoid the acquisition of paddy lands or wetlands. Otherwise, the region's production of food grains will adversely be affected by the land acquisition for the airport projects.



### 6.4.1 Classification of Project Affected Households Based on the Ownership of Land Area: Project-wise Analyses

The analyses of size of land holdings of the project affected households and their systematic categorisation based on the land area possessed by them are essential to understand how the new proposal of land acquisition for airport projects affects them. The intensity of repercussions of airport-induced land acquisition and displacement may vary from household to household and also from region to region. Indeed, the size of land holdings of PAPs is one of the most important factors in this regard. The landholders are grouped into six heads, namely: those who own land areas from 1 cent to 10 cents; those who keep land areas from 11 cents to 20 cents; others who possess land areas from 21 cents to 30 cents; that group who retains land areas from 31 cents to 40 cents; holders of an extent of 41 cents to 50 cents and the last group that retains land areas of more than 50 cents. Table 6.10 reflects the project-wise breakup of the categorisation of the size of land area occupied by the heads of the sampled project affected families.

**Table 6.10: Classification of Landholders' Group Among Project Affected Families**

Categorisation of Landholders' Group	Calicut Airport			Kannur Airport		
	Number of Households	%	Mean (Cents)	Number of Households	%	Mean (Cents)
1 cent to 10 cents	40	59.7	7.39	24	44.4	8.83
11 cents to 20 cents	14	20.9	14.70	11	20.4	16.30
21 cents to 30 cents	2	3.0	31.62	5	9.3	25.20
31 cents to 40 cents	2	3.0	34.00	3	5.6	34.33
41 cents to 50 cents	2	3.0	46.00	3	5.6	45.33
Above 50 cents	7	10.4	95.28	8	14.8	114.38
Total	67	100.0	20.77	54	100.0	30.95

Source: Primary Data

The analyses of the sampled project affected families indicate that the proposed land acquisition would affect largely the segment of 1 to 10 cents landholders' group (marginal landholders) in both the projects. That is, 59.7 and 44.4 percent of the affected families belong to the category of marginal landholders (1 to 10 cents) who are living in the adjacent areas of the project site of CCJ and KIAL respectively. Its proportion is significantly higher in the Calicut Airport regions when compared to the KIAL project. It means that the proposed land acquisition would seriously affect the bottom strata of the society in terms of the size of land holdings. Its aftermath will be heavier upon the regions of Calicut Airport as more vulnerable residents (marginal landholders) are living there. This trend is contrasted with the findings of Chapter IV where we have already stipulated that 51.9 percent of the

families belonged to the category of large and medium landholders in the pre-displacement phase (also see table 4.8). The second category, that is, 11 to 20 cents landholders, has been the next largest group, in both the projects, going to face land acquisition and displacement. Its percentage is 20.9 in Calicut Airport site and 20.4 percent in KIAL site. Here also, the percentage is slightly larger in the site of CCJ when compared to the KIAL project.

Interestingly, the remaining four groups, which are middle and upper segments in our classifications, occupy a considerably higher percentage in the KIAL site when compared to the CCJ project. That is, Calicut Airport regions retain only 3.0 percent in each of the 21 to 30 cents, 31 to 40 cents and 41 to 50 cents landholders' groups. The percentage of landholders' group who occupied more than 50 cents of land (large landholders) is 10.4 in the CCJ site and its proportion in the KIAL site is 14.8. Anyhow, these trends manifest the fact that more vulnerable segments are living in the vicinity of Calicut Airport site when compared to the Kannur Airport sites. The concerned authority should take adequate measures to safeguard the interests and aspirations of these downtrodden people who are living in the closest areas of both the projects during the process of land acquisition as per the new notifications released by the Kerala State Government.

#### **6.4.2 Structure of Houses Occupied by the Project Affected Families**

The building structure of the project affected households is portrayed in table 6.11. The dominance of single storeyed houses can be seen among project affected families in the regions of Calicut Airport, where 80.6 percent of the total sampled households is living in the single storeyed residences and only 19.4 percent in the double storeyed homes.

**Table 6.11: Project-wise Homestead Structure of the Project Affected Households**

Building Structure	Calicut Airport		Kannur Airport	
	Frequency	Percentage	Frequency	Percentage
Single storeyed	54	80.6	31	57.4
Double storeyed	13	19.4	23	42.6
Total	67	100	54	100

Source: Primary Data

Unlike the CCJ site, there is only a moderate difference in the percentage of single and double storeyed houses occupied by them in the project site of Kannur Airport. That is, 57.4 percent of them owned single storeyed residences and the remaining 42.6 percent possessed double storeyed houses.

#### **6.4.3 Mean Years of the Dwellings of PAPs: Airport Project-wise Analyses**

Indeed, it is extremely painful to vacate their homestead, as the evicted members have deep sentimental attachments with their belongings or they have so much emotional baggage

involved, as per the direction of the requisition authority. Additionally, very often, they haphazardly witness the demolition of their houses without keeping any sign of their existence. The proposed acquisition of land for further development of CCJ and KIAL would result in the bulldozing of their houses, which are built by the PAPs, that are ranged from 1 year old houses to 47 years old houses. The largest number of dwellers in the KIAL site come under the category of period between 10 and 15-years old houses. Its percentage in the KIAL site is 40.7 while in the CCJ site, it is only 6.0 percent. At the same time, the above 20-year-old homestead group retained the highest percentage in Calicut Airport site. Its proportion in CCJ site is 43.3 and 16.7 in KIAL site as shown in table 6.12.

**Table 6.12: Years of Residence in the Region: Responses of Project Affected Families**

Years of Dwellings	Calicut Airport		Kannur Airport		Aggregate	
	Frequency	%	Frequency	%	Frequency	%
Less than 5 years	21	31.3	7	13.0	28	23.1
Between 5 and 10 years	10	14.9	13	24.1	23	19.0
Between 10 and 15 years	4	6.0	22	40.7	26	21.5
Between 15 and 20 years	3	4.5	3	5.6	6	5.0
More than 20 years	29	43.3	9	16.7	38	31.4
Total	67	100.0	54	100.0	121	100.0
Mean years of residence*	16.37 Years		13.31 Years		15.01 Years	
Minimum year	1 Year		3 Years		1 Year	
Maximum year	47 Years		42 Years		47 Years	

Source: Primary Data

\*Not significant at 5% level of significance

Twenty-one project affected families from the Calicut Airport site responded that their dwellings were newly built and the oldest of them was built only five years ago. Its percentage in CCJ site is 31.3 whereas it is 13.0 percent in KIAL site. The interesting point here is that many of the PAPs have been living there for a long period and they had built their new homestead nearest to their parents' home. Some of them constructed their houses in the land that they had inherited from their ancestors. In essence, the mean years of dwellings in Calicut Airport region is 16.37 years which is moderately higher when compared to the KIAL project, where the mean years is 13.31. At aggregate level, the mean years is 15.01 Years.

**Table 6.13: Independent Samples Test: Mean years of residence in CCJ and KIAL**

t-test for Equality of Means					
t	df	p-value (sig.)	Mean Difference	95% Confidence Interval of the Difference	
1.499	119	.137	3.05086	Lower	Upper
				-.97949	7.08120

Source: Primary Data

To test the null hypothesis ( $H_0$ ) that there is no statistically significant difference in the mean years of residence between CCJ and KIAL, an independent samples t-test was performed. The independent samples t-test manifests a statistically not significant difference,  $t(119) = 1.499$ ,  $p = .137$ . Thus, the project affected households from the CCJ site were associated with a statistically not significant larger mean years with respect to average years of residence than the affected families from the KIAL site. That is, we failed to reject the null hypothesis.

### 6.5 Economic Activity Status of PAPs: Gender-wise Analyses of Sampled Families

In this section, the researcher is attempting to trace out the magnitude of the labour force and also identify the number of employed and unemployed members among sampled PAPs. Additionally, the gender-wise analyses of these variables will give more insights into the trends of frequency of job-holders among men and women segments of the PAPs. It will help us to understand how many of them retain jobs in the airport project as well as allied sectors including cargo business. The employment status of the workforce (age group between 15 and 64 years) of the PAPs are analysed in table 6.14.

**Table 6.14: Frequency of Economically Engaged PAPs**

Airport Projects	Number of Employed Persons		
	Males	Females	Aggregates
Calicut Airport	104	24	128
Kannur Airport	84	42	126
Total	188	66	254
Airport Projects	Number of Unemployed Persons		
	Males	Females	Aggregates
Calicut Airport	24	108	132
Kannur Airport	25	83	108
Total	49	191	240

Source: Primary Data

The frequency of employed and unemployed persons among PAPs as shown in table 6.14 is arrived after secluding dependent people (children below 15 years, students and senior citizens above 64 years) from the total number of PAPs. The aggregate level analyses reflect that the number of economically engaged persons is 254, of which 188 persons (104 from CCJ and 84 from KIAL) are males and the remaining 66 workers (24 from CCJ and 42 from KIAL) form females' category. The data on employment status of the sampled PAPs reveal that 26 persons from the regions of Calicut Airport are working in Gulf countries while this number in the KIAL site is lower, that is, only seven persons are doing their jobs abroad.

### **6.5.1 Nature and Pattern of Occupational Distribution among PAPs**

The pattern of employment among project affected job holders indicates that the majority of working people is involved in the category of temporary jobs and casual works. That is, 46.09 percent of the employed persons from the Calicut Airport site is engaged in temporary jobs while this figure for the KIAL site is only 35.71 percent. The percentage of casual workers is 29.69 and 26.19 in CCJ and KIAL sites respectively, as shown in table 6.15.

**Table 6.15: Types of Jobs Held by the Project Affected Persons**

Nature of Jobs	Calicut Airport		Kannur Airport		Aggregate (CCJ + KIAL)	
	Frequency	%	Frequency	%	Frequency	%
Permanent job holders	14	10.94	14	11.11	28	11.02
Temporary job holders	59	46.09	45	35.71	104	40.94
Casual workers	38	29.69	33	26.19	71	27.95
Self-employed persons	15	11.72	27	21.43	42	16.54
MGNREGA job holders	2	1.56	7	5.56	9	3.54
Total Employed Persons	128	100.00	126	100	254	100

Source: Primary Data

There are 14 PAPs from CCJ site who retained permanent jobs and 14 PAPs from KIAL site also. The proportion of this category of jobs is 10.94 in CCJ site and 11.11 percent in KIAL project site. At the same time, the percentage of self-employed persons is higher in the KIAL site (21.43%) when compared to the CCJ site (11.72). The MGNREGA card holders' proportion is negligible in both the projects, 1.56 and 5.56 in the sites of CCJ and KIAL respectively.

### **6.5.2 Beneficiaries of Airport Jobs Among PAPs: Magnitude and Trends**

The common perspective, which is often underscored by the developers, is that a large number of job seekers who have been residing in the closest regions of the airport get

employment in the project itself. In addition to this, the argument is that the benefits derived by affected persons from the airport project outweigh the damages experienced by them from the operations of the project. In this context, it is sagacious to look at the total number of job-holders among the PAPs who are working in different departments of the airport sector. Let us analyse the magnitude of job holders and types of jobs offered by the airport authority to PAPs.

**Table 6.16: Magnitude of Job-holders in the Calicut and Kannur Airports**

Airport Projects	Gender-wise Job-holders		
	Male	Female	Total
Calicut Airport	11	3	14
Kannur Airport	20	19	39
Aggregate	31	22	53

Source: Primary Data

The jobs in the airport may range from technicians, fire and safety, screening staff, handy men or handy women, security guards, taxi drivers, trolley pullers to cleaners. It is rational to think that the PAPs, who are facing a lot of difficulties from the operations of the airport like overflow of water, jerking during the take-off and landing of aircrafts, etc. as they are residing in the closest places of the airport, are eligible to occupy jobs in the concerned airport as per their qualifications and abilities. Moreover, they surrendered their land and other properties for the advancement of these developmental projects.

We have already mentioned in the preceding section that the total number of workers who are engaged in different types of economic activities is 254, of which 53 project affected persons are doing their jobs in the airport sector at aggregate level. That is, its percentage is 20.87. More interestingly, a disaggregated view of table 6.16 also reveals the contribution of jobs in Calicut Airport retained by the PAPs (14) towards the total number of job holders of PAPs (128) in this location which is meagre, that is, 10.93 while this proportion for KIAL project is significantly higher, that is, 30.95. It shows that the PAPs from the location of Kannur Airport are enabled to absorb more benefits from this project when compared to Calicut Airport. Around three-fourth of the total airport jobs held by the PAPs is contributed by the KIAL project.

## **6.6 Land Acquisition Notifications and Willingness of the Households**

The willingness of households in the course of discussions to surrender their homestead and other properties either voluntarily or involuntarily will give more insights about the attitude

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of the residents towards land acquisition for airport projects. Table 6.17 shows that the majority of displaced households from the Calicut Airport site were not willing to surrender their homestead voluntarily for the extension of the airport project. Its percentage is 73.1, that is, 49 households out of 67 responded that their displacement would be involuntary and also there are no other options before them other than surrendering their homestead, land, neighbourhood and so on if the Government stick on with the proposals. Only 26.9 percent, that is, 18 households are ready to give consent letters to the acquisition authority voluntarily.

**Table 6.17: Project Affected Families' Willingness to Surrender Homestead for the Project Voluntarily: Airport-wise Analyses**

Responses of Households	Calicut Airport		Kannur Airport		Total	
	Frequency	%	Frequency	%	Frequency	%
Ready to Surrender	18	26.9	35	64.8	53	43.8
Not Ready to Surrender	49	73.1	19	35.2	68	56.2
Total	67	100.0	54	100.0	121	100.0

Source: Primary Data

Surprisingly, the response of the households from the KIAL site is visibly contrasting from the Calicut Airport site. It is clearly observed from table 6.17 that more than three-fifth of the total households (64.8 percent) are ready to surrender their properties to the authority voluntarily for the development of the KIAL project. The remaining 35.2 percent households are not willing to surrender their homestead for the project. Why do these contradictory responses of the PAPs exist between the CCJ and the KIAL projects? The subsequent section is trying to give an answer to this question.

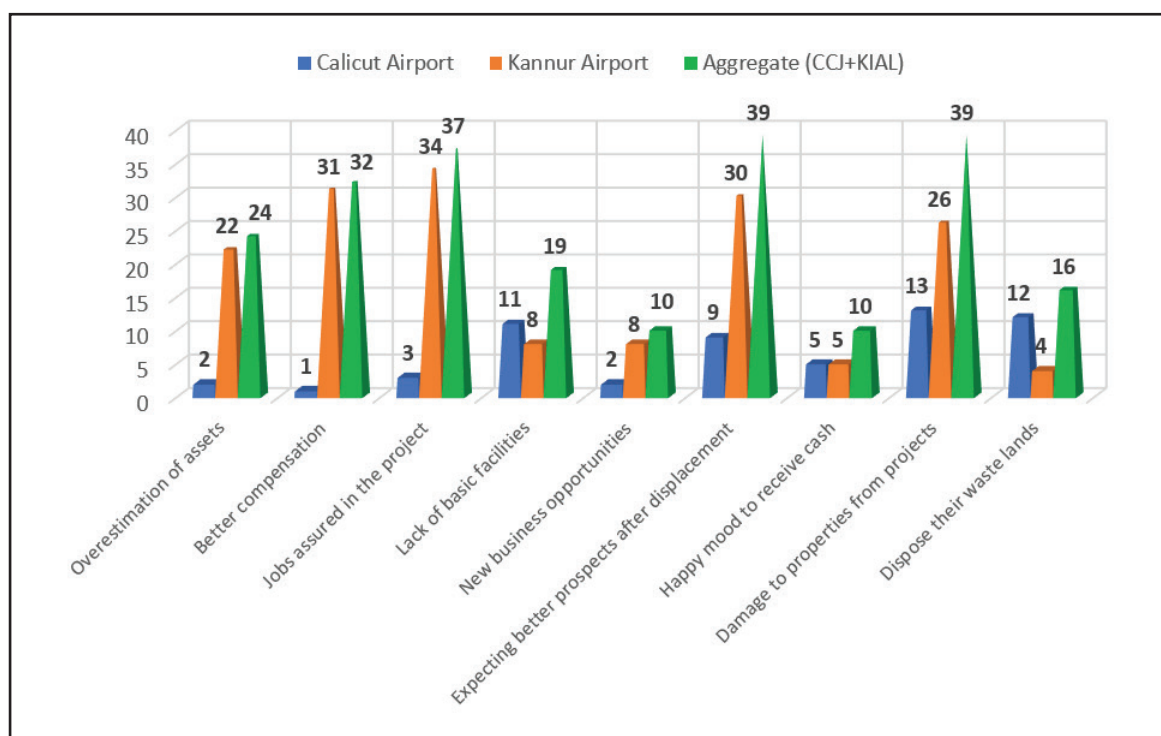
### **6.6.1 Key Determinants that Influenced the Households for Giving Consent for Land Acquisition**

The discussion of major determinants or factors that are considered by the households for giving either consent or dissent for land acquisition will provide insights into the differences of approaches and expectations of project affected persons who may face evacuation from the project sites of CCJ and KIAL in near future. In an in-depth interview with the PAPs, the researcher understood the level of satisfaction from the smiling faces of the majority of the displaced households from the KIAL project site. Contrary to this, the majority of project affected households from Calicut Airport site shared their agonies, hopelessness and other issues related to the proposal of land acquisition. Indeed, we can read the intensity of their grievances from their hopeless eyes and gloomy faces.

Interestingly, the leading factors that are considered by the affected people for surrendering their land for the airport projects include the overestimation of values of land and other assets, better compensation, jobs assured in the project, lack of basic facilities in the pre-displacement location, new business opportunities after relocation, happy mood to receive cash and some of them anticipated that they could dispose of their properties near the airports which were not marketable at that time as the location of property was nearest to the airport and some land areas were waste lands. The analyses of project affected households' responses regarding land acquisition are added to the subsequent sections of this chapter.

Figure 6.1 reveals the key determinants that influenced the decisions of the heads of the households to give their consent for land acquisition voluntarily. The project impacted households from Kannur airport site gave the highest weightage to the component of jobs assured in the project and better compensation offered by the authority while the heads of families from Calicut Airport site gave importance to the element of damages to properties from the operations of the airport and disposal of their waste lands. Around 31 households out of 54 sampled data from KIAL project site are attracted towards the component of better compensation that was announced in the latest land acquisition proposals. In the case of the CCJ project, its frequency is only one. Thus, the aggregate figure (CCJ + KIAL) is 32 project affected households.

**Figure 6.1: Leading Factors Considered by the Project Affected Households for Giving Consent for Land Acquisition**



Source: Primary Data



The supporters of the land acquisition for KIAL project articulated that the authority offered higher value to their properties. It is noticed from the above figure that 24 households (22 from KIAL and 2 from CCJ) favoured the component of overestimation of their assets by the authority which would result in better compensation to them. The interesting thing here is that 8 households firmly supported the proposal of land acquisition for the KIAL project because of acute water shortage that they are experiencing in their life. Many of them are facing the issue of contamination of water, especially during the monsoon season. The water flows heavily from the elevated part of the airport towards the residential areas of these people. The surprising element is that these households conducted several rounds of agitations for acquiring their land for the project. In the case of the Calicut Airport project site, eleven families viewed this component of lack of basic facilities in their regions which is the primary reason for supporting the proposal of land acquisition for the project.

It is interesting to note that some households (8 and 2 affected families from KIAL and Calicut Airport sites respectively) are planning to do new business after relocation, by using the compensation amount, like real estate, hotel business, furniture shops and so on. Another attractive determinant is the pleasure and happy mood of displaced households to receive cash as a part of compensation package from the authority. Around 5 households in each project responded that they are very eager to receive lakhs from the Government and constantly enquired about the progress of land acquisition. A few sampled households, that is, 12 from the Calicut Airport site and 4 from KIAL site, assigned weightage to another factor, that is, the prospect of disposing of land unlikely to return any benefit if retained in the absence of proper demand for the land.

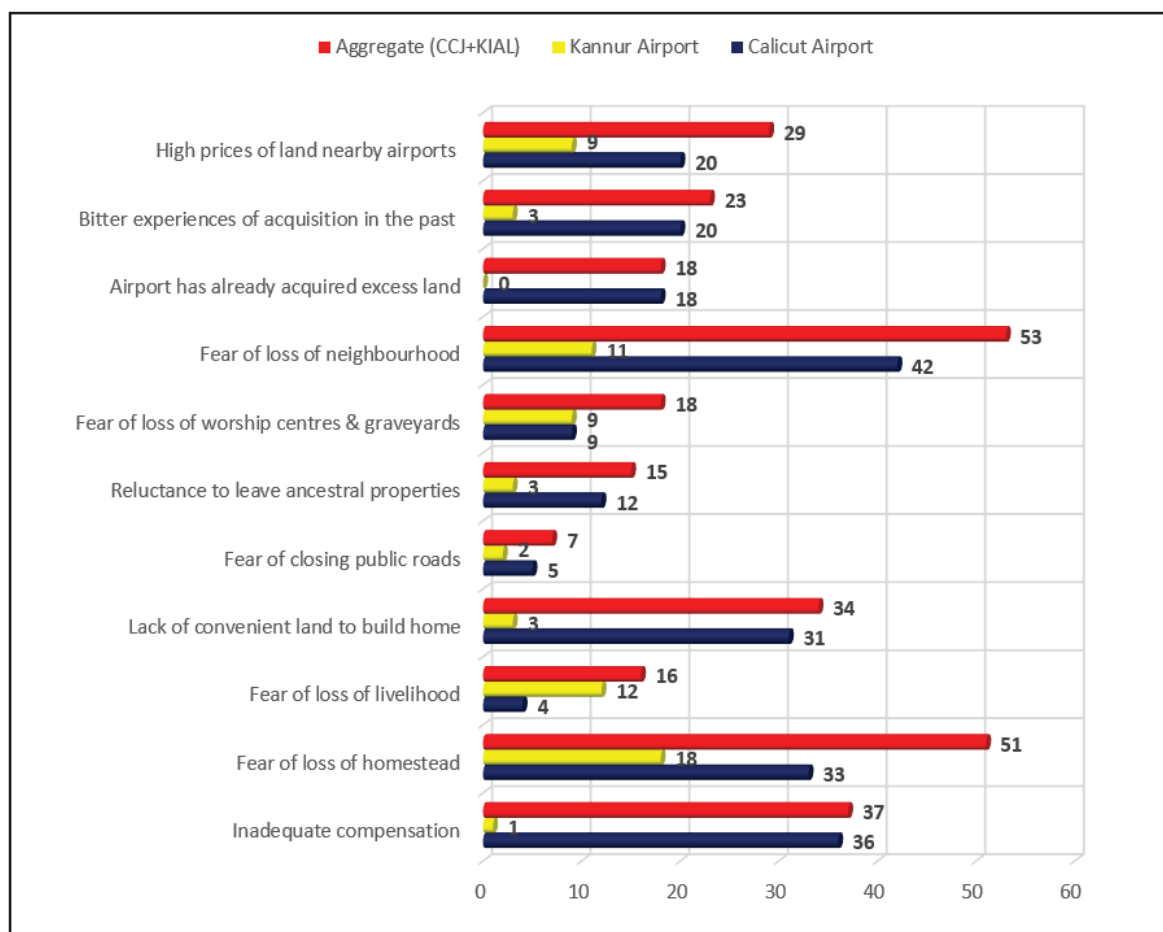
### **6.6.2 Key Factors Considered by the Affected Families for Giving Dissent for Land Acquisition**

Indeed, the majority of affected households feel extreme frustration when they hear the news or notification of land acquisition for airport projects, particularly from the project site of Calicut Airport. It is argued that fair and generous rehabilitation packages of developers for affected households may help them to build their normal life in the post-relocation phase (Perera, 2014). The key factors that are considered by the sampled project affected households for not giving their land for the airport project voluntarily include under-estimation of their properties including homestead by the concerned authority, inadequate compensation, fear of loss of homestead and livelihood and also fear of loss of neighbourhood and social fabric including town. Additionally, non-availability of convenient land for constructing residential buildings, difficulties in building new homesteads, fear of closing public

roads, reluctance to leave ancestral properties, fear of demolition of centres of worship and traditional graveyards are other decisive factors in shaping the decision to oppose the proposal of airport extension. Indeed, the project-wise analyses of sampled data provide more information about the variables that are seriously taken by the households for not giving consent for land acquisition.

Figure 6.2 shows that the variables like inadequate compensation by the authority and fear of loss of homestead are the major determinants in the project site of Calicut Airport for expressing dissent for land acquisition for the project. The number of families who gave highest weightage to the aforementioned variables is 36 and 33 respectively. This number for the KIAL project is comparatively very meagre, that is, 1 and 18 households respectively. Interestingly, 42 households from the CCJ project site considered the loss of neighbourhood a major factor for not giving land for the project. However, only 11 households from the KIAL project site seriously took this variable for involuntary relocation.

**Figure 6.2: Major Factors that Influenced in Taking the Decision Not to Surrender Properties**



Source: Primary Data

Another noticeable factor that highlighted by the project affected persons particularly from the CCJ site is their bitter experiences from land acquisition in the past. The unfair compensation and unjust rehabilitation packages of the authority in the earlier stages of land acquisition also play a decisive role in deciding not to give land for the project by the affected families. Its count in the CCJ site is 20 and in the KIAL site, its figure is very low, that is, 3. Similarly, 18 heads of the households firmly believed that the current proposal of land acquisition is unnecessary as the Calicut Airport authority has already surplus land. They strictly demanded to utilize the unused acquired surplus land judiciously.

The households from the site of KIAL project gave weightage to the variable of reluctance to leave ancestral properties. There are 12 and 3 households from CCJ and KIAL projects respectively who took these variables seriously as shown in figure 6.2. Around 5 households from the CCJ project considered the variable of fear of closing of public roads while its weightage in KIAL project site was 2. It is also very important to note that the number of households who opposed the project is meagre in KIAL project site.

### **6.7 Damages / Troubles on Account of the Airport Projects: Responses of PAPs**

We have already discussed in the preceding section that some of the PAPs have been deriving benefits from the airport project in the form of jobs in the airport and also other socio-economic support from them. Undoubtedly, operations of these projects have contributed immensely towards the development of the region as well as the advancement of economic activities at aggregate level. However, in this section, our analyses are restricted to the magnitude of benefits as well as damages from the airport operations experienced by the PAPs. There are high possibilities of troubles from the operations of the airport to those families who are residing in the nearest areas of the airport.

The damages on account of the operations of airports include jerking and scratch to home buildings, air pollution, scarcity of water, contamination, difficulties in transaction of land and other properties, heavy water-flows during monsoon, dumping of wastages, razing of hills and deep pit as soil was taken by the authority and other troubles like the threat of wild animals and snakes. The mobile-phones of the residents in this area are always out of coverage. Road-accessibility to their home is another matter that they crave for. Let us observe the responses of project affected families from the site of Calicut Airport as well as Kannur Airport.

It can be seen that lion's portion of the sampled project affected households have been experiencing acute troubles from the operations of the respective airport projects. Its

proportion in the Calicut Airport site is 95 and in KIAL region, it is 87. Only a negligible percentage of the selected households responded that there are no major troubles from the operations of these projects. It may be on account of the strong boundary walls and proper drainage system in these areas built by the authority. Additionally, the locations of these families' residences are a little bit away from the runway of the airports. Let us consider the types of troubles or damages faced by the project affected households.

**Table 6.18: Different Forms of Damages on Account of the Airport Projects:  
Project-wise Analyses**

Different Damages to Residences	Calicut Airport		Kannur Airport	
	Frequency	%	Frequency	%
Jerking and scratch to residences	43	68.3	37	68.5
Sound pollution	39	61.9	30	55.6
Scarcity of water and contamination	30	47.6	20	37.0
Difficulties in transaction of land and other assets	18	28.6	21	38.9
Air pollution	13	20.6	8	14.8
Heavy water-flows during monsoon from airports	26	41.3	36	66.7
Dumping of wastages	22	34.9	4	7.4
Razing of hills / deep pit as soil taken by authority	13	20.6	3	5.6
Troubles from mixing plant operations	19	30.2	4	7.4
Other Troubles	23	36.5	5	9.3

Source: Primary Data

The majority of project affected families are facing multiple troubles or different types of damages from the operations of airports. The researcher has witnessed the gravity of the problems like big scratches even in the recently constructed walls of the houses and severe jerking of homes especially during the time of take-off and landing of aircrafts. The plantation crops like coconut trees and areca nut palms were adversely affected by the airport projects, particularly in the regions of KIAL project. The need of the hour is to apply more scientific and sophisticated technologies to minimise these types of damages including noise and air pollution. Of the major troubles, the severe one is the overflow of waste water from the elevated parts of the runways to the wells and other water sources, especially during monsoon seasons. The project affected people seriously raised this issue and firmly demanded a permanent solution to this problem. Around 41.3 and 66.7 percent of the sampled households registered this issue vehemently in the regions of Calicut and Kannur airports respectively. They posted complaints against the airport authority several times to the health department, Panchayat, Collectorate and so on.

Some of the project affected families participated in the agitations against the mixing plant which was operated by the authority to strengthen the runway of the respective airports. Its operations resulted in the emission of carbon on a large scale. It caused allergies and other health issues to many of the family members. The heavy flow of water and mud from this higher portion into the land areas and wells of PAPs, especially during the monsoon seasons. Some of the families abandoned their homestead and now they are residing in rented houses.

The extraction of soil for filling purposes resulted in the razing of nearby hills and also paving the way for forming deep pits in the location. For instance, a deep pit nearby Calicut Airport, which is popularly known as “Bengulam Pond” is a threat to many homesteads as the frequent occurrence of soil erosion may devastate those houses. Earlier, this region was a vast paddy field but now it is turned into a foul-smelling waste land. Other issues raised by the households are the difficulties associated with the selling of their properties in the open market. It was seriously reported by 28.6 percent of the affected households in Calicut Airport and 38.9 percent in KIAL regions. Many of them tried to sell their assets but utterly failed to attract a reasonable price for their properties.

Factors like rumour of land acquisition and damages from the airports are result in lowering the demand for their properties. This is one of the reasons for giving consent to acquire their land for airport expansion that we have discussed in the preceding section of this chapter. In essence, the airport authority has been accused of not taking permanent solutions to solve all these issues. The authority totally failed to prevent the flow of water from the elevated parts of the airport into wells and land areas of the residents of the local people.

### **6.8 Agitations Organised by the PAPs Against Airport Authority**

The adjoining regions of the airport have been witnessing strong protests frequently against the airport authority / the state government organised by the local people to annul their decisions regarding the airport projects. Many of the protests dragged the media attention widely as some of them ended with clashes between the protestors and the police. There were enormous discussions in the media on this hot topic of airport-induced land acquisition, displacement and resettlement of inhabitants. The interesting phenomenon in this regard is that there are contradictory interests behind the movements of agitations against the authority organized by the local inhabitants. Very often, different demands are raised in the protests by the local people within the same regions as well. This section will look at the level of participation of PAPs in the ongoing agitations, their approaches towards the protests and also their demands that they wanted to fulfil at the end of these agitations.

**Table 6.19: Agitation Programmes Against Airport Authority: Responses of Affected Households**

Responses of Project Affected Households	Calicut Airport*		Kannur Airport**	
	Frequency	%	Frequency	%
Participated in Agitations	49	73.1	50	92.6
Not Participated in Agitations	18	26.9	4	7.4
Total	67	100.0	54	100.0

Source: Primary Data

\* $\chi^2 (1, N = 67) = 14.343, p = .000$  (Significant at 5% level of significance)

\*\* $\chi^2 (1, N = 54) = 39.185, p = .000$  (Significant at 5% level of significance)

Indeed, the constant support from NGOs, green activists and also from various local clubs and political organizations beefed up the structure and demand of these agitations. As a result, the state government was forced to alter its decisions several times regarding the land acquisition for the development of the airport projects, particularly in the case of Calicut International Airport since 2007. Table 6.19 revealed that 92.6 percent of the project affected families participated in the various agitations conducted by the “Samara Samithi” against the KIAL project’s runway extension while 73.1 percent of the sampled families attended the agitations against the Calicut Airport project expansion. That is, the participation level of the PAPs is higher in the project site of KIAL when compared to the Calicut Airport. Let us observe the attitude of the PAPs towards the programmes of the movements.

**Table 6.20: Attitude of the Project Affected Households Towards the Activities of Samara Samithi**

Responses of the Householders	Calicut Airport		Kannur Airport	
	Frequency	%	Frequency	%
Strongly supported	46	68.7	46	85.1
Moderately supported	5	7.5	5	9.3
Neither supported nor opposed	7	10.4	3	5.6
Moderately opposed	5	7.5	0	0
Strongly opposed	4	6.0	0	0
Total	67	100.0	54	100

Source: Primary Data

It is really interesting to discuss the attitude of the heads of the project affected households towards the different programmes of the Samara Samithi (known as Kudiyozhippikkal Prathirodha Samiti – KPS in the regions of Karipur, Pallikkal, Kondotty and Nediyruppu in the Malappuram district; Kudiyirakku Virudha Samiti in the regions of Elambara, Kotheri

and Velliyamparamba in the Keezhallur Grama Panchayat in the Kannur district) like picketing of collectorate, procession march to the front gate of the airport, standby protest and black flag demonstration, staged blockade in front of the village offices and so on. It is to be noted that a few heads of the households responded that they have supported the protests and extended their financial aid to conduct their activities but they were least interested in participating in the procession or other kinds of protests.

Around 68.7 percent of the households strongly supported all kinds of activities of the Samara Samithi in the CCJ site whereas this figure in the KIAL site is 85.1. Interestingly, 10.4 and 5.6 percent of the sampled project affected families from the CCJ and the KIAL, respectively, registered their indifferent attitude towards the Samara Samithi as shown in table 6.20. Some of the affected families neither supported nor opposed the activities of the protesters. The number of households who opposed the activities of the Samara Samithi is nil in the KIAL site while there are five heads (7.5%) who moderately opposed the Samithi and additionally, four families (6.0%) strongly opposed it in Calicut Airport site. Let us examine the responses of the heads of project affected families regarding the question: “Why did you participate in the agitation?”

### **6.8.1 Motives Behind the Participation in Protests by the PAPs: Project-wise Analyses**

Every protest or agitation is organised by the inhabitants to achieve certain goals. There are divergent reasons to form an anti-eviction movement by the PAPs. Reasonable demands have been raised by them in the agitations. The massive involvement of women and children in agitations underscored their apprehensions regarding the government’s new proposal of land acquisition. They loudly chanted slogans against the acquisition authority and many of the movements got wide attention on account of mass participation of locals and other supporters. There are distinct differences in the motives of project affected families in participating agitations against CCJ and KIAL projects.

Surprisingly, 63.0 percent of the total project affected families in the regions of KIAL project firmly demanded in their agitations to speed up the process of land acquisition. The reasons behind this kind of motive among them will be analysed in the subsequent section of this chapter. In contrast to this, 67.2 percent of the heads of the households in the vicinity of Calicut Airport vehemently demanded to drop the decision of the government to acquire land for further expansion of the project. Additionally, they vigorously urged the authority to shut down the special land acquisition office which was opened by the revenue department to accelerate the process of land acquisition for further development of the airport. Similarly,

18 households (33.3%) from the site of the KIAL project demanded to stop further land acquisition in the agitations as shown in table 6.21.

**Table 6.21: Intentions of Project Affected Households in Attending Agitations**

Responses of the Householders	Calicut Airport		Kannur Airport	
	Frequency	%	Frequency	%
To stop the land acquisition	45	67.2	18	33.3
To get fair compensation	3	4.5	31	57.4
To get land free of cost	2	3.0	39	72.2
To get jobs in the project	18	26.9	28	51.9
Against mixing plant operations	13	19.4	1	1.9
To speedup land acquisition	0	0	34	63.0

Source: Primary Data

Similarly, 31 heads of the families (57.4%) from Kannur Airport responded that they have been participating in the protests only to get enhancement in the compensation amount along with attractive rehabilitation packages including 10 cents of land free of cost with all amenities, permanent jobs in the project and so on. That is, their real intention is not to stop the land acquisition process but to get better compensation from the concerned authority. They believed that resistance from the part of the PAPs will force the concerned authority to design attractive rehabilitation packages. At the same time, there is not a single household among the sampled PAPs in the adjoining areas of Calicut Airport demanding the authority explicitly to acquire land for the project. Here the slogan of protesters is “Not an inch of land for the expansion of the Calicut Airport.”

Around 19.4 percent of the households formed protest movements and actively participated in them against the authorities of the CCJ project when they operated a mixing plant to rejuvenate its runway. Another 26.9 percent of the sampled project affected families in Calicut Airport site conducted agitations to get jobs in the airport project and also against the non-transparent selection procedures of the authority. In essence, the primary purpose of protests in the KIAL site is to get better compensation including free land, decent jobs in the project and other facilities. Majority of them really wanted to avoid delays in acquisition of their lands. Unlike the KIAL site, the affected households from the CCJ site demanded the cancellation of new land acquisition proposals. Their demands also include the effective measures from the authority to mitigate troubles, on account of airport operations, which are confronted by the PAPs. For instance, the demand for taking conducive steps to prevent



heavy flow of water from the airport into locals' wells and land areas. However, some other organisations, say, Malabar Airport Development Action Committee (MADAC), are continuously demanding for making speedy actions to acquire additional land for Calicut Airport to construct aprons, car parking, new terminals and to runway expansion.

### **6.9 Land Acquisition and Prioritisation of Expectations of Project Affected Households: Project-wise Analyses**

Let us look at the responses of heads of the project affected families when they are asked with a question: "What is your expectation from the project if they acquire your homestead?" The researcher has conducted several rounds of discussions and consultations with the project affected persons which helped him to derive ten major expectations linked to rehabilitation packages when the authority acquires their land and displaces them. The statistical tool of five-point Likert scale is adopted to understand the preferences of project affected households regarding their rehabilitation packages. Additionally, the Focus Group Discussions with the PAPs which added to the subsequent section of this module will provide more insights regarding the anticipations of PAPs. Table 6.22 gives the mean values and Std. Deviation of the variables linked to their expectations.

**Table 6.22: Project Affected Families and their Expectations on Ten Vital Components and their Preferences: Descriptive Statistics**

Key Expectations of Project Affected Households	Calicut Airport		Kannur Airport	
	Mean	Std. Deviation	Mean	Std. Deviation
Fair compensation	4.55	0.702	4.67	0.614
Free land	3.91	1.026	3.93	0.749
Build home at free of cost	2.63	1.191	2.93	0.929
Ensure basic facilities	4.33	0.911	3.80	1.459
Prevent loss of neighbourhood	3.73	1.377	3.28	1.433
Job as per qualification	3.37	1.434	3.41	1.511
Utilize existing land properly	3.64	1.334	1.96	1.081
Ensure participation of affected persons in designing rehabilitation packages	2.97	1.466	3.09	1.404
Set aside particular percentage of shares for PAPs	2.93	1.329	2.89	1.298
Utilize CSR judiciously for the welfare of PAPs	3.09	1.311	3.41	1.267

Source: Primary Data

The component of fair compensation occupied the highest priority among project affected persons in both the projects. Its mean value is 4.55 in the CCJ site and 4.67 in the KIAL site. The visible difference in the mean values can be seen in the case of the expectations of utilizing the existing land properly by the authority. Its mean value is 3.64 in the CCJ site and in the KIAL site, its value is only 1.96. Let us conduct an independent t-test to understand whether the difference in the mean values of key expectations of project affected families between Calicut Airport and Kannur Airport is statistically significant or not.

$H_0$ : There is no significant difference in the mean values between CCJ and KIAL.

$H_1$ : There is a significant difference in the mean values between CCJ and KIAL.

**Table 6.23: Independent Samples Test: Expectations of Project Affected Persons**

t-test for Equality of Means					
t	df	p-value (sig.)	Mean Difference	95% Confidence Interval of the Difference	
2.719	119	.008*	.17974	Lower	Upper
				.04885	.31063

Source: Primary Data

\*The p-value (.008) is significant at 5% level of significance

To test the null hypothesis ( $H_0$ ) that there is no statistically significant difference in the mean scores of observations of the project affected households regarding their rehabilitation packages between CCJ and KIAL, an independent samples t-test was performed. The independent samples t-test manifest a statistically significant difference,  $t(119) = 2.719$ ,  $p = .008$ . Thus, the difference in the mean scores of the project affected households between CCJ site and KIAL site is statistically significant at 5% level of significance. That is, we can reject the null hypothesis.

### **6.10 Focus Group Discussion (FGD)**

Sufficient qualitative details were collected by the researcher from the FGDs, one near Calicut Airport and another near Kannur Airport. The principal role of the FGD is to help the researcher to gather views and responses of PAPs regarding their gains and losses from the operations of Calicut and Kannur Airport projects. Besides this, great emphasis has been given to the anxieties and expectations of the inhabitants when the government takes up measures for the acquisition of land for the airport. The discussion was started with a broad question regarding their approaches towards the Surveyors appointed by the authority and also attempted to mobilise their opinions regarding the Social Impact Assessment initiative of the Government. In FGD, experts firmly suggested to follow funnel approach to questioning

(Millward, 1995; Stewart & Shamdasani, 2014) to obtain more reliable information from the participants as well as inverted funnel sequence method of questioning (Marshall & Rossman, 2014) to get more observations and views from them regarding airport-induced land acquisition, displacement and resettlement.

The questions included both closed-ended and open-ended questions. The researcher has made sincere efforts to collect maximum information from the FGD by preparing the most relevant questions and statements and also intervened in the discussions by asking appropriate questions. Let us discuss the observations made by the project-affected persons who are residing in the adjacent places of the Calicut and Kannur International airports, in the Focus Group Discussions held at Koottalungal, 10<sup>th</sup> ward of Pallikkal Grama Panchayat, Malappuram district and Kotheri, 8<sup>th</sup> ward of Keezhallur Grama Panchayat, Kannur district. The FGDs were conducted on 13<sup>th</sup> July 2019 in Koottalungal and 21<sup>st</sup> September 2019 in Kotheri region. The following groups of people took part in the process of collecting qualitative data and other information of the project-affected persons (PAPs) of the two airports chosen for a comparative study.

- |  |                           |
|--|---------------------------|
| ✎ Heads of the project affected households | ✎ Local students          |
| ✎ Members of Panchayat                     | ✎ Members of Kudumba Sree |
| ✎ Local political leaders                  | ✎ Health Inspectors       |
| ✎ Leaders of protesting committees         | ✎ Representatives of NGOs |

### **6.10.1 FGD With PAPs from Calicut Airport Project Site**

Kuttappu, who was about eighty years old, stood up from among the participants' group and said, "As an individual who is residing near the airport, I have to tell certain things." He shared with the audience the necessity of the airport and the expectations it instilled in the minds of the people in the light of his own experiences. At the same time, he boldly criticised the unscientific methods adopted in the developmental activities of the airport. The airport authorities miserably failed to solve the problems of the people who live near the airport. Kuttappu had surrendered his house and compound to the airport for its developmental purposes. The gist of his opinions is given below which was widely applauded by all the participants in the FGD.

Some of the people who belong to older generations may be recollecting even today the tedious journey of expatriates in the 1980s which took more than two days to reach Bombay while they were travelling abroad with hopes of better employment facilities and a host of

other aspirations. In those days, they flew to the alien lands from Bombay International Airport after travelling continuously for more than two days by train from their homes. A journey by bus was also irksome. This was the condition in Malabar before the opening of Calicut Airport in 1988. The only other alternative to reach foreign countries in those days was a journey by sea. Spending at least five days from the limited number of days granted to them towards leave, as far as the expatriates who were coming home on vacation were concerned, was a great loss. This Bombay-journey and the short-term leave really increased their stress and strain. The hopes and aspirations of the entire expatriates of Malabar also flew with them to other countries when aircrafts began taking off from Calicut Airport (popularly known as Karippur airport). Though they had to make many sacrifices and incur heavy losses, the opening of Karipur Airport was a great blessing for them. Conveniences in the airport at the initial stage were very limited. Only four aircrafts could land at one time. The total area of the airport was only an extent of 25 acres of land.

Karippur, which is located in Pallikkal Grama Panchayat in Malappuram district and its neighbouring areas, however, had undergone drastic changes with the opening of this airport. Trade and commerce in the region enjoyed an unprecedented boom. Business was flourishing. The secret behind this sudden development could be attributed to nothing but the functioning of this airport, reiterated by a participant in the FGD. The people of Karippur and the inhabitants in the neighbouring villages had surrendered their lands and residences for the purpose of the airport. They were subjected to compulsory acquisition of land for twelve times. Compensation given to them was meagre. Those who lost their lands were thoroughly dissatisfied with the negligent attitude of the airport authorities and government officials. Murmurs of complaint and dissatisfaction arose from different corners. No wonder the inhabitants in the region organised themselves and launched agitations against further acquisition. They protested against government officials and airport authorities. When surveyors came with demands for measurements, they had to face wide and well-organised protests from the victims and their leaders. On many occasions, the surveyors had to return.

Mr. Jasir C, Convenor of the agitation committee under the banner of Anti Land Acquisition for Calicut Airport Extension, says that even students who approached the project-affected families for collecting some information for their project works in relation to their degree programmes were mercilessly driven away from this location. The inhabitants firmly believed that those students who approached them represented the acquiring authority and they

were cunningly trying to conduct a social impact assessment (SIA) survey. Mr. Neelandan, a resident whose house is very close to the airport-boundary expresses this opinion and reveals the fact that his homestead is included in the recently announced proposal-list of land-acquisition for Calicut Airport extension.

Nafeesa, an old woman, recalls to her memory of providing the survey-team with tea and biscuits twenty-five years ago when they came to measure the land in her possession and enjoyment. As a result of the compulsory acquisition, she had to surrender her land, receiving the paltry amount the authorities offered her. She can remember only with a sense of deep regret the moment of her stepping out from her dwelling with a new born baby in her arms and other young children. The compensation distributed to her was insufficient for finding a suitable and permanent accommodation for them. Her husband was working abroad (Kuwait) at the time of land acquisition and displacement. Subsequently, this family managed to purchase a homestead somewhere near their acquired residence. This decision was taken by the head of the family primarily to avoid the situation of resettlement in new places. However, now this family is living with a panic of further acquisition as the Government of Kerala has granted green signal for acquiring land for the extension of the Calicut Airport. Her property which consists also of her homestead is included in this new proposal.

Maybe because of this negligent attitude that the inhabitants do not let the authorities approach them with further demand for acquisition in the name of developmental purposes. The airport authorities are in possession of many acres of land which are still lying vacant. This is a notable opinion expressed by Ambalangadan Muhamed Master, another participant in the FGD. It is under these circumstances that the local people vehemently oppose any move from the government to acquire land for the airport or its further development. They insist upon scientific use of the land lying vacant under the possession of the airport authorities. Mini Mol, one of the councillors of Kondotty Municipality, asserts her view that people had surrendered their lands to the authorities only to cooperate with developmental programmes of the region. As a result of this cooperative attitude, they lost their centres of worship, burial grounds and children's playgrounds also. She boldly protests against the recent move from the government to acquire land by displacing thousands of families for its extension in favour of corporate business giants. She believes that some people at the helm of affairs have an axe to grind behind all these decisions.

Because the authorities gave a deaf ear to the genuine demands of the local people, social impact assessment had to be stopped. As per the new decision, an extent of 152.5 acres of land has yet to be acquired. This proposal includes 137 acres of land from Pallikkal Panchayat and the remaining 15.5 acres of land from Kondotty Municipality. Mr. Afthar Ali, a participant who built his homestead very recently, states that the proposed land could not be acquired because of the strong and organised opposition from the local inhabitants. They drove away a group of surveyors who came from Bosco College, Kannur and another group from Kerala Volunteers' Health Services, Kottayam to conduct SIA survey.

Another participant, Mr. Ambalangadan Moideenkutty, said that the authorities offered the people a number of enticing promises as compensatory packages for surrendering all claims to their lands and residences. Some of these promises are given below:

- ✘ Considering availability of electricity and road accessibility, an attractive amount will be given for the property surrendered to the authority.
- ✘ Guaranteeing a minimum area of land between 4 cents and 10 cents to all displaced families irrespective of the size of their land holdings.
- ✘ Considering qualification, job-facility will be made available to one member of the family.
- ✘ The package will also include an amount for the payment of rent during the transition period. This facility will be available to all affected families for six months after evacuation.
- ✘ The affected families can transport all movable materials from their acquired home and cut trees from their land areas free of cost.
- ✘ Ensure a proper resettlement of displaced families.

Another participant, Mr. Nasar O.P, who recalled his previous experiences of land acquisition and displacement for Calicut Airport development, said that, "The authorities had promised to appoint one member of the family in a vacancy according to his / her educational qualification along with attractive monetary and other compensation for surrendering claims over their acquired properties but 95 percentage of these enticing promises remained unfulfilled." Now Mr. Nasar is going to experience the incidence of double displacement as his residence and the land which is lying around it are included in the new list of properties intended to be acquired. Only a very small number of people were benefitted by these offers. According to Mr. Jasir, the number of permanently appointed persons in the airport was very low. He added that most of the people who were included in the list were appointed on a

contract-basis, that too in the cleaning department such as sweepers or attenders. Subhadra, one of the members of Kudumbashree ADS (Area Development Society) says that nobody has been appointed according to their educational qualifications. Ignoring the applications of a number of graduates, highly qualified local youths and even those who have successfully completed their aviation-courses, north-Indian candidates are appointed through agents by resorting to all sorts of fraudulent means. The local people are prompted to raise their doubts as to why the authorities fail to show mercy to the dependents of the people (DPs / PAPs) who have relinquished all their claims over their properties and surrendered them for developmental purposes.

In the subsequent session of FGDs, the researcher gives stress on the areas of benefits from the airport projects enjoyed particularly by the project-affected persons. Indeed, developmental projects such as airports foster economic activities in the region and also augment the operations of allied sectors in an economy. Let us observe the opinions made by the participants of FGDs regarding the benefits from the CCJ and the KIAL projects.

Muhammed Ali Master, who is working as teacher in a higher secondary school in Kondotty near Calicut Airport, is of the opinion that most of the promises remain unfulfilled. Still, one cannot deny the advantages of the airport. Of course, the disadvantages outweighed the merits on certain occasions. He added that some local people got jobs in airport as taxi drivers, cleaners, technicians, security guards and so on. Their appointments were on a contract basis. The allied sectors, especially the cargo business, are regulated by the affluent people and they usually hire labourers from other states. The PAPs terribly failed to reap the benefits from the opportunities opened by the airport. Another participant loudly responded that they are destined to face all difficulties from the Calicut Airport operations and others, who are hailing from other parts of the country are fortunate to harvest maximum benefits from it.

Chukkan Bichu, an Engineer and former councillor of Kondotty Municipality, says, “The airport authorities should not forget the fact that by keeping away the local candidates from even petty posts, they are doing injustice to a generation whose ancestors had surrendered all their properties and sacrificed their lifelong earnings for a public cause. Their main means of livelihood was from farming operations. With the construction of the airport, they lost their occupations and had to strive for turning over a new leaf.”

Because of the constant use of crusher, concrete and other materials for the construction of the airport, the water in the wells in all the nearby localities was polluted; the drinking

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water in them tasted kerosene. Some of the children were afflicted by diseases. Protests from local residents increased against water-pollution. They submitted their petitions before the authorities to redress their grievances. As a result of constant complaints and wide protests, the authorities dug a well for the local public. In addition to this, they built an auditorium in the nearby school, using CSR fund, remarks Mrs. Arifa, a native who is working as Rationing Inspector at Taluk Supply Office, Kondotty. They also gave funds, furniture and other assistance to 'BUDS' School, a school for the differently abled children. Mrs. Suhra P, a member of Pallikkal Grama Panchayat informed that the authorities also extended their cooperation in funding Nalanda School, Private Health Centres and other programmes for the construction of public wells.

The fact is that the airport authority had spent only a meagre amount for the development of its surroundings. Undoubtedly, the local residents, who are forced to surrender their properties for the authority for the development of the airport, anticipated a splendid future with its growth, but the ground reality is too short of their expectations. The airport authority could have done more in this regard. Another remarkable observation made in the discussion by Mr. Muneer K. C, a participant is that the airport authorities must use their CSR fund judiciously for the socio-economic development of the region which is their primary responsibility rather than a generosity from them.

"We won't surrender an inch of our land" was a slogan raised by the local people against acquisition of land. A group of protesters against acquiring land around Karipur Airport raise the same slogan nowadays also. They assert that there is no point in acquiring land again for the Calicut Airport in the name of expansion programmes when there is still a very large extent of convenient land under the direct possession of the airport authorities acquired at twelve times. Mr. Jasir C responds, "Those who had surrendered more than fifty cents of land and residence to the authorities are now living in an extent of five cents each." This is one of the reasons why the local people raise their protests against the government's intervention.

Registrar Mr. Ahmed says, "I built my residential building two years ago. How can I surrender this property to the airport authorities? Even if they give me land for the construction of a new house, I won't be able to build a new house with the available funds. Besides, physical problems will also retard the progress." Shameer, an autorickshaw driver of the locality, is



totally against any further acquisition. Kuttappu, another participant, whose land had been acquired five times recalls his sad experiences after each acquisition.

Interestingly, Mr. Raveendran, one of the active participants of the Samara Samiti against the extension of the KIAL project, recalled his journey which started from Kannur along with a group of people to the regions of PAPs of the Calicut Airport. The primary intention of the journey was to understand the techniques and means of agitation organised by PAPs against the Calicut Airport-induced land acquisition and displacement. They made a fruitful conversation and mutually shared their strategies and plans. Eventually, Mr. Raveendran and others formed an agitation wing consistent with lines of protests organised by the PAPs from the Calicut Airport project site.

Expert opinion is that Calicut Airport is not constructed at the most suitable place. A very large number of people still live near the airport. Some of them are displaced persons. They face many problems. They are forced to live there because they don't have an alternative before them. Mr. K.K. Alikutty, a writer in the locality, says that the sudden decision to acquire the land caused many problems in the region. Some of the residential buildings in the locality are badly affected by the flood of heavy rain from the elevated areas of the airport due to lack of proper drainage schemes. The authorities usually give a deaf ear to their sorrowful complaints. It is only on very rare occasions that they go through the written complaints and petitions. Even if they do something, their responses will be very late. They always fail to do something concrete in the matter and the local people are badly affected by the negligent attitude of the authorities. The locals are dissatisfied with the insincere and temporary measures of the authorities. What they want is a permanent solution for these seasonal calamities. Alikutty adds that the table top runway of the airport was constructed by filling a plain area with soil which either razed existing hills in the surroundings or created huge pits in the adjacent places of the project. Some private contractors managed to harvest a large amount of money by handling all these allied activities.

Mr. Neelakandan, a participant, viewed that due to heavy rain and the violent flow of water, the compound-wall around the airport at its southern side fell down here and there and dirty water flows heavily through the roads and residential areas of the locals, causing untold miseries to the people and great damages to their properties. There were instances of soil-erosion due to the violent flow of muddy water from the airport compound during rainy

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seasons. As a result of this some of the wells in the locality were damaged by filling them with mud and other waste materials. Another respondent states, “No specific action has been taken to mitigate the problems permanently.”

The locals recall correctly an instance of pythons and other reptiles entering into their dwellings two years ago from the airport compound when its compound wall fell down in the southern side. In the heavy flow of dirty water mud, carcasses of animals and large quantities of dried leaves were brought into the wells. Here again, the locals were the losers. Another participant in the FGDs said, “Till this moment, no permanent solution has been made to avoid such irritating incidents.”

The septic tank inside the airport-compound gets damaged by rain-water at times during heavy rains and black, filthy water flows into the wells of inhabitants outside the airport compound. Mrs. Zubaida, one of the locals, remembers how her two young children were afflicted by the malady of dengue, an infectious fever caused by mosquito-bite when her well was filled with this kind of filthy water in which mosquitos grew in large numbers. They were laid up in a hospital for a fortnight until they got recovered from the fatal disease. The jerk caused at the time of take-off and landing also damages some residences in the area. Shabeeb, a local resident who is running an internet café, says that the mobile-jammer established for the airport-security causes troubles to the users of phones and internet in the region.

With the opening of the airport, western culture began slowly spreading in this small village. Veerankutty Master, says that anti-social elements have intruded into the locals’ private affairs because of the rapid spread of western culture and its bad impacts on social life. He is also of the opinion that it will definitely have a detrimental influence on young generation. Mr. Kalathingal Imbichi Bava, a famous clinical psychologist who lives near G.V.H.S.S Kondotty, expresses his view that most of the inhabitants of the airport-border are mentally ill and irritated because of the continuing problems created by water-pollution, air-pollution and clouds of dust blowing in the wind at the time of landing of the planes. In addition to these, majority of them are living here with a panic mind because of the continuous news or rumours about the coming land acquisition initiative of the government for the development of the Calicut International Airport.

Waste materials like rotten foods, used gloves and masks are thrown to the compounds of people who are living near the airport. This is a great nuisance at a time when COVID-19

is spreading everywhere. A huge water-tank which contains 75000 litres of water has been placed very close to the house in which one Abbas and his family are living now. Mr. Alungal Abdul Azeez, Health Inspector, is much worried about this. He says that this gigantic water-tank is leaky and that if its leakage increases, the compound-wall of the airport near it will collapse and will create irrecoverable losses to the lives and properties of the people who are living nearby. Many dwellings will be wiped out and the people will become silent spectators to a man-made tragedy.

Mr. Abdussamad who lives near the compound wall of the airport is afraid of reptiles and other poisonous creatures entering his house and compound as the compound walls are not plastered. At any time, this wall may collapse. With the opening of the airport, the pathway to his house is also blocked. Additionally, the waste-tank from the flight is let out here. The airport authorities always ignore all the complaints about it. As a result of the negligence caused by the authorities, a large number of teen-agers and septuagenarians are allergic to such rubbish and foul smells. Mr. Abdul Azeez adds that it is unrealistic to believe that the conditions of DPs/PAPs will improve even when the airport authority doesn't give compensatory packages and rehabilitation facilities to them.

One Mr. Thottoli Abbas was very much disappointed when half portion of his house and a piece of his land which extended about 22 cents were acquired by the authorities. He was a physically disabled child in those days and he remembers well how his parents had suffered with him and his young siblings. It took many months for the completion of the structure of their residence. Even today, they don't have a proper way to their house. He is now living with his wife and children. Since there is no road-accessibility to his house, he finds it extremely difficult to find suitable grooms of his four daughters of marriageable age. Among many other things youngsters give due importance to road-accessibility also. Their mother prays that a day may come when her dead body can be carried along a convenient road to the burial ground.

Large quantities of soil, laterite stones and granite were needed for the construction of the airport. Owing to the unscientific activities of the contractors who were entrusted with the task of supplying these essential materials, large and deep pits were formed in the surrounding areas. Some of these pits on the side of the roads pose problems to pedestrians and traffic. Some anti-social elements have no scruple in depositing waste materials in them. Indeed,

it is remiss of them to resort to such unhealthy and anti-social activities. Really, the locals are the sufferers. The dearest and nearest of these locals are often reluctant to call at their residences. Six house-holders of this locality complain that they find it very difficult to have their meals at home because of the proximity of airport comfort-stations. Leakage in them and from the toilets is another serious problem. A very large number of house-holders have lost their way to their residences. Many people left their dwellings. Yet, some other people who are not able to accommodate somewhere else still manage to continue there under this unhealthy atmosphere.

Mrs Sreeja, one of the ASHA workers of the locality, says that a large extent of the acquired land which is under the possession of the airport authorities is not properly utilized for developmental purposes and is overgrown with weeds and other wild vegetations. It remains really a threat to the locals as it is the meeting place of many unruly and anti-constitutional elements in the society. The use of liquor and intoxicating drugs increased. Some youths were attracted towards irreligious activities. Social workers took the initiative to take them to de-addiction centres. The health inspector is not optimistic about the days ahead of their lives.

The road that was connecting Koottalungal with Kondotty town does not exist now. It is under the runway. Mr. Rayin, another participant asserted, “Instead of travelling one mile directly to the town, the people of this region have to travel more than six kilometres to reach there these days.” During the days of airport-construction, lorry drivers drove their vehicles very rashly and negligently. As a result of this negligent driving, many people lost their lives in accidents. Not even a single rupee was given to the families of these poor victims towards compensation or financial assistance. Mr. Abdullakytty, a local resident, states that the locals protested against the authority demanding a permanent solution to end the spread of massive dust on account of uninterrupted passing of heavy vehicles with soil for the purpose of building table top runway. As a result, the authority guaranteed them to spray water regularly to mitigate the problem.

Ambalangadan Mohamed Master, a local resident, explains how he and some of his friends and acquaintances were adversely affected by an acquisition of land in the name of expansion of the runway of Calicut International Airport. He was born and brought up in Melangadi near Kondotty. The scarcity of water prompted him and some of his friends and acquaintances to shift their residences to Koottalungal, a calm and quiet rustic area

only in walkable distance from Melangadi. They bought cultivable lands there, dug wells, built houses and started living peacefully. Acquisition of land for further expansion of the airport-runway turned everything upside down. About 300 meters of Kondotty-Tirurangadi Road was blocked before reaching Koottalungal. Dropping thousands of loads of soil, this area of the road was raised to the level of the runway and a new road was built encircling the airport boundary walls on all sides. Now, the inhabitants of Koottalungal, Tharayittal and the passengers to Kunnumpuram, Tirurangadi, Chemmad and other areas have to travel five kilometres more instead of covering a short distance of nearly 300 metres. Furthermore, they are forced to hire auto rickshaws or cars and pay a big amount to reach home as there are no buses plying along this route after 7 p.m.

Mr. Rasheed, a local resident who is engaged mainly in digging wells, said that one has to dig deeply to get water due to depletion of water in the ground level. The primary reason of this incident is the wide dependence on bore wells especially by the airport authority in the peripheries of the airport. The razing of hills and filling of land with soils for building a runway adversely affected the availability of water. Mr. K.C. Muneer, whose homestead is located near the airport wall, mentioned in the discussion that earlier his well was full of water irrespective of changes of seasons. Now there is only a little measure of water in it due to many reasons. Contamination of water, colour change, foul smell, etc. are some other problems. Earlier, his neighbours depended on this well during summer seasons but now his own family itself is facing acute shortage of water.

The researcher has intervened in the discussion by giving a last question on their expectations regarding the rehabilitation packages and also their suggestions to redress the victims' grievances. Along with the compensatory amount, an evacuated person must be given land and one member of his / her family must be appointed in the existing vacancy or in the vacancy that is likely to arise in the airport as was done by the KIAL, said another participant. The difficulties caused to the locals and other continuing problems must be solved when water flows out heavily from the airport compound. Construction of drainages and their proper maintenance are very essential also. The locals invariably need a permanent solution to these issues. Mr. Noufal, another participant states: "The scientific approach is essential in this regard rather than resorting to ad hoc redressal mechanisms."

As far as possible, spend a major portion of the Corporate Social Responsibility (CSR) fund for the development of the locality and for the welfare of the people who have suffered for

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the expansion of the airport. This step may help the authority to transform the PAPs from the so-called losers to gainers. The fund can be utilised for augmenting the social infrastructure of the region like school buildings, health care centres, skill acquisition and training centres, playgrounds and so on.

Take a genuine interest to know the real problems of the local people (displaced and project-affected persons) and appoint an authority-team for that purpose. Mr. Rayin adds that the study may enable the authority to frame effective measures to mitigate their problems and also to take steps to ameliorate their living conditions. Avoid acquiring land part by part at different stages so that the locals may live in the existing land without the fear of further acquisitions. Lack of long-sightedness of the authority results in double displacement of the inhabitants. In extreme cases, there are chances of triple or multiple displacement of them.

The authorities may enquire about the living conditions of the evacuated people in their new settlements and make sure that they are having the basic needs of a healthy living. We can understand the facts from the sampled respondents that the airport authority never makes a study about the state of living conditions of the DPs and PAPs. The need of the hour is that the system must include the provision of compulsory enquiry about the socio-economic conditions of them at least thrice in the first decade of their life after the land acquisition for a project, said another participant.

Dig wells for public use and increase drinking water-facilities. The issues, related to the sharing of basic facilities such as drinking water and link roads, particularly in the resettled areas between DPs and host population can easily be resolved by augmenting these basic facilities there. It is the sole responsibility of the authority to identify conducive places for resettlement purposes. The mentality of the authority to resettle DPs in unfit regions should be avoided. Mr. Mohamed Master states: “Appoint a special team to avoid the difficulties of evacuated people and make available to them their compensatory packages without the payment of bribes and the unnecessary interference of intermediaries.” Avoid appointing candidates in the existing vacancies through agents and filling all the posts with people from outside.

### **6.10.2 FGD With PAPs from Kannur Airport Project Site**

“An area which was not thickly populated was selected for Kannur International Airport (KIAL). Because of this, at the initial stage, only a very few families had to be evacuated but a large number of people lost their lands.” This is a firm opinion expressed by one Mr.

Narayanan who has been living in Velliyamparamba, Kannur since 1955 where the KIAL project is located. Attracted by enticing offers and promises, they welcomed surveyors and other concerned authorities. Attractive amounts towards compensation, rehabilitation-packages ensuring good neighbourhoods, land along with compensation, electrification, availability of water, road accessibility and other conveniences were some of the alluring prospects before them.

The people, however, are facing a lot of problems. Another participant added that one of their severe problems now is non-availability of pure drinking water. Mr. Pururshothaman, another participant says that this is because of rehabilitating all the evacuated people at one particular area as per their demand. In addition to all these difficulties, they are afraid of being evacuated once again in the not-too-distant future.

There are contradictory observations that emerged from the Focus Group Discussions regarding the approaches of PAPs towards SIA survey. The majority of participants from the side of Kannur Airport have strongly cooperated with the surveyors. They welcomed them with the expectation of better prospects after displacement. They anticipated a better rehabilitation package as in the case of their predecessors. They have already witnessed from the displaced inhabitants who built modern houses with all amenities and got jobs in the KIAL project. In contrast to this, the PAPs from the Calicut Airport have lost their faith in airport authority as they have broken their promises offered to the DPs in the previous phases of land acquisition for airport extension.

There were only a very few numbers of inhabitants in the locality when land was acquired for the first time for Kannur International Airport Limited (KIAL). A major portion of the acquired land was uninhabited. Mr. Ravi, a participant in FGDs, said that as it was a joint venture with private participation, the compensatory packages offered to the displaced persons were very attractive. Some of the promises put forward by them are given below:

- ✕ Very attractive amount of compensation will be given considering the quality of the property.
- ✕ An extent of 10 cents of land will be given to all along with the compensatory amount.
- ✕ A member of the evacuated family will be appointed at the airport as per his / her qualification.
- ✕ Wells will be dug for public use.
- ✕ Permission will be given to cut down trees from the acquired land and the evicted residents will be allowed to take all portable materials from the acquired properties.

Mr. Satheesan, an ex-member of Pazhassi Grama Panchayat asserted that 90 percent of the promises made by Kannur Airport authorities have been fulfilled. This is entirely different from the attitude of Calicut Airport authorities. In Kannur, the airport authorities gave all the evacuated families 10 cents of land and all other conveniences which they needed. A member of each evacuated family got an appointment also. Another participant remarked that the local people were very much pleased by all these offers. “It is quite interesting to note that the local people in Kannur come forward with a demand for acquiring their properties,” says Mr. Satheesan. Another reason that prompts them to launch such an agitation is that they are not in a position to sell their properties as and when they are in need of money because of their proximity to the airport. The compensatory amount which the airport authorities give for the acquired properties cannot be expected for the remaining uncultivated and unoccupied land.

The people were much benefitted by the public well dug by the KIAL, according to Mrs. Devutty, a resident of Mattannur Municipality. A contradictory statement raised by another participant against the KIAL project is that most of the inhabitants who are living nearby the KIAL had been deprived of their rights over their properties once or twice by giving them paltry sums. Mr. Sabu, one of the inhabitants says that the authorities had positively considered the request of the affected persons to accommodate them in the locality itself so that their relationship with their dearest and nearest might not be severed.

Mr. Raveendran, a local resident, said that the airport authorities appointed many candidates in it. Furthermore, they rendered their assistance in giving them sufficient training. During the rainy season, eight residential buildings were badly affected by heavy and continuous rain. The airport authorities accommodated the affected persons in convenient places and paid their rents till they returned to their own houses, Mr. Raveendran asserted. It is firmly believed that the expectation of better life after displacement mainly on account of fair rehabilitation packages of the KIAL authority incentivise the PAPs to surrender their homestead and other properties for further expansion of it.

The agitations launched by local people requesting the authorities to acquire their properties for the airport attracted the attention of the press and the general public. “Acquire our properties also” was their slogan, another participant says. The reasons which they put forward were as follows:

- ✎ They were isolated from others as most of the properties around their habitats were acquired.
- ✎ As the airport was one of their boundaries, their land value decreased to a great extent



and there was no demand for the properties of some of them when they wanted to sell a portion of their land.

- ✎ The third reason was interesting. Even though a few people had protested against acquisition at the beginning, most of the local people later supported it as they were greatly attracted by the compensatory packages offered for the affected people. The amount they received was much higher than the existing land-value of the area. The losers of houses were allowed to take away useful building materials like doors, windows and stones from them. Wells were dug for public use.
- ✎ Some people considered the acquisition as a blessing in disguise. At first, they were living in isolated areas without any conveniences of water, electricity or transportation. Now, when they shifted to the new lands offered by the authorities, they were able to enjoy all these conveniences.

The unscientific methods adopted in the construction of the runway naturally resulted in polluting drinking water in the wells in the neighbourhood. A very vast area of cashew-nut garden (this region is locally known as Moorkamparamba) was selected for this purpose. It was on this garden-area that all those trees were cut down and a new runway was made. The local people say that there were a large number of wells in these gardens which were destroyed completely by filling them with roots and woods of cashew trees, soil and stones. Mr. Rajan, a native participant averred, “By using JCB and such other modern implements all the cliffs and hills were flattened for this purpose.” No sand was used for filling the wells in the area. The drinking water in the neighbourhood is odorous and filthy because of the unscientific methods used for filling the wells in the area of the runway, an elevated portion of the airport. As a result of this, even children are afflicted by many diseases, Mrs Zeenath, another participant said.

Doctors are of the opinion that it is dangerous to use this water which contains harmful elements in them as the PH level in it is very high. They spoke about some people in the neighbourhood who left their houses due to these problems. Guests or visitors who call at their residences are reluctant to drink tea or water or eat something from their residences. Mr. Ravikumar is much worried about such incidents. There is a well near the house in the compound and water is available in it. The sorrowful fact is that it cannot be used for drinking. It is at this context that he is reminded of Mahatma Gandhi’s famous lines, “Water, water everywhere. Not a drop to drink.”

One Mr. Sukumaran complains that all his genuine attempts to find a solution for this problem were of no use as the airport authorities didn’t consider them seriously. Under

these circumstances, he is forced to discourage the visits of his relatives or friends. The absence of a good drainage system is one of the problems which harasses the local people. The water that comes out from the airport causes great difficulties to the people. A few of the participants openly asserted that these are the primary factors that would be considered by them to give their homestead voluntarily for the runway extension of the KIAL project in near future. They really wanted to escape from these difficulties. There is no adequate demand for their properties from the open market. The acquisition of their land and houses by the KIAL authority is the last resort in front of them. They organised several rounds of agitations for accelerating the acquisition process. However, some other participants contradicted with their views by saying that they not ready to give up their homestead and vacate their home town for further development of the airport. The loss of burial-grounds is another problem, Mrs. Soumini, another participant said. Other participants are really fascinated with the rehabilitation packages offered by the Government and anticipate a better prospect after displacement.

According to Mr. Rajan who relinquished his job at the airport, “Local applicants were not appointed in the vacancies commensurate with their qualifications and abilities.” Those who were absorbed in some insignificant posts were paid very low salaries, he said. Most of the vacancies in the KIAL are filled even now through special agents and therefore people from outside are always the potential beneficiaries.

Some people who were evacuated did not construct residential buildings in the plots of land which were given to them by the airport authorities as a part of rehabilitation packages. Instead of that, they sold their lands to others. On such lands came up big flats or hotels. Mr. Raveendran, Chairman of the Action Committee asserts that the locals lost their privacy and freedom as a result of the increasing number of outsiders in their residential areas. Another problem is associated with the improper waste management of these hotels and apartments. Many of the projects are run by outsiders who benefited largely from the airport project. At the same time, the damages or problems that emanated from the KIAL project are absorbed by the local people, said Raveendran. Here, the gainers are outsiders and the losers are local people.

Mrs. Latha, one of the natives cites examples of roofing tiles flying out from the house in the strong wind at the time of landing of aeroplanes or their take off. Many cultivable lands were acquired for expansion programmes of the KIAL. Still, there is a likelihood of another acquisition. This drives away people from any new attempts to start cultivation in the existing land under their possession. Of course, it may result in underutilisation of existing arable land and cut in the quantity of production of food crops in the region. Similarly,

some participants sadly said that they were planning to renovate their houses but gave up the plan when they heard the rumour of land acquisition for the KIAL's runway extension continuously. Now they have been leading their life with the expectation that the authority would acquire their homestead soon. However, the extraordinary delay in the acquisition process worsened their situations further.

Lalitha, a native of Kannur, is of the opinion that the job guaranteed to a member of the evacuated family must be of a permanent nature under the KIAL. It must not be under any other companies on a contract basis. If high posts are given to the local applicants according to their abilities and educational qualifications, it will definitely be an inspiration to the growing young generation to learn well and seek better employment facilities here in India or abroad. The airport authorities can contribute to the earnest attempts of the youths to join most advanced courses, get appointments in their own areas and thereby make contributions to the development of their villages also. Through such activities, the airport can be a good model for other developments also.

The authorities should render their help to the evacuated persons to avoid the unpleasant situation of being segregated. They should be kind and considerate towards them and should do something concrete to promote their welfare and well-being, said another participant. It shall be a matter of mercy on the part of the authorities if they are prepared to make arrangements for imparting awareness to the evacuated persons and also to others in the locality who are likely to be affected by acquisition in the not-too-distant future. Try to find a suitable resettlement area for the evacuated neighbours so that they may be able to retain their former relationship again. Render the best possible help to make sure that there are hospitals and public schools in these new settlements.

It is of great significance to conduct social impact assessment studies before taking measures for acquisition. The new Act of 2013 made this provision compulsory in nature. In addition to this, there should be an environment impact assessment study before giving green signal to acquire land for any developmental projects. It is high time that we gave priority to conserve nature, ensure the balance of ecology or simply promote sustainable development goals. Make sure that the advantages of development reach every layman in the society without any discrimination of region, caste, creed or religion. Consider the market-value of the land and then fix compensatory packages. Avoid delay in paying compensation to the affected persons. Mrs. Sreeja, a member of Grama Panchayat holds the view that the authorities must take the initiative to convince the people of the various legal aspects involved in the process.

## **6.11 Concluding Remarks**

An airport is the personal pride of all the people. Needless to make a special mention that each inhabitant in Karipur as well as Kannur prided himself or herself when Calicut International Airport and Kannur International Airport became realities. Indeed, they have sweated and wept bitter tears for each of them for transforming the dream of an airport in the region into reality. The majority of the local people have a lot of complaints about the airports. They have many stories to narrate which vividly depict their sufferings and sacrifices. It was not their barren land or rocky hill that was taken by force for the development of the airport. On the other hand, a large number of families had to part with everything that was dear to them in their properties which included their dwellings, fertile fields, cultivable lands, yielding coconut and arecanut palms, acres of rich pasture, roads, wells and so on. Without any protests, the Muslims surrendered their mosque for the simple fact that the acquisition was for a common purpose. The Dalits did not make a hue and cry when their burial ground was acquired for the Karipur airport.

It is observed that the private sector component of the PPP airport model has a huge role to play in the way our government system inculcates pro-DPs policies and other welfare measures for them. The argument here is that the private sector primarily wants to finish the airport project work at the earliest to generate return from it. It is not an exaggeration to state that the involvement of the private sector accelerates the government's process of land acquisition and disbursement of compensation to DPs/PAPs. They wanted to settle all issues raised by the local residents in amicable ways and are not interested in creating an atmosphere of deadlock as it results in delays in the commencement of project and also escalates the project costs. The exertion of pressure up on the policy makers from the side of the private sector makes the rehabilitation packages become more attractive to affected persons. This trend of fair rehabilitation packages can be seen from the project site of KIAL project, the second airport built under the PPP regime in Kerala, when compared with the packages of Calicut Airport, a public sector led project in the state.

## CHAPTER VII

### FINDINGS, IMPLICATIONS AND CONCLUSION

#### 7.1 Introduction

Indeed, the discussion on DIDR is multi-dimensional and invariably demands more scientific as well as empirical studies on ramifications of developmental projects on people, environment, society, economy and so on. Developmental projects, say an airport, categorically produce two groups of people; namely: gainers or benefitted group and losers or damaged group. The compensation including solace, rehabilitation packages and assurance of jobs in the project for evictees are some measures to minimise the adversities and the argument is that the humane resettlement pattern will help them to rebuild not only their normal life but also a better life in the post-relocation phase. The multi-stages of involuntary displacement and resettlement of evictees and the resultant impoverishment risks and re-construction measures have been scientifically discussed by social scientists particularly after 1980s. The renowned sociologist Michael M. Cernea's "Impoverishment Risks and Reconstruction" Model is noteworthy in this regard.

On the other hand, development is essential to any nation. It has to advance towards progress in different ways. It is widely anticipated that the dramatic increase in the investment in well-connected infrastructure projects will generate employment opportunities for millions, ameliorate the living conditions of the people, promote better prospects for improving ease of living in the country, pave the way for fair and impartial access to infrastructure for all segments of the society and more importantly accelerate tremendous growth in the country. As we know, the aforesaid factors are the prerequisites for accelerating the GDP growth of the country which minimise the gap between the potential GDP and the actual GDP.

The present study follows a descriptive research design and its analyses are based on both primary and secondary data. The required data have been collected, by deploying the simple random sample technique, from two international airports of Kerala; viz., Kannur International Airport Ltd. (KIAL) and Calicut International Airport Ltd. (CCJ). The investigator relies on a period of 15 years, ranging from 1995 to 2010, for data collection on DPs and PAPs in which the authority had acquired land for building greenfield airport, KIAL and also for the expansion of brownfield airport, CCJ. The period had witnessed a

total of 406 households' physical displacement as they were forced to relocate from their original place to new areas for resettlement and an economic displacement of 364 families who are popularly described as project affected persons (PAPs) by the social scientists. Undeniably, these economic displacees are on the verge of physical displacement as the State Government has notified a new proposal of land acquisition for further expansion of KIAL and CCJ projects. In essence, the total project-affected persons under whom both physical and economic displacements come up to 770 households. Krejcie-Morgan formula has been used in this study to determine the optimum sample size. In brief, the study has selected a total of 256 samples, of which 135 displaced families and 121 project affected households.

## **7.2 Major Findings and Observations**

Development will definitely bring about drastic changes in a place. Along with this change, the people who live in that place will surely be affected by such natural growth. No doubt this will have its sudden and direct impacts on the lifestyles of the inhabitants also. The inauguration of Calicut and Kannur airports in the state brought about wonderful changes in the socio-economic and cultural aspects of all the people around them. Quite against their will, a large number of inhabitants were evicted from their houses for the construction of these two airports. The first acquisition of land and residences was for the construction. Later, it was in the name of further developmental purposes. The social scientists argued in their studies that the local people who were evacuated from their properties were the losers. The authority has envisaged R & R measures to rebuild their normal life in the post-evacuation phase.

The general perspective regarding DIDR is that the majority of the worst affected segments are the poor, marginalised, women, children and other vulnerable groups that one can observe and substantiate from empirical studies conducted by social scientists that we have done in the second module of this thesis. Additionally, the monetary compensation alone is inadequate to ensure a decent standard of life for the project impacted households after their displacement. The need of more holistic studies on intra-developmental projects is highlighted in the section of review of literature as majority of the studies on DIDR is focussed on particular single project like dams or inter-developmental projects. Moreover, a systematic analysis of project-affected persons or economic displacements are essential to understand the multifaceted phases of the DIDR. An attempt has been made to fill these research gaps in relation to DIDR.

The study has noted that the project affected families (economic displacees) include Antyodaya Anna Yojana (yellow card) holders (16.4% in the CCJ site and 11.1% in the KIAL site), pink card holders (47.8% in the CCJ site and 37.0% in the KIAL site), blue colour card holders (37.0% in the CCJ site and 31.5 % in the KIAL site) and white card holders (20.9% in the CCJ site and 20.4% in the KIAL site). It is found that the new proposal of land acquisition would affect largely the poor segments in both the projects. Its religion-wise discussion reveals that 70.1% of them belonged to the Muslim community in the site of CCJ and in the KIAL site, 83.3% of them belonged to the Hindu Community. Its caste-wise analysis shows that the OBC category is the predominant section in both the projects (79.1 and 59.3% in Calicut and Kannur Airports sites respectively). The percentage of SC category is higher in the KIAL site (33.3%) when compared to the CCJ site (19.4%).

One of the strategic inputs for infrastructural development is land which is inelastic in supply and inadequate to growing elastic demand as vacant land / barren land is negligibly zero in Kerala and the existence of strict law against the conversion of wet land and cultivable land to other purposes. The analyses of the sampled data revealed a dramatic decline in the land-man ratio among displaced households after displacement when compared to the average size of land area possessed by them before displacement. It was 57.04 cents of land per family in the pre-evacuation phase which had drastically declined to 27.52 cents in the post-displacement phase. More specifically, the land man ratio has steeply decreased to 4.03 cents after displacement from 8.36 cents of land before displacement. This trend clearly shows that the airport-induced land acquisition followed by displacement has adversely affected the size of land holdings of the households.

A disaggregate level analysis indicates that the average land holding was higher among the sampled households from KIAL site in both the phases when compared to the CCJ site. It was 61.27 cents and 53.23 cents per family in the pre-eviction phase of Kannur Airport and Calicut Airport respectively. These figures have contracted to 31.13 cents in the KIAL site and 24.26 in the CCJ site during the post-relocation phase. Similarly, the land man ratio also decreased to 5.01 cents from 9.87 cents of land per individual in KIAL site and in the case of CCJ, its figure has diminished to 3.29 cents from 7.21 cents. The fall in the size of land area between pre-evacuation and post-evacuation phases is statistically significant according to the Wilcoxon Signed Ranks Test.

The State Government has acquired 69.48 acres of land area from the sampled evicted households (physical displacement), of which 38.67 acres for Kannur Airport and the

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remaining 30.91 acres for Calicut Airport. Both the projects have acquired dry land as well as paddy fields. At the same time, the size of land area acquired by the authority from the project-affected persons (economic displacement) is only 4.085 acres which is meagre when compared to the land area acquired from the physical displacees. This figure as per the project wise analysis becomes 1.525 acres for CCJ project and the rest of 2.56 acres for KIAL project.

There are four categories of landholders which are formed on the basis of the size of land holdings of the displaced households – marginal, small, medium and large landholders. It is understood from the analysis that the proportion of marginal landholders who possessed the least land area among the four categories of landholders has drastically ballooned in the post-evacuation phase. Its percentage rose to 67.19 in the KIAL site from 25.0 percent before displacement. Similarly, this trend is also visible in the project site of CCJ where its figure is elevated to 54.93%. It was only 23.94% in the pre-displacement phase. Contrary to this, the proportion of large landholders has declined from 23.94 to 4.23 in CCJ site and the similar pattern has been reported from the displaced households from KIAL site, where its percentage has massively declined to 14.06 from 31.25%. The phenomenon of land alienation or landlessness happened to the majority of displaced households as articulated in Michael Cernea's Impoverishment Risk and Reconstruction Model.

The study revealed that the issue of abandoned lands has been pertinent to displaced persons from the site of Calicut Airport. Its magnitude is 51.90 cents of land area in the Calicut Airport site in which the evacuated households have not been able to receive any form of compensation from the acquiring authority. These lands are considered as waste lands as far as the displacees are concerned since these land areas do not produce any return to them nor do they fetch any value from the open market. Its figure was very meagre in the KIAL site (5 cents). The authorities gave a deaf ear to the earnest requests of the owners of those small pieces of lands to acquire them also for the airport. As they were lying near the boundary of the airport, people did not demand them for constructing a small residence in them. Not surprisingly, they are now very happy when they hear the news of a new proposal of land acquisition for the extension of Calicut International Airport as they can dispose of their abandoned lands or waste lands to the authority and thereby, they can receive compensation as per the new Land Acquisition Act of 2013. They totally opposed all movements organised by the local people under the aegis of the Samara Samithi against the authority's new proposal of land acquisition.



The analyses of basic amenities enjoyed by the households during their two distinct phases reflect considerable changes in accessing drinking water, road accessibility, power connectivity, travel distance to reach town and so on. Some of them rely on purchasing clean drinking water especially during summer seasons after evacuation as against their life with abundant water during the pre-relocation phase. Around 34.4% of the displaced households from the KIAL site are spending money to purchase pure drinking water from outside and its proportion in the CCJ site is 19.7. Moreover, the availability of public tap or wells has increased significantly in the resettlement site of the evictees from KIAL site. Around 94% of the respondents are enjoying this facility which highlighted the ground level implementation of one of the assurances of the authority in the rehabilitation packages. Its proportion in the CCJ resettlement site is only 11.3%.

Additionally, the post-displacement phase has marked a massive improvement in the number of electrified residences. Its percentage has been increased to 94.4 in the post-relocation stage from 52.1 in the pre-relocation stage as far as the Calicut Airport site is concerned. Its proportion in Kannur Airport site rose to 100% from 79.7%. In addition to these, there is a positive growth in the state of sanitation after displacement as 100% access to septic latrine amenities is ensured in both the project sites when compared to 66.6 and 82.8% in CCJ and KIAL sites respectively before displacement. The percentage of double storeyed residences has improved in the post-evacuation phase. The same positive growth has been registered in the number of residences with concrete roofs. However, the difficulties linked to road accessibility and travel distance to reach the nearest town are reported by 80.3% of the displaced households from Calicut Airport site whereas its percentage in KIAL site is only 4.7%.

The study also found that the most difficult phase of the displaced households is the transition stage which marks a period immediately after their displacement and their resettlement in new places. The number of jobless people is higher in this phase. Another concern linked to this stage is their mode of stay. The data shows that 29.6% of the displaced families from the Calicut Airport site resorted to rented homes and 39.4% of them stayed in temporary sheds. These figures for KIAL site are 31.3% and 12.5% respectively. Those who were living in temporary thatched or tiled sheds suffered very much because they did not have proper accessibility to reach the town for essential needs. They had to go along zigzag pathways or cross other householders' lands.

The survey also revealed that a good number of people had to take shelter in the residences of their relatives (21.1% from CCJ and 7.8 from KIAL) as they were not in a position to

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check the violent flow of water from the airport during the rainy seasons. As it was not safe to leave their families in those tents, thatched sheds or houses under construction, many expatriates had to put an end to their careers abroad and stay at home. Their lives were fully devoted to the activities connected with the construction of their residential building and hence they could not attend to any other calling to earn a living. Some students stopped attending schools and helped their parents in the construction of their new residences. Another reason that added to increase the number of drop-outs in the area was that the educational institutions were very far away from their newly built houses and transportation facilities were very rare.

The study has also noted that the evictees' workforce participation rate (WFPR) has dwindled to 45.51% in the post-eviction phase when compared to the rate of pre-eviction phase (55.67%). This reduction is acute among displaced persons from the Calicut Airport site where the rate has fallen to 42.03% from 53.41%. Its reduction in KIAL site is from 58.8% to 50.35%. The cut in WFPR was severe during the transition phase where we can see the lowest rate, that is, 30.93%. It is also noted that the acquisition of paddy fields by the authority aggravated the level of unemployment among displaced households. In those days, most of the people were depending on farming operations for their livelihood. Now when their cultivable lands were taken from them and justice was denied, they naturally got annoyed with the then existing social system.

Additionally, the gender-wise analysis indicates that the female work force participation rate (FWFPR) has declined sharply when compared to the segments of males' group. The FWFPR has contracted to 15.05% from 35.44% in the CCJ site. Surprisingly, this reduction in the KIAL site is comparatively lower (from 41.45% to 32.89%) primarily on account of the majority of jobs opportunities opened in Kannur Airport is absorbed by the displaced females. Many of the displaced families were engaged with some economic activities, mainly in animal rearing during the pre-displacement phase.

This study also noted that the airport-induced land acquisition and displacement affected the sector of animal husbandry very badly which paved the way for huge reduction in it from 66.2% to 11.3% in the CCJ site and from 48.4% to 3.1% in the KIAL site. This factor became one of the reasons for a drastic reduction in the FWFPR after displacement. Of course, cattle-breeding was a means of living for many of these people before acquisition of their land and their evacuation but they could not continue their calling in the new places. This was because they could not find suitable pastures wherein their cattle could stray without

any outside interference. These pastures had been converted as airport runways. These wide pastures constituted one of the main portions of the acquired land. Mrs. Nafeesa, one of the evictees from CCJ site, was very active in the field of cattle-rearing as her livelihood. She says that she lost her job when these lands of many people extended over a small measure, and hence it was not possible to rear cattle in such small plots. She can recollect only with a sense of deep sorrow her sad situation of being thrown out of cattle-rearing after this acquisition.

This study revealed that the Calicut Airport authority recruited only six displacees and 14 project affected persons for jobs inside the project while the Kannur Airport authority gave placements to 55 evictees and 39 project affected persons. The job absorption rate is deplorably poor among the affected families from Calicut Airport site when compared to Kannur Airport site. Additionally, the displacees, both physical and economic, failed to reap the benefits from project-related temporary jobs as well as project-related outside jobs. During the days of construction of the airport, some natives were chosen as contractors, drivers and security staff on a contract-basis. Later on, they were terminated from their service. It is really an injustice to keep the local people away even from petty posts in the airports.

Unlike the Calicut Airport authority, most of the promises given to the people at the time of acquiring land for Kannur Airport and evicting residents were fulfilled. Majority of the affected families was happy to accept the decision of the KIAL authority to give each evacuated family 10 cents of land freely instead of the properties that were likely to be acquired. They believed that they would be able to reach the town from rustic areas and would be able to lead a better life. The authorities gave jobs to the members of the project affected families also. Most of the evacuated families were beneficiaries of this offer.

The study has noted that the rehabilitation package of KIAL was in conformity with the demands of the people. It was because of such an attractive package that the evicted people were able to rebuild their lives completely without losing their old connections, neighbourhood and friendship. At a later stage, however, some of them had the feeling that they had committed a great blunder by being submissive and surrendering their house and properties before the airport authorities.

The evicted people were given lands somewhere near the Kannur Airport itself. Because of the close proximity of the airport, the new residents had to suffer all the difficulties and inconveniences caused from the airport like air-pollution, water-pollution and occasional

jerking of their residences. Another problem that they were facing was scarcity of drinking water. The unscientific methods adopted in the construction of the runway stopped water resources at some areas and checked its free flow. It also polluted the available drinking water in some wells. As a result of this, children and aged people were afflicted by some sort of ailments. Another disadvantage that they faced was the increased cost of construction as labour, especially skilled labour, was scarce and their demand had increased much because all the evacuated families were busily engaged in the activities of constructing new houses for a living.

In addition to all these difficulties, these people are going to face another problem of being evicted once again because of another likely acquisition for further developmental activities according to the surveys conducted recently. It is heard that a few acres of land lying close to the airport are going to be acquired. The evicted people will have to wander here and there for land and residences. In short, acquisition poses a threat to all the neighbouring residents.

At the time of distributing lands to the evacuated families from the KIAL site, the authorities had adopted the method of lucky draws. Those who were very lucky got lands which were lying very close to public road, others got behind them and those who were unlucky got third plots at the back. Some of them complained that the lands given to them as third plot were unfitted for living. Most of the people who got lands at the back sold them and left the place. They bought a few plots of land somewhere else and built new houses there. There was great demand for such new houses.

The KIAL authority has given consent to the evicted people to cut trees from their acquired lands and transport them with the building materials taken from their demolished houses free of cost and to use them for the construction of their new houses. In fact, it was a great relief to the evicted people. They had used such materials from the old house and saved a lot of money as well as time. Around 88% of the evictees responded that they got permission from the KIAL authority to take all movable materials from their acquired houses. This provision was enjoyed by only 9.9% in the CCJ site. Many of the heads of the displaced families are greatly thankful to the authorities who let them stay in the acquired house for a period of one year until finished construction of his new house. That is, 48.4% of them vacated the old houses only after the housewarming of their newly built residence.

The study has shown that the airport-induced land acquisition resulted in involuntary occupational shift among displaced persons. The category of temporary workers has increased in both the projects after displacement when compared to the pre-displacement

phase. Its increase is prominent in the KIAL site where the number of temporary workers has increased to 59 from 24 and in the CCJ site, its number has risen to 56 from 46 persons. At the same time, the numbers of casual workers and self-employed persons have declined after evacuation in both the projects. As there had been a rise in exports from Calicut Airport since its inauguration, many local people got jobs in driving, packing, loading and other fields but they were appointed on a contract basis. After wide protests, a few people got petty jobs in various departments like cleaning, catering and so on. The wages paid to them were very low. Mainly women were recruited to fill in such vacancies.

The changes in the structure of family setup on account of airport-induced land acquisition and displacement are visible in the drastic reduction of joint family norm in the post-relocation phase. On the other hand, the post-eviction period had witnessed a steep increase in the percentage of nuclear families in both the projects. Its share in the CCJ site is 76.1 after displacement which was only 29.6% before displacement. The changes happened to the KIAL site is visible from its rise from 62.5% to 87.5%.

The study clearly indicated that the relocation of households from their original place to another region resulted in the loss of education to their children. Of course, the education of many children was badly affected. They dropped out after only a year or two of their joining and started working to earn a living. It made their lives miserable, leading to irreparable losses and chances of enjoying their childhood. This is the naked violation of their fundamental right to get free education between 6 and 14 years old. It is disappointing to see the report of educational loss from 31% of the displaced families from the CCJ site. Its percentage is comparatively lower in the KIAL site, that is, 12.5%. Some of them fret about their difficulties in continuing their education as a result of financial stringency caused by unemployment after acquisition. They could not resume their studies since then.

The incidences of impoverishment and social exclusion are another sad side of DIDR. Many of the displaced households have experienced social exclusion in the resettlement regions. Around 41 and 31 percent of the evicted families from the sites of CCJ and KIAL respectively shared their experiences of social exclusion. According to this study, the incidence of social exclusion has been reported mainly by the SC community among displaced families in both the projects.

People who start a living at another place after surrendering all their properties for the airport and think that they have fulfilled all their long-cherished dreams generally suffer a lot later. Even if they spend 50 years in the resettlement area, the native people will call them as

settlers or newcomers. Some of them expressed their views about this point in the following words, “If one settles in a new place and lives there continuously for a long period, even then the natives and their descendants will have a tendency to treat the settlers as aliens. And the newcomers will definitely feel a sense of isolation in many matters, especially religious, social and economic.”

Another grave concern pertinent to the Airport-induced land acquisition and displacement is the incidence of double or multiple displacements. Around 24% of the sampled relocated households from Calicut Airport have experienced the physical displacement more than once in their life. This unfortunate incidence in the KIAL site happened to 25% of the evicted households. Surprisingly, no special packages had been announced for these segments of the evictees. The discussion on multiple displacements on the basis of land holding groups reveals that the marginal landholders have experienced it more in their life in both the projects when compared to other land holding groups. Their share in it is 59% and 62.5% in CCJ and KIAL projects respectively.

The tool of Quality-of-Life Index (QLI), developed and extensively used by social scientists, is imperative in assessing the repercussions of developmental projects on people in general and project affected families in particular. This index, which consists of both social and economic indicators, provides an insight upon the living standards of the displaced households by splitting the period into two phases; namely: pre-evacuation and post-evacuation phases. The compilation of QLI data and its analysis reflect a deplorable state of living conditions of some displaced households as the number of families belonged to the ‘extreme poor status’ was nil in the pre-displacement phase at aggregate level which translated to 11.9% of them in this bottom strata after their displacement.

A disaggregate level analysis shows that the lion’s share of the ‘extreme poor status’ is contributed by Calicut Airport, that is, 15 families out of 16. Moreover, this category’s average score in the CCJ site is 26.4 while its score in the KIAL site is 27.0. It manifests a fact that the adverse impacts are much severe among the displaced households from Calicut Airport site when compared to Kannur Airport site.

Similarly, the trends in the segment of ‘poor status’ reveal that the post-evacuation phase paved the way for a drastic increase in the number of families to 26.7% from a mere 9.6% at aggregate level. Again, the share of evictees from Calicut Airport site (from 8.5% before displacement to 32.4% after displacement) to this vulnerable group is alarmingly larger when compared to Kannur Airport site (from 10.9% to 20.3%). These trends reflect the truth

that a number of households shifted from the 'fair status,' a middle category as per the QLI, to susceptible groups such as 'extreme poor status' and 'poor status.' That is, at aggregate level, this middle group's proportion has decreased massively from 63.0 to 36.3.

The project-wise analyses indicate that the percentage of families belonged to the 'fair status' category in the KIAL site has declined to 42.2 after displacement from 70.3. The same trend is also visible from the CCJ site where its percentage has diminished to 31.0 from 56.3. In addition to these, there is a discrepancy in the mean scores between CCJ and KIAL site. The QLI mean score of the 'fair status' group has declined from 60.08 to 56.8 after displacement in the CCJ site while its score has registered a growth in the KIAL site from 62.3 to 64.6. Additionally, the ANOVA Test has proved that there is significant difference among different landholders (marginal, small, medium and large) with respect to the mean scores of QLI in both phases at aggregate level.

The 'good status' category also shows a declining trend from 29.6% to 14.1% after displacement in the CCJ site. In contrast to this, this category's percentage has enlarged in the KIAL site from 17.2% to 28.1% after evacuation. This similar pattern reflects in the upper category of 'very good status.' The percentage of households from Calicut Airport has declined from 5.6 to 1.4. Unlike the CCJ, its proportion has enhanced from 1.6 to 7.8. The use of statistical tools such as paired t-test helps us to substantiate statistically the significant difference in the mean scores of QLI between pre-displacement and post-displacement phases at aggregate level. However, the project-wise paired t-test exhibits a contradictory result. The difference in the average QLI score is statistically significant only in the Calicut Airport site.

The  $H_0$  of two main hypotheses framed in the initial stage of the study have been rejected as part of a statistical test conducted in the different stages of analysis. The test statistics have proved that there exists a significant difference in the socio-economic conditions of DPs between pre-relocation and post-relocation phases. Additionally, there exist differences in R & R packages implemented for airport-affected households between KIAL and CCJ.

The study noted that the majority of the local inhabitants expressed their feelings of resentments towards the new acquisition programmes of the State Government for the extension of Calicut Airport when we compare them with the approach of the local people from Kannur Airport site. Around 75 percent of the displaced families from the KIAL site responded that they had actively participated in most of the meetings and discussions on the need of land acquisition for the project extension and also in designing the compensation

packages. However, this form of mass participation was absent in the site of Calicut Airport where only 15 percent of the displaced households were involved in all types of deliberations convened by the concerned authority. Interestingly, the majority of these participated households expressed their satisfaction with the compensation and rehabilitation packages announced by the concerned authorities.

The majority of displaced households (84.5%) from the Calicut Airport site viewed that the compensation money was inadequate and the authority's premium price was low compared to the market price of their land and other properties. In contrast to this, 78.2% of the evacuated households from the KIAL site responded that the premium price was higher than that of the existing market price at that time.

The study revealed that the land owners from Calicut Airport site got very annoyed with the officers about their deliberate attempts to decrease the value of their properties and filed original suits in civil courts, claiming enhancement for the acquired lands. Suits were filed twice or thrice for enhancing their amounts. It took years to get their grievances redressed. In many cases, the oft-quoted words "Justice delayed is justice denied" came true. Around 89% of the evicted families from the Calicut Airport site were involved in litigation whereas only 30% of families from the KIAL site resorted to civil cases for getting a hike in the monetary compensation. Though some of them got it (84.5% and 17.2% of the displaced families from CCJ and KIAL sites respectively), the agents and lawyers exploited them by charging 20% to 30% towards their commission and fees. It took approximately 9 and 7 years in Calicut and Kannur airports sites respectively to get the enhanced amount. Many of them really get angry when they bring back this incident to their memory.

The study demonstrated that there exists a questionable and unnecessary delay between the notification by the Government for land acquisition and the actual acquisition and also the time of disbursement of compensation amount to the victims of the project. The average time period taken in the distribution of monetary compensation was approximately 13 months in Calicut Airport site which was higher when compared to Kannur Airport site (10 months). This difference is statistically significant according to the result of independent t-test statistics. It is very shocking to digest the naked truth that a land-owner who is supposed to lose one acre of land for the realisation of the project struggles to purchase even ten cents of land by using the compensation that he has received from the authority.

At the time of eviction, the authorities gave the people a lot of assurances. They did not fulfil even half of them. MADAC (Malabar Airport Development Action Committee),



an NGO, gave Rs. 40000 to 60000 to a few of the evicted families (9.85%) from Calicut Airport site whose acquired lands were below 10 cents. At that time that amount was a great solace to such people. Others responded that with monetary compensation comes great responsibility to purchase suitable land for building houses. Some of them utilised the fund for the marriage ceremony of their daughters and some others decided to divide the money among family members.

The utilisation pattern of the compensation money by the displaced families from Calicut Airport project shows that the major portion of their fund was spent for purchasing new lands for constructing houses. In contrast to this, 62% of the evicted households from Kannur Airport site utilised their monetary compensation to build houses. Indeed, the land-based resettlement provision of the KIAL site helped them to concentrate on constructing new houses in the freely allotted land areas. The study has found that around 85% of the displaced families utilised this allotted free land for constructing their own houses. The KIAL authority has taken special care to install basic facilities to the resettlement site. This provision was absent in the Calicut Airport site. In economic perspective, the majority of the displaced households deplorably failed to direct their compensation money to productive activities like investment in financial instruments, bank deposits, start new business ventures and so on.

The airport-induced land acquisition also resulted in the loss of common property resources (CPRs) such as graveyards, centres of worship and so on. This incidence was acute in the site of Calicut Airport as 73.2% of the sampled displaced households reported the loss of CPRs. Its percentage in Kannur Airport is only 14.1%. Before completion of their new houses, some people died and their relatives had to suffer a lot to perform their obsequies. It was a time when the Dalits in the area of Calicut Airport site had lost their burial ground in the acquisition. Those who didn't possess their own land found it very difficult to bury the dead in the lands of their families. The situation was worsened when their relatives also turned a deaf ear to their requests to help them in the matter. One Mrs. Chakkikutty, an aged Dalit woman of the locality, recalls the sad event of burying the dead bodies of her three children somewhere in different areas after great efforts to find places for their burial.

Similarly, there was a striking discrepancy between CCJ and KIAL sites in the average years taken by the displaced households for their resettlement. It was 4.3 years among displacees from Calicut Airport site while this period is only 2.7 among evictees from Kannur Airport site. It indicates the fact that the attractive components of the rehabilitation packages like

land-based compensation in the KIAL site helped the affected families to restore their normal life immediately in the post-displacement phase. It is noteworthy that even the marginal landholders from KIAL site took only 2.63 years to complete their resettlement while this group from CCJ site required 5.27 years to finish their task of resettlement.

Regarding the discussion on the approach of the host population in the resettlement site indicates that the majority of displaced families from the KIAL site received support from them. However, the scattered nature of the resettlement of the displacees from the CCJ site resulted in their experiences of arrogant approaches from the host population and many of them faced loneliness and social exclusion. The difficulties linked to the resettlement site are reported by around 80 and 47 percent of the evacuated families from CCJ and KIAL sites respectively. The tool of Likert scale has been employed to explore perspectives of the displaced households regarding their new settlement sites after their relocation. Majority of the families from the KIAL site belonged to the group of “Good” (54.7%). More interestingly, 17.2% of them come under “Very good” category. However, around 26% of the displaced families from the CCJ site registered their responses in the “very bad” strata as per the Likert scale analyses. Additionally, 33% of them reported in the “bad” group.

The interesting observation in this regard is that the airport project under the PPP framework succeeded in convincing the local people about the necessity of the project and also gave guarantee of fair and humane rehabilitation packages to the DPs. The airport project under the public sector deplorably failed to gather the support and cooperation from the natives for further expansion of the project. It is correct to state that the land acquisition and displacement for KIAL project is more or less voluntary in nature and the same for Calicut Airport is involuntary displacement or may be regarded as a form of forcible land acquisition and displacement.

This study also noted that many of the heads of the affected families who had come forward with a readiness to surrender their lands were doing so only because they were facing many difficulties and experiencing lots of inconveniences in their land like lack of road-accessibility or non-availability of drinking water. Those who possessed fertile lands with water-availability were not prepared to dispose of their properties. So, they were against acquisition also. Those who raised their voice against acquisition were branded as reactionaries or enemies of developments. In extreme cases, the protesters have been denoted as anti-nationalists or fake environmentalists, said by a participant in the FGD. They argued that they were not against any developmental activities in the state. On the other hand, they were only questioning the injustice done to the people by the authorities

on certain occasions, especially when the lands of the poor and the illiterate were taken coercively without giving them proper compensation.

The study found that the components of better compensation and land-based rehabilitation packages in the KIAL site induced the majority of the locals to surrender their properties to the authority for the extension of the airport. At the same time, lack of basic facilities and acute troubles from the operations of Calicut Airport are the leading factors considered by the project affected persons to give consent for land acquisition. Some of them anticipated that they could dispose of their waste lands easily when the authority reinstated the proposal of land acquisition. On the other hand, the major reasons for those people who are constantly opposing the land acquisition include unattractive rehabilitation packages of the concerned authority, fear of loss of homestead, ancestors' properties and livelihood measures, disintegration of neighbourhood, bitter experiences in the previous land acquisition, loss of graveyards and centres of worship and so on.

Around 93% and 73% of the affected families from KIAL and CCJ sites respectively participated in the protest against the authority. At the same time, there are contradictions in their motives of participation in it between these two projects. The protestors (71.4%) from CCJ site firmly demanded to abandon the new land acquisition proposal by reiterating their slogan of: "Not an inch of land for further extension of Calicut Airport." Unlike the Calicut Airport site, 57.4% of the affected households from the KIAL site responded that they have participated in the protest movements to accelerate the procedures of land acquisition. This trend is clearly reflected in the Focus Group Discussions with them. A number of people who were evicted (economic displacement) from their lands after compulsory acquisition in the name of public purposes and some other affected people who are fully aware of the past and present plights of these affected households took a very active part in this FGD. They were not reluctant to pour out their troubles in the past caused by compulsory acquisitions.

The study found that the project affected persons from both the projects gave their first priority towards fair compensation and just rehabilitation packages if the authority goes ahead with the acquisition proposals. These households from the CCJ site also demanded to utilise the existing vacant land judiciously to avoid unnecessary land acquisition. Some of them expected the shareholder status in the respective projects to ensure regular income to them after displacement and also demanded to utilise the CSR fund in favour of them. This study also noted from the responses of affected persons regarding their expectations upon the rehabilitation measures that must include the steps to avoid the loss of social capital including neighbourhood.

### **7.3 Key Policy Implications**

- ✎ The concerned developer or the authority must give importance to draft and execute gender-sensitive rehabilitation measures. Take special care to safeguard the needs of the senior citizens, women, physically challenged persons and children especially during the transition phase of land acquisition and displacement.
- ✎ It is sagacious to incorporate the provision of “Evictees’ Stock Option in Airport” (ESOA) into the rehabilitation packages. It guarantees a certain minimum percentage of the shares of the project to the displaced households. This provision will ensure a steady income to these displacees and thereby very effective to prevent their impoverishment after displacement. Moreover, this step will eradicate the feeling of victimisation among them. Those householders who surrendered their valuables to the authority for materialising the project become one of the primary stakeholders of the project. It is justifiable in all respects.
- ✎ The authority must identify those families who were fortunate to obtain wind-fall-gains on account of the project funded by the Government and impose one time levy, say, “special assessment” upon them. This fund can be used for ameliorating the living standards of the evacuated families as well as PAPs. In this way, the authority can minimise the gap between two groups that emerged from the project - the gainers and the losers.
- ✎ Government can impose a special cess which may be termed as ‘Evictees’ Welfare Cess’ on air tickets and cargo movements to extend its fiscal support to DPs by mobilising additional revenues from it.
- ✎ The effective execution of the provisions of the new land acquisition act, Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 is paramount to ensure minimum displacement of inhabitants and speedy resettlement of affected families. The authority must give due importance to conduct both Social Impact Assessment (SIA) Survey and Environmental Impact Assessment (EIA) Survey. It is important to strengthen the existing displacees’ protection laws and schemes.
- ✎ The need of the hour is that the authority must focus on designing policies for fostering the alternative methods of non-displacing or least displacing land acquisition

for installing developmental projects rather than reiterating the usual statement that displacement of inhabitants is not good but inevitable in the course of development. Additionally, the authority must take measures to ensure the participation of affected families in designing compensation and rehabilitation packages.

- ✕ It is also important to prepare the host population to receive the displaced families and also accommodate them by providing all basic facilities to the resettlement site timely and adequately. Take measures to avoid any possibilities of confrontation between the host population and the evictees. All these measures will assist to minimize the incidence of social exclusion and the feeling of revictimization among DPs.
- ✕ It is paramount to create a 'Displacees Support Fund' to ensure their welfare. It is the responsibility of the concerned authority to maintain this fund. The effective utilisation of the CSR fund is critical in this juncture. Beyond all doubts, this concrete step will strengthen the principle of rehabilitation which indeed is the right of the displaced persons.
- ✕ Indeed, the authority must incorporate all possible measures to avoid the incidence of double displacement or multiple displacement. There should be an attractive additional package for them if any projects' land acquisitions result in double displacement or revictimization.
- ✕ It is imperative to fulfil the promises given by the acquisition authority at the time of land acquisition to displaced and project affected persons.
- ✕ The authority must take measures to assess the living conditions of the DPs and PAPs especially after land acquisition for developmental projects. A frequent survey in this regard is indispensable to explore whether they experienced improvement or impoverishment in the evacuation phase. In our country, there are documents for most of the things. Huge amounts of money are spent every year for the purpose of wild-life census to know the total number of wild animals like elephants, tigers or lions living in the forests but no such surveyors are conducted to know the living conditions of the evacuated householders after driving them away from their residence. There are environmentalists and others to argue for the wild beats but no genuine attempts are made to look into the touching conditions of the evacuated people after driving them away from their residences and lands. Nobody cares for the education of their children or their well-being.

- ✎ Any attempt made in the name of developmental purposes is, indeed, an injustice on the part of the authorities if they are not capable of looking into evictees' problems after evacuation. Of course, their grievances have to be redressed without any delay.
- ✎ The sacrifices of the landholders who surrendered their lands and residences voluntarily or otherwise cannot be ignored and forgotten. Even though some money had been given to them as compensatory amount, the contributions and sacrifices which they made towards common purposes of public interests cannot be minimised or discarded.
- ✎ The acquisition officials have to change their attitudes. The evacuated people expect only goodness from them. They have to treat these people also as their brethren. Then only they will have a broad outlook in considering their problems.

#### **7.4 Guidelines for Future Research**

The present study is confined to two airport projects in Kerala due to time and financial constraints. Even the comparative analyses of two airports – CCJ and KIAL – produced interesting contradictory results. That is, this area is broad and highly relevant in terms of academic field as well as policy-making perspectives. There is a wide scope for research on the entire airport projects of the state regarding land acquisition, displacement and resettlement and also make an attempt to compare them with the rest of the states in India. Similarly, there is high scope for conducting a study on impacts of airport-induced displacement and resettlement on women and children. In addition to these, the specialised study on the impacts of airport-induced displacement and resettlement on host-communities is highly recommended. Another vital scope in this field is the discussion of airport projects and their impacts on environment and so on.

#### **7.5 Concluding Remarks**

Developmental projects are unavoidable for the speedy social and economic growth of the country. The government, however, has to be very cautious to see that such projects do not become barriers in affected householders' advancement and do not adversely affect their peaceful living. They should not impair the people's ability to progress or damage the ecological systems. The authorities should be careful to choose eco-friendly projects which will be helpful to humanity as a whole. There should be measures in the legislation to protect our environment and to maintain the balance of our ecology. A tendency to treat the evicted people as mere victims of developmental projects should be stopped and sincere

attempts should be made to bring them to the mainstream of the society by offering them an opportunity to become part and parcel of such developmental projects. The provisions of attractive compensation and fair rehabilitation packages to property holders are integral ingredients in this regard. Indeed, the current scenario invariably needs an alternative model of development which demands zero displacement or at least minimum displacement for commissioning developmental projects in the country.

There should be an effective policy with pragmatic and humane approach which is essential to resolve the issues pertaining to DIDR as underscored in one of the laudable principles and aims of UN's Sustainable Development Goals (SDGs)<sup>1</sup> – “leave no one behind.” It calls for special attention to mitigate the grievances of the displaced population. Hopefully, the findings of this study will induce the social researchers to do more works on DIDR and will give an insight to the concerned authority. Additionally, its policy implications may help the policy-makers to chalk out fair compensation schemes and effective rehabilitation packages by incorporating humane provisions as well as environment friendly measures in acquiring land, displacing inhabitants and in settling them in new areas. The system must borrow all good measures from different developmental projects paradigms such as public sector and PPP framework to ensure the speedy transformation of DPs and PAPs from the category of “victims” or “losers” to the category of “survivors” or “gainers” in all respects.

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<sup>1</sup> SDGs, alternatively known as Global Goals, consist of 17 targets for materialising more inclusive and more sustainable future for all. These commendable targets were framed by the United Nations General Assembly in 2015 by replacing Millennium Development Goals (MDGs). The UN has set the year of 2030 for achieving all these well-defined global goals.

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# **ANNEXURE**

Bibliography

Appendices

I. Quality of Life Index (QLI)

II. Questionnaire I

III. Questionnaire II



## BIBLIOGRAPHY

- Aboda, C., Mugagga, F., Byakagaba, P., & Nabanoga, G. (2019). Development induced displacement: A review of risks faced by communities in developing countries. *Sociology and Anthropology*, 7(2), 100-110.
- Adeola, R. (2017). The legal protection of development-induced displaced persons in Africa. *African Journal of Legal Studies*, 10(1), 91-104.
- Agrawal, P., Sahoo, P., & Dash, R. K. (2009). Savings behaviour in South Asia. *Journal of Policy Modelling*, 31(2), 208-224.
- Anaya, J., & Anaya, S. J. (2004). *Indigenous peoples in international law*. Oxford University Press, USA.
- Annual Report (23<sup>rd</sup>), 2017-18, *Airports Authority of India (AAI)*, Ministry of Civil Aviation, Government of India.
- Annual Report (24<sup>th</sup>), 2018-19, *Airports Authority of India (AAI)*, Ministry of Civil Aviation, Government of India.
- Appa, G., & Patel, G. (1996). Unrecognised, Unnecessary and Unjust Displacement. *Understanding impoverishment: The consequences of development-induced displacement*, 2, 139.
- Appa, G., & Sridharan, R. (1992). Report on the canal affected people and the downstream impact of the Sardar Sarovar projects.
- Asif, M. (2000). Why displaced persons reject project resettlement colonies. *Economic and Political Weekly*, 2005-2008.
- Bhaduri A, 2018. A study in development by dispossession, *Cambridge Journal of Economics*, Vol. 42.2018, 1, 19-31.
- Bender, C. (2008). London 2012 - displaced by the Olympics. *Dialog*, 98(3), 34-39.
- Bennett, O., & McDowell, C. (2012). *The human cost of development and resettlement*. Washing D. C: Palgrave Macmillan.
- Berger, T. R. (1993). The World Bank's independent review of India's Sardar Sarovar projects. *American University International Law Review* 9(1), 33-48.
- Bisht, T. C. (2009). Development-induced displacement and women: The case of the Tehri Dam, India. *The Asia Pacific Journal of Anthropology*, 10(4), 301-317.

- Brereton, D., Owen, J., & Kim, J. (2011). Good practice note: Community development agreements. *EI Sourcebook. Centre for Social Responsibility in Mining (CSR), the University of Queensland*.
- Bugalski, N. (2016). The demise of accountability at the World Bank. *American University International Law Review*, 31(1), 1-56.
- Butler, B. N., & Aicher, T. J. (2015). Demonstrations and displacement: social impact and the 2014 FIFA World Cup. *Journal of policy research in tourism, leisure and events*, 7(3), 299-313.
- Canning, D., & Pedroni, P. (2004). The effect of infrastructure on long-run economic growth. *Harvard University*, 99(9), 1-30.
- Census (2011). Ministry of Home Affairs, Government of India. Census of India Website: Office of the Registrar General & Census Commissioner, India (censusindia.gov.in).
- Cernea, M. M. (1988). *Involuntary resettlement in development projects: Policy guidelines in World Bank-financed projects* (Vol. 80). World Bank Publications.
- Cernea, M. M. (1990). Poverty risks from population displacement in water resources development. *Development Discussion Paper Harvard Institute for International Development*, (355).
- Cernea, M. M. (1995). Understanding and preventing impoverishment from displacement: Reflections on the state of knowledge. *Journal of refugee studies*, 8(3), 245-264.
- Cernea, M. (1995). Social integration and population displacement. *International Social Science Journal*, 143(1), 91-112.
- Cernea, M. M. (1996). Understanding and preventing impoverishment from displacement. *Understanding impoverishment: the consequences of development-induced displacement. Berghahn Books, Oxford*, 13-32.
- Cernea, M. M. (1997). *Hydropower dams and social impacts: a sociological perspective*. The World Bank.
- Cernea, M. M., & World Bank. Social Policy and Resettlement Division. (1997). *African involuntary population resettlement in a global context*. Washington, DC: World Bank.
- Cernea, M. M. (1998). Impoverishment or social justice? A model for planning resettlement. *Oxford, New Delhi*.

- Cernea, M. M. (Ed.). (1999). *The economics of involuntary resettlement: Questions and challenges*. World Bank Publications.
- Cernea, M. M. (1999). Why economic analysis is essential to resettlement: A sociologist's view. *Economic and Political Weekly*, 2149-2158.
- Cernea, M. M. (1999). Development's painful social costs. In *The development dilemma* (pp. 1-31). Palgrave Macmillan, London.
- Cernea, M. M. (2000). Risks, safeguards and reconstruction: A model for population displacement and resettlement. *Economic and Political Weekly*, 3659-3678.
- Cernea, M. M., & McDowell, C. (Eds.). (2000). *Risks and reconstruction: Experiences of resettlers and refugees*. World Bank Publications.
- Cernea, M. M. (2003). For a new economics of resettlement: a sociological critique of the compensation principle. *International social science journal*, 55(175), 37-45.
- Cernea, M. (2004). Impoverishment risks, risk management, and reconstruction: A model of population displacement and resettlement. In *UN Symposium on hydropower and sustainable development* (Vol. 27). Beijing: United Nations.
- Cernea, M. M., & Mathur, H. M. (2007). *Can compensation prevent impoverishment? Reforming resettlement through investments*. Oxford University Press.
- Cernea, M. M. (2007). Financing for development: Benefit-sharing mechanisms in population resettlement. *Economic and Political Weekly*, 1033-1046.
- Chakravorty, S. (2013). *The price of land: acquisition, conflict, consequence*, Oxford University Press.
- Clark, D. L. (2002). The World Bank and human rights: the need for greater accountability. *Harvard Human Rights Journal*, 15, 205-317.
- Colchester, M., Jiwan, N., Andiko, M. S., Firdaus, A. Y., Surambo, A., & Pane, H. (2007). *Promised land: palm oil and land acquisition in Indonesia: implications for local communities and indigenous peoples*. Bogor, Indonesia: Perkumpulan Sawit Watch.
- Cook, C. C. (Ed.). (1994). *Involuntary resettlement in Africa: Selected papers from a conference on Environment and settlement issues in Africa* (Vol. 227). World Bank Publications.
- Cramm, J. M., Moller, V., & Nieboer, A. P. (2012). Individual-and neighbourhood-level indicators of subjective well-being in a small and poor Eastern Cape township: The effect of health, social capital, marital status, and income. *Social indicators research*, 105(3), 581-593.
-

- Das, P. P. P., & Shukla, A. (2011). Psychological and emotional needs of displaced women. *Global Journal of Arts & Management*, 1(4).
- Das R, 2017. David Harvey's theory of accumulation by dispossession: a Marxist critique, *World Review of Political Economy*, Vol. 8, No. 4, 590-616.
- de Wet, C. (1988). Stress and environmental change in the analysis of community relocation. *Human Organization*, 47(2), 180-187.
- de Wet, C. (2005). Policy Recommendations and Suggestions for Further Research. *Development-induced Displacement: Problems, Policies and People*, 18, 203.
- de Wet, C. J. (Ed.). (2006). *Development-induced displacement: Problems, policies and people* (Vol. 18). Berghahn Books.
- Downing, T. E. (1996). Mitigating social impoverishment when people are involuntarily displaced. *Understanding impoverishment: The consequences of development-induced displacement*, 2, 33-48.
- Downing, T. E. (2002). *Avoiding new poverty: mining-induced displacement and resettlement* (Vol. 52). London: International Institute for Environment and Development.
- Downing, T. E. (2002). Creating poverty: the flawed economic logic of the World Bank's revised involuntary resettlement policy. *Forced Migration Review*, 12(1), 13-14.
- Downing, T. E., & Garcia-Downing, C. (2009). Routine and dissonant cultures: A theory about the psycho-socio-cultural disruptions of involuntary displacement and ways to mitigate them without inflicting even more damage. *Development and dispossession*, 225-253.
- Dreze, J., Samson, M., & Singh, S. (1997). Dam and the nation. In *Narmada Forum (1993: Centre for Development Economics)*. Oxford University Press.
- Dreze, J., & Sen, A. (1990). *Hunger and public action*. Clarendon Press.
- Dreze, J., & Sen, A. (1999). The Amartya Sen and Jean Drèze Omnibus: Comprising - Poverty and famines; Hunger and public action and India: Economic development and social opportunity. Oxford University Press.
- Dreze, J., & Sen, A. (2002). *India: Development and Participation*. Oxford University Press.
- Drèze, J., & Sen, A. (2013). *An Uncertain Glory: India and Its Contradictions*. Princeton University Press.
- Drydyk, J. (2001). Towards Ethical Guidelines for Displacement-Inducing Developments: Filling the Gaps.
-

- Dwivedi, R. (1999). Displacement, risks and resistance: Local perceptions and actions in the Sardar Sarovar. *Development and Change*, 30(1), 43-78.
- Economic Review*, 2019. Kerala State Planning Board.
- Economic Survey*, 2019-20, Ministry of Finance, Government of India.
- Ekka, A., & Asif, M. (2000). Development-induced displacement and Rehabilitation in Jharkhand, 1951 to 1995: A database on its extent and nature. *A Study Supported by Oxfam (India) Trust, Indian Social Institute, New Delhi*.
- Elamin, M. M., Hamza, S. B., Abdalla, Y. A., Mustafa, A. A. M., Altayeb, M. A., Mohammed, M. A. & Abass, M. F. M. (2020). The Psychological Impact of the COVID-19 Pandemic on health professionals in Sudan 2020. *Sudan Journal of Medical Sciences*, 15(2), 54-70.
- Estache, A. (2004). *Emerging infrastructure policy issues in developing countries: A survey of the recent economic literature* (Vol. 3442). World Bank Publications.
- Faas, A. J., Jones, E. C., Tobin, G. A., Whiteford, L. M., & Murphy, A. D. (2015). Critical aspects of social networks in a resettlement setting. *Development in Practice*, 25(2), 221-233.
- Faas, A. J. (2017). Enduring cooperation: Time, discipline, and Minga practice in disaster-induced displacement and resettlement in the Ecuadorian Andes. *Human Organization*, 76(2), 99-108.
- Fearnside, P. M. (1999). Social impacts of Brazil's Tucuruí dam. *Environmental Management*, 24(4), 483-495.
- Fernandes, W., Das, J. C., & Rao, S. (1989). Displacement and rehabilitation: An estimate of extent and prospects. *Development, displacement and rehabilitation*, 62-68.
- Fernandes, W. (1991). Power and powerlessness: Development projects and displacement of tribals. *Social Action*, 41(3), 243-270.
- Fernandes, W., & Raj, S. A. (1992). *Development, Displacement, and Rehabilitation in the Tribal Areas of Orissa*. Indian Social Institute.
- Fernandes, W., & Asif, M. (1997). Development-induced displacement in Orissa 1951 to 1995: A database on its extent and nature. *New Delhi: Indian Social Institute*.
- Fernandes, W., & Paranjpye, V. (1997). Hundred years of displacement in India: Is the rehabilitation policy an adequate response? *Rehabilitation policy and law in India: A right to livelihood*, 1-34.
-

- Fernandes, W. (1998). Land Acquisition (Amendment) Bill, 1998: Rights of project-affected people ignored. *Economic and Political Weekly*, 2703-2706.
- Fernandes, W., & Naik, N. (1999). Development-Induced Displacement in Goa 1965-1995.
- Fernandes, W. (2001). Development induced displacement and sustainable development. *Social Change*, 31(1-2), 87-103.
- Fernandes, W. (2004). Rehabilitation policy for the displaced. *Economic and Political Weekly*, 1191-1193.
- Fernandes, W. (2006). Liberalisation and development-induced displacement. *Social Change*, 36(1), 109-123.
- Fernandes, W. (2006). Development-induced displacement and tribal women. Rath, G. C. (Ed.). (2006). *Tribal development in India: The contemporary debate*. Sage.
- Fernandes, W., & Bharali, G. (2006). Development-Induced Displacement in Assam 1947-2000: A Quantitative and Qualitative Study of Its Extent and Nature. *Guwahati: North Eastern Social Research Centre (mimeo)*.
- Fernandes, W. (2007). Singur and the displacement scenario. *Economic and political weekly*, 203-206.
- Fernandes, W. (2012). Development-induced displacement in the era of privatisation. In *Resettling Displaced People* (pp. 310-325). Routledge India.
- Fisher, R. C. (1995). *Toward sustainable development? struggling over India's Narmada River*. ME Sharpe.
- Francis, P. (1999). Involuntary Resettlement in Urban Development: Plan, Performance and Outcome in the World Bank-funded Antananarivo Plain Project, Madagascar. *Journal of Refugee Studies*, 12(2), 180-202.
- Franke, R. W., & Chasin, B. H. (1993). Kerala: Development through radical reform. *Science and Society*, 57(4).
- Fujikura, R., & Nakayama, M. (2015). *Resettlement policy in large development projects*. Routledge.
- Ganguli, N. (2014). Refugee Women in Calcutta (1947-1958). *Journal of Internal Displacement*, 4(1), 12-27.
- George, A., & Rajan, I. (2015). Changing cities and changing lives: Development induced displacement in Kochi, Kerala. *Cities People Places: An International Journal on Urban Environments*, 1(1).
-

- Gizachew, A. (2017). Refining the impoverishment risks and reconstruction (IRR) model: A study of the models overlooked risks, evidences from the impacts of Tekeze Dam, North-East Ethiopia. *Journal of Development and Agricultural Economics*, 9(4), 66-79.
- Goyal, Piyush, *Interim Budget, 2019-2020*, Finance Minister's Speech, The Budget Division of the Department of Economic Affairs (DEA), Ministry of Finance, Government of India.
- Guggenheim, Scott. E., & Cernea, M. M., (1993). *Anthropological Approaches to Involuntary Resettlement: Policy, Practice and Theory*. Routledge.
- Hanna, P., Langdon, E. J., & Vanclay, F. (2016). Indigenous rights, performativity and protest. *Land Use Policy*, 50, 490-506.
- Helliwell, J. F., & Putnam, R. D. (2004). The social context of well-being. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences*, 359(1449), 1435-1446.
- Hindustan Times, 27<sup>th</sup> June, 2020.
- Hoda, A. (2018). *Land use and Land Acquisition laws in India* (No. 361). Working Paper.
- Hoffman, S. M. (2002). Powering injustice: hydroelectric development in northern Manitoba.
- Holbrooke, R. C. (2000). Conflict in Africa: The search for peace in the Congo. *Vital Speeches of the Day*, 66(6), 165.
- Holtzman, S. B. (2004). *Living in limbo: Conflict-induced displacement in Europe and Central Asia*. World Bank Publications.
- Hoshour, K., & Kalafut, J. (2010). A Growing Global Crisis. *Development-Induced Displacement & Resettlement, International Accountability Project. Issue Paper. IAP, San Francisco. Disponible sur Internet: <http://www.accountabilityproject.org/downloads/IAP>, 208.*
- International Finance Corporation. (2010). *Strategic community investment: A good practice handbook for companies doing business in emerging markets*. World Bank.
- Jackson, S., & Sleigh, A. (2000). Resettlement for China's Three Gorges Dam: socio-economic impact and institutional tensions. *Communist and Post-Communist Studies*, 33(2), 223-241.
- Jayal, N. G. (1998). Displaced persons and discourse of rights. *Economic and Political Weekly*, PE30-PE36.
- Jijelava, D., & Vanclay, F. (2017). Legitimacy, credibility and trust as the key components
-

- of a social licence to operate: An analysis of BP's projects in Georgia. *Journal of Cleaner Production*, 140, 1077-1086.
- Joshi, V. (1997). Rehabilitation in the Narmada Valley: human rights and national policy issues. *The Dam and the Nation: Displacement and Resettlement in the Narmada Valley*, 168-183.
- Khagram, S. (2003). Neither temples nor tombs: A global analysis of large dams. *Environment*, 45(4), 28.
- Koenig, D. (2001). Toward local development and mitigating impoverishment in development-Induced displacement and resettlement, the final report prepared for ESCOR R7644 and the research programme on development induced displacement and resettlement. *University of Oxford: Refugee Studies Centre*.
- Koenig, D. (2006). Enhancing Local Development in Development-Induced Displacement and Resettlement Projects. In *Development-Induced Displacement: Problems, Policies, and People*, 105. de Wet, C. J. (Ed.). Berghahn Books.
- Kothari, S. (1996). Whose nation? The displaced as victims of development. *Economic and political weekly*, 1476-1485.
- Koutsoyiannis, A. (1979). Baumol's Theory of Sales Revenue Maximisation. In *Modern Microeconomics* (pp. 323-351). Palgrave, London.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Krugman, P. (2011). The new economic geography, now middle-aged. *Regional studies*, 45(1), 1-7.
- Kumar, S. K. (2013). *Kerala Model of Development—Critical Analysis and a Design for the Future* (Doctoral dissertation, BITS).
- Kumar, S., & Mishra, A. J. (2018). Development-induced displacement in India: An indigenous perspective. *Journal of Management and Public Policy*, 10(1), 25-36.
- Lewis, W. A. (1984). The state of development theory. *The American Economic Review*, 74(1), 1-10.
- Lindsay, J. M. (2012). Compulsory acquisition of land and compensation in infrastructure projects. *PPP insights*, 1(3), 1-10.
- Lobo, L., & Kumar, S. (2009). *Land acquisition, displacement and resettlement in Gujarat: 1947-2004*. Sage Publications India.
- Mahapatra, L. K. (1999). Testing the risks and reconstruction model on India's resettlement experiences. *The economics of involuntary resettlement: Questions and challenges*,



- 189-230. Cernea, M. (Ed.). World Bank, Washington, DC.
- Mallavarapu, R. B. (2006). Development, displacement and rehabilitation: An action anthropological study on Kovvada Reservoir in West Godavari agency of Andhra Pradesh, India. *International Journal of Social Sciences*, 1(1), 35-41.
- Manjula K (2013). *Impacts of Land Acquisition for Development on the Lives and Livelihoods of Displaced Land Owners in Kerala*, final project report submitted to the University Grants Commission, Major Research Project, Kerala.
- Manjula, K., Kumar, T. A., & Aneesh, K. A. (2013). Impact of Development Induced Displacement in Kerala, India. *Journal of Internal Displacement*, 3(1), 2-18.
- Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research*. Sage publications.
- Mathur, H. M. (Ed.). (1995). *Development, displacement, and resettlement: Focus on Asian experiences*. Vikas Publishing House.
- Mathur, H. M. (2008). *India: Social Development Report 2008: Development and Displacement*. Oxford University Press.
- Mathur, H. M. (2011). Social impact assessment: a tool for planning better resettlement. *Social Change*, 41(1), 97-120.
- Mathur, H. (2013). *Displacement and resettlement in India: The human cost of development*. Routledge.
- McDowell, C. (Ed.). (1996). *Understanding impoverishment: The consequences of development-induced displacement* (Vol. 2). Berghahn books.
- McDonald-Wilmsen, B., & Webber, M. (2010). Dams and Displacement: Raising the Standards and Broadening the Research Agenda. *Water Alternatives*, 3(2).
- Millward, L. J. (1995). Focus groups. *Research methods in psychology*, 2, 274-292.
- Mishra, B. K., Badola, R., & Bhardwaj, A. K. (2007). Conservation induced displacement and resettlement: a case study of Gujjar rehabilitation from Rajaji National Park. *Indian Forester*, 133(10), 1341-1349.
- Modi, R. (2004). Sardar Sarovar oustees: coping with displacement. *Economic and Political Weekly*, 1123-1126.
- Mohan, R. (2016). Transporting India to the 2030s: What do we need to do? *Review of Development and Change*, 21(1), 27-37.
- Mohanty, B. (2005). Displacement and rehabilitation of tribals. *Economic and Political Weekly*, 1318-1320.
-

- Monosowski, E. (1990). Lessons from the Tucurui experience. *International Water Power and Dam Construction*, 42(2), 29-34.
- Morris, S., & Pandey, A. (2010). The Question of Land and Infrastructure Development in India: Urgently Required Reforms for Fairness and Infrastructural Development. *Indian Institute of Management Working Paper*, (2010-03), 02.
- Morse, B., & Berger, T. R. (1992). Sardar Sarovar. *Report of the Independent Team*. Ottawa: Resource Futures International Inc.
- Mougeot, L. J. (1990). Future hydroelectric development in Brazilian Amazonia: Towards comprehensive population resettlement. In *The Future of Amazonia* (pp. 90-129). Palgrave Macmillan, London.
- Muggah, R. (2008). Protection and durable solutions: Regimes for development and conflict-induced internally displaced and resettled populations. In *Forced Displacement* (pp. 26-49). Palgrave Macmillan, London.
- Munnell, A. H. (1990). Why has productivity growth declined? Productivity and public investment. *New England economic review*, (Jan), 3-22.
- Murickan, J. (2003). *Development-induced displacement: Case of Kerala*. Rawat Publications.
- Nandal, V. (2014). Land Acquisition Law in India: A Historical Perspective. *International Journal of Innovative Research and Studies*, 3(5).
- Naoroji, D. (1901). *Poverty and un-British rule in India*. London S. Sonnenschein 1901, reprinted at University of Toronto Libraries (2011).
- Nathan, D. (2009). Social security, compensation and reconstruction of livelihoods. *Economic and Political Weekly*, 22-26.
- National Civil Aviation Policy, 2016*, Ministry of Civil Aviation, Government of India, Press Information Bureau, dated, 15-June-2016.
- National Rehabilitation and Resettlement Policy, (2007)*. Ministry of Rural Development, Department of Land Resources, Land Reforms Divisions, New Delhi, 31<sup>st</sup> October, 2007.
- Nayak, A. K. (2013). Development, displacement and justice in India: Study of Hirakud dam. *Social change*, 43(3), 397-419.
- Oliver-Smith, A. (1991). Successes and failures in post-disaster resettlement. *Disasters*, 15(1), 12-23.

- Oliver-Smith, A. (2006). Displacement, resistance and the critique of development. *Development-induced Displacement, Oxford: Berghahn*, 141-79.
- Oliver-Smith, A. (2010). *Defying displacement: Grassroots resistance and the critique of development*. University of Texas Press.
- Ota, A. B. (1996). Countering Impoverishment Risks: The Case of Rengali Dam Project. *Involuntary displacement in dam projects*, 150-178.
- Owen, J. R., & Kemp, D. (2016). Can planning safeguard against mining and resettlement risks? *Journal of Cleaner Production*, 133, 1227-1234.
- Padel, F., & Das, S. (2012). Resettlement realities: The gulf between policy and practice. In *Resettling displaced people* (pp. 154-191). Routledge India.
- Pandey, B., Patro, A. K., Rao, C. V., Padhi, K. K., & Mallick, S. (1998). Depriving the underprivileged for development, *Orissa, India*: Institute for Socio-Economic Development.
- Paoloni, L., & Onorati, A. (2014). Regulations of large-scale acquisitions of land: the case of the voluntary guidelines on the responsible governance of land, fisheries and forests. *Law and Development Review*, 7(2), 369-400.
- Parasuraman, S., Singh, D. P., & Prasad, N. P. (1995). A Study on Displacement and Development Needs of Ramagundam Super Thermal Power Project Affected Families. Tata Institute of Social Sciences, Mumbai (mimeograph).
- Parasuraman, S. (1999). The Consequences of Displacement for Women. In *The Development Dilemma* (pp. 211-228). Palgrave Macmillan, London.
- Parasuraman, S. (2016). *The development dilemma: Displacement in India*. Springer.
- Partridge, W. L. (1989). Involuntary resettlement in development projects. *J. Refugee Studies.*, 2, 373.
- Patel, S., d'Cruz, C., & Burra, S. (2002). Beyond evictions in a global city: people-managed resettlement in Mumbai. *Environment and Urbanization*, 14(1), 159-172.
- Patel, S., Sliuzas, R., & Mathur, N. (2015). The risk of impoverishment in urban development-induced displacement and resettlement in Ahmedabad. *Environment and Urbanization*, 27(1), 231-256.
- Patnaik, P. (2007). In the aftermath of Nandigram. *Economic and Political Weekly*, 1893-1895.
- Pattnaik, B. K. (2013). Tribal resistance movements and the politics of development-induced displacement in contemporary Orissa. *Social Change*, 43(1), 53-78.
-

- Penz, P., Drydyk, J., & Bose, P. S. (2011). *Displacement by development: ethics, rights and responsibilities*. Cambridge University Press.
- Perera, J. (2006). Managing Resettlement in India: Approaches, Issues, Experiences. *Social Change*, 36(1), 197-203.
- Perera, J. (Ed.). (2014). *Lose to gain: is involuntary resettlement a development opportunity?* Asian Development Bank.
- Perera, J. (2014). Displacement-induced impoverishment: The role of a sustainable income restoration and improvement strategy in livelihood rehabilitation in Sri Lanka. *Social Change*, 44(3), 333-354.
- Rajagopal, B. (2000). Human Rights and Development. *World Commission on Dams Submission*, [www.dams.org/kbase/submissions/showsub.php](http://www.dams.org/kbase/submissions/showsub.php).
- Ramesh, J., & Khan, M. A. (2015). *Legislating for Equity: The Making of the 2013 Land Acquisition Law*. Oxford University Press.
- Rao, V. K. R. V. (1980). Infrastructure and economic development. *Commerce Annual Number*, 141, 10-11.
- Reddy, G., Smyth, E., & Steyn, M. (2017). *Land access and resettlement: a guide to best practice*. Routledge.
- Rege, S. (2000). Understanding popular culture: The Satyashodhak and Ganesh mela in Maharashtra. *Sociological bulletin*, 49(2), 193-210.
- Rew, A., Fisher, E., & Pandey, B. (2000). Addressing policy constraints and improving outcomes in development-induced displacement and resettlement projects. *Unpublished report, Refugee Studies Centre, University of Oxford*.
- Robinson, W. C. (2003). *Risks and rights: The causes, consequences, and challenges of development-induced displacement* (Vol. 18). Washington DC: The Brookings Institution.
- Rodgers, G., Gore, C., & Figueiredo, J. B. (Eds.). (1995). *Social exclusion: Rhetoric, reality, responses* (pp. 43-56). Geneva: International Institute for Labour Studies.
- Rodhouse, T., & Vanclay, F. (2016). Is free, prior and informed consent a form of corporate social responsibility? *Journal of Cleaner Production*, 131, 785-794.
- Roller, L. H., & Waverman, L. (2001). Telecommunications infrastructure and economic development: A simultaneous approach. *American economic review*, 91(4), 909-923.

- Sambhav Shrivastava, K., Gupta Bhaya, S., & Wordsell, T. (2020). Subversion of Due Process for Seeking the Consent of Communities in Land Acquisition and Resultant Land Conflicts.
- Sameena, M.S (2018). The Resilient Kerala Women: Case Studies from The Moolampilly Agitation, *EPRA International Journal of Economic and Business Review*, Volume - 6, Issue- 11, November 2018.
- Sánchez, F., & Broudehoux, A. M. (2013). Mega-events and urban regeneration in Rio de Janeiro: planning in a state of emergency. *International Journal of Urban Sustainable Development*, 5(2), 132-153.
- Sarkar, A. (2007). Development and displacement: Land acquisition in West Bengal. *Economic and Political Weekly*, 1435-1442.
- Saxena, K. B. (2011). Rehabilitation and resettlement of displaced persons: a critical examination of the national policy and proposed bills. In *Development-induced Displacement, Rehabilitation and Resettlement in India* (pp. 43-65). Routledge.
- Schwab, K. (2019). Why do we need the “Davos Manifesto” for a better kind of capitalism? In *World Economic Forum* (Vol. 1).
- Scoones, I. (1998). Sustainable rural livelihoods: a framework for analysis, IDS Working Paper 72.
- Scudder, T. (1981). What it means to be dammed: the anthropology of large-scale development projects in the tropics and subtropics. *Engineering and Science*, 44(4), 9-15.
- Scudder, T. (1996). Development-induced impoverishment, resistance and river-basin development. *Understanding impoverishment: The consequences of development-induced displacement*, 49-74.
- Scudder, T. (2011). Development-induced Community Resettlement 1. In *New directions in social impact assessment*. Edward Elgar Publishing.
- Sen, A. (1997). *Choice, welfare and measurement*. Harvard University Press.
- Sen, A. (1999). Commodities and capabilities. *OUP Catalogue*.
- Sen, A. (1999). The possibility of social choice. *American economic review*, 89(3), 349-378.
- Sen, Amartya. “Development as freedom (1999).” *The globalization and development reader: Perspectives on development and global change* 525 (2014).
- Sen, A. (2003). Democracy and its global roots. *The New Republic*, 28-35.
-

- Seufert, P. (2013). The FAO voluntary guidelines on the responsible governance of tenure of land, fisheries and forests. *Globalizations*, 10(1), 181-186.
- Shahbaz, M., & Jain, R. (2017). Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013. *Supremo Amicus*, 2, 249.
- Shaojun, C., & Guoqing, S. (2006). Analysis of economic impact in water conservancy and hydropower development. In *Dams and Reservoirs, Societies and Environment in the 21<sup>st</sup> Century, Two Volume Set: Proceedings of the International Symposium on Dams in the Societies of the 21<sup>st</sup> Century, 22<sup>nd</sup> International Congress on Large Dams (ICOLD), Barcelona, Spain, 18 June 2006* (p. 267).
- Sharma, R. N. (2003). Involuntary displacement: A few encounters. *Economic and Political Weekly*, 907-912.
- Sharma, S. (2014). Development for whom and at whose Cost: Displacement Due to Dams in India. *Indian Journal of Public Administration*, 60(1), 19-34.
- Shaw, M. N. (2017). *International law*. Cambridge university press.
- Siddiqui, K. (2008). Globalisation and developing countries: opportunities or marginalisation? Sarup and Sons.
- Siddiqui, K. (2012). Development and displacement in India: reforming the economy towards sustainability. In *Journal of Physics: Conference Series* (Vol. 364, No. 1, p. 012108). IOP Publishing.
- Sinha, R. (2020). Land acquisition law in neoliberal India. *The Land Question in Neoliberal India: Socio-Legal and Judicial Interpretations*, 138.
- Singh, S., Kothari, A., & Amin, K. (1992). Evaluating major irrigation projects in India. *Big Dams, Displaced People: Rivers of Sorrow Rivers of Change*, New Delhi: Sage Publications, 169-86.
- Smyth, E., & Vanclay, F. (2017). The Social Framework for Projects: a conceptual but practical model to assist in assessing, planning and managing the social impacts of projects. *Impact Assessment and Project Appraisal*, 35(1), 65-80.
- Somayaji, S., & Talwar, S. (Eds.). (2011). *Development-Induced Displacement, Rehabilitation and Resettlement in India*. London: Routledge.
- Sreya, B., (2013). Judicial interpretation of Public Purpose with respect to land rights, *Social Science Research Network*, July 8, 2013.

- Stanley, J. (2004). Development-induced displacement and resettlement. *Forced Migration Online*.
- Stewart, D. W., & Shamdasani, P. N. (2014). *Focus groups: Theory and practice* (Vol. 20). Sage publications.
- Stiglitz, J. E. (2010). *Freefall: America, free markets, and the sinking of the world economy*. WW Norton & Company.
- Swamy, R. N. (2011). Development-Induced Displacement: The Case of Moolampilly. *The Indian Journal of Political Science*, 153-163.
- Sweetman, C. (Ed.). (1998). *Gender and migration*. Oxfam.
- Szablowski, D. (2002). Mining, displacement and the World Bank: A case analysis of compania minera antamina's operations in Peru. *Journal of Business Ethics*, 39(3), 247-273.
- Szablowski, D. (2010). Who defines displacement? The operation of the World Bank Involuntary Resettlement Policy in a large mining project. *Development's Displacements: Economies, Ecologies, and Cultures at Risk*, 33.
- Taneja, B., & Thakkar, H. (2000). Large dams and displacement in India. *Large dams and displacement in India Cape Town, South Africa: submission no. SOC166 to the World Commission on Dams*.
- Terminski, B. (2012). Mining-induced displacement and resettlement: Social problem and human rights issue (a global perspective). *Available at SSRN*, 2028490, 1-45.
- Terminski, B. (2013). Development-induced displacement and resettlement: Theoretical frameworks and current challenges. *Development*, 10, 101.
- Terminski, B. (2014). *Development-induced displacement and resettlement: Causes, consequences, and socio-legal context*. Columbia University Press.
- Thangaraj, S. (1996). Impoverishment risks' analysis: A methodological tool for participatory resettlement planning. *Understanding impoverishment: The consequences of development-induced displacement*, 223-232.
- Tharoor, S. (2016). *An era of darkness: The British empire in India*, Aleph Book Company, New Delhi, India.
- The Hindu, 1<sup>st</sup> November, 2016, 12<sup>th</sup> April, 2017, 4<sup>th</sup> September, 2018, 4<sup>th</sup> November, 2018 & 12<sup>th</sup> January, 2020.
- Thomson, F. (2014). Why we need the concept of land-grab-induced displacement. *Journal of Internal Displacement*, 4(2), 42-65.

- Thomas, Sabu P., Pillai, R Prakash and Franklin Biju, Loyola College of Social Sciences Sreekariyam Thiruvananthapuram, *Report on Social Impact Assessment Study Trivandrum International Airport Terminal II Phase II*, January 2018.
- Union Budget Documents, 2016-17, 2018-19 & 2022-23, Ministry of Finance, Government of India.
- Vanclay, F. (2017). Project-induced displacement and resettlement: from impoverishment risks to an opportunity for development? *Impact Assessment and Project Appraisal*, 35(1), 3-21.
- Van der Ploeg, L., & Vanclay, F. (2017). A human rights-based approach to project-induced displacement and resettlement. *Impact assessment and project appraisal*, 35(1), 34-52.
- Varia, N. (2013). “ *What is a House Without Food?*”: *Mozambique’s Coal Mining Boom and Resettlements*. Human Rights Watch.
- Varkkey, B., & Raghuram, G. (2001). Public private partnership in airport development- Governance and risk management implications from Cochin International Airport Ltd.
- Vithayathil, P. N., & Sunny, C. (2009). Development Projects and Human Right Protection: the CIAL in Kerala. *Rajagiri Journal of Social Development*, 5(1).
- Wahi, N. (2017). Land Acquisition in India: A Review of Supreme Court Cases from 1950 to 2016. *Available at SSRN 3378958*.
- Wickeri, E. (2010). Land is life, land is power: Landlessness, exclusion, and deprivation in Nepal. *Fordham International Law and Justice*, 34, 930.
- Wilmsen, B. (2016). After the deluge: A longitudinal study of resettlement at the Three Gorges Dam, China. *World Development*, 84, 41-54.
- Wilson, E., & Kuszewski, J. (2011). Shared value, shared responsibility: a new approach to managing contracting chains in the oil and gas sector. IIED. London.
- Windfuhr, M. (2017). *Safeguarding human rights in land-related investments: Comparison of the Voluntary Guidelines Land with the IFC Performance Standards and the World Bank environmental and social safeguard framework* (p. 60). DEU.
- Wolfensohn, J. D. (2005). *Voice for the World’s Poor: Selected Speeches and Writings of World Bank President James D. Wolfensohn, 1995-2005* (Vol. 889). World Bank Publications.
- World Bank. (1994). *World development report 1994: Infrastructure for development*. The World Bank.
- World Bank. (2004). *Involuntary Resettlement Sourcebook: Planning and Implementation in Development Projects*. The World Bank.



World Bank. (2014). *A measured approach to ending poverty and boosting shared prosperity: Concepts, data, and the twin goals*. The World Bank.

World Bank Group. (2016). *World development report 2016: Digital dividends*. World Bank Publications.

World Commission on Dams. (2000). *Dams and development: A new framework for decision-making: The report of the world commission on dams*. Earthscan.

Yip, W., Subramanian, S. V., Mitchell, A. D., Lee, D. T., Wang, J., & Kawachi, I. (2007). Does social capital enhance health and well-being? Evidence from rural China. *Social science & medicine*, 64(1), 35-49.

## APPENDIX I

### Parameters Used for the Construction of QLI & Scores

Sl. No.	Parameters	Score	Pre-displacement Phase	Post-displacement Phase
<b>1.</b>	<b>Homestead Status</b>			
	a. No residence	0		
	b. Relative's House	3		
	c. Rented home / Paying guest	6		
	d. Own house	10		
<b>2.</b>	<b>Availability of Land</b>			
	a. Marginal landholder (< 10 cents)	0		
	b. Small landholder (between 10 and 40 cents)	3		
	c. Medium landholder (between 40 and 1 Acre)	6		
	d. Large landholder (> 1 Acre)	10		
<b>3.</b>	<b>Livelihood Status</b>			
	a. No one employed	0		
	b. At least one employed	3		
	c. At least two employed	6		
	d. More than two employed	10		
<b>4.</b>	<b>Annual Income (in Rs.)</b>			
	a. Low Income (< 50000)	0		
	b. Lower Middle-Income (between 50000 and 100000)	3		
	c. Upper Middle-Income (between 100000 and 500000)	6		
	d. High Income (> 500000)	10		
<b>5.</b>	<b>Food Security</b>			
	a. Food Insecurity	0		
	b. Minimum Food Access	3		
	c. Moderate Food Access	6		
	d. Self-reliant	10		

<b>6.</b>	<b>Health Status</b>			
	a. Have Chronic Diseases	0		
	b. Only Common Diseases	3		
	c. Only Age-related Diseases	6		
	d. No Major Diseases	10		
<b>7.</b>	<b>Access to Education</b>			
	a. Drop-outs	0		
	b. Loss of more than 3 years	3		
	c. Loss of less than 3 years	6		
	d. No loss / Complete Access	10		
<b>8.</b>	<b>Access to Infrastructure</b>			
	a. No Access	0		
	b. Some Access	3		
	c. Moderate Access	6		
	d. Full Access	10		
<b>9.</b>	<b>Kinship Status</b>			
	a. No Contact	0		
	b. Some Contact	3		
	c. Moderate Contact	6		
	d. Strong Contact	10		
<b>10.</b>	<b>Community Life / Social Life</b>			
	a. Unfriendly	0		
	b. Satisfied	3		
	c. Friendly	6		
	d. Very Happy	10		
	<b>Total Score</b>	100		
<b>Implications</b>				
<ul style="list-style-type: none"> <li>⊗ Extreme poor status <math>\leq 30</math> (below 30)</li> <li>⊗ Poor status <math>\leq 50</math> (between 30 and 49)</li> <li>⊗ Fair status <math>\leq 75</math> (between 50 and 74)</li> <li>⊗ Good status <math>\leq 90</math> (between 75 and 89)</li> <li>⊗ Very good status <math>\geq 90</math> (between 90 and 100)</li> </ul>				

## Appendix II

Schedule Number 

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**Department of Economics, Dr. John Matthai Centre, Thrissur, Calicut University**  
**Interview Schedule for the study of**  
**Development-Induced Land Acquisition, Displacement and Resettlement: A Study on**  
**Airport Projects in Kerala**

### Interview Schedule I: Displaced Inhabitants (Physical Displacees)

#### I. Profile of the Household / General Information

1.	Name of the Respondent					
2.	Panchayat / Municipality					
3.	Village					
4.	Taluk					
5.	District					
6.	Ward No. & Name					
7.	House No. & Name					
8.	Gender of the house owner	1. Male	2. Female	3. Third Gender		
9.	Religion of the respondent	1. Hindu	2. Islam	3. Christian	4. Others	
10.	Caste of the respondent	1. SC	2. ST	3. OBC	4. General	
11.	Nature of family set up	1. Joint	2. Nuclear	3. Single	Before	After
12.	Economic Status	1. APL	2. BPL			
13.	Location	1. Rural	2. Semi Urban	3. Town		
14.	Ownership of cattle & poultry	1. Sheep	2. Cow	3. Others		
15.	Total land area located in the nearest of the project					
16.	Did you feel the remaining land area nearest the airport as abandoned lands?	1. Yes		2. No		
17.	If yes, size of abandoned land areas (in cents)					

Column 3	<b>Relation to head</b>	(1) Head (2) Spouse of the head (3) Son/Daughter (4) Sons/Daughters in-law (5) Grandchild (6) Father/Mother-in-law (7) Brothers/Sisters in-law (8) parent (9) grand-parent (10) Others-(specify)
Column 5	<b>Sex</b>	(1) Male (2) Female (3) Third Gender
Column 6	<b>Marital status</b>	(1) Married (2) Unmarried (3) Widow/Widower (4) Divorced (5) Separated
Column 9 & 10	<b>Activity status</b>	(1) Employed (2) Unemployed (3) Student (4) Retired (Previously employed, at present no work) (5) Children
Column 13 & 14	<b>Nature of job</b>	(1) Permanent (2) Temporary (3) Casual workers
Column 15 & 16	<b>Agency</b>	(1) Government (2) Private (3) Self-employed (4) Quasi-government (5) Others-(specify)
Column 19 & 20	<b>Bank account</b>	(1) Yes (2) No
Column 21 & 22	<b>Intoxicants</b>	(1) Alcohol (2) Pan Masala (3) Snuff (4) Drugs (5) Smoking (6) Others (Specify) (7) Nil

**II. Details of Household Members (Before & After Land Acquisition)**

Sl. No.	Name	Relation to Head of the family	Age	Sex	Marital Status	Education Completed		Activity Status		Occupation		Nature of Job		Agency		Monthly income		Whether having bank Account		Intoxicants, if any	
						General	Technical	before	after	before	after	before	After	before	after	before	after	Before	after	before	after
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1																					
2																					
3																					
4																					
5																					
6																					
7																					

### III. Land Acquisition: Notification and Responses of Inhabitants

1.	For which project was your land acquired?	1. Calicut Airport	2. Kannur Airport	
2.	Did you hear about the decision of the authority to acquire land before the notification?	1. Yes	2. No	
3.	If yes, from where did you get the information?	1. Media 3. Govt. officials	2. Local Politicians 4. Friends	
4.	Have you got legal right on acquired land?	1. Yes	2. No	
5.	Date of notification			
6.	Date of final acquisition			
7.	Date of disbursement of compensation			
8.	What was your first reaction when you heard the news of land acquisition?	1. Extremely frustrated 2. Moderately frustrated 3. Indifferent 4. Satisfied 5. Very happy Mood		
9.	Was there any discussion with you by the agent of the authority regarding the acquisition of land?	1. Yes 2. No		
10.	If yes, what types of discussions were conducted?	1. Necessity of the project 2. Socio-economic impact of project 3. Mode of compensation 4. Compensation amount 5. Rehabilitation packages		
11.	Were you willing to surrender your land for the project voluntarily?	1. Yes 2. No		
12.	Were there any sorts of organized/unorganized activities against the acquisition?	1. Yes 2. No		
13.	Have you actively participated in the agitation program against land acquisition?	1. Yes 2. No		
14.	Were you afflicted by any mental stress?	1. Yes 2. No		
15.	Displacement caused higher level of stress in your life – Register your response	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree		

#### IV. Extent of Land-Acquisition, Volume of Compensation and Litigation

1.	Nature of ownership of the acquired land	1. Owned 2. Possessed by other means		
2.	If not owned, specify the nature of right			
3.	How much of your land was acquired by the authority (in cents)?	1. <10            2. b/w 10 – 20 3. b/w 20 – 30   4. b/w 30 – 40 5. b/w 40 – 50   6. > 50 (specify)		Specify in Cents
4.	Nature of the land lost / Type of land (in cents)	Type of land	Cents	
		1. Paddy field		
		2. Dry land		
		3. Cultivated land		
		4. Barren land		
		5. Any other		
Total land area				
5.	What was the land value per cent offered to you by the Authority? (In Rupees)	1. < 10000 2. b/w 10000 – 20000 3. b/w 20000 – 30000 4. b/w 30000 – 40000 5. b/w 40000 – 50000 6. > 50000 (specify the amount)		
6.	What was the approximate market-value at the time of acquisition?	1. Lower than the price offered by the authority		
		2. Higher than the price offered by the Authority		
		3. Equal		
7.	Was there any change in the extent of land ownership? (Total land area in cents).	Before		After
		1. <10		1. <10
		2. b/w 10 – 20		2. b/w 10 – 20
		3. b/w 20 – 30		3. b/w 20 – 30
		4. b/w 30 – 40		4. b/w 30 – 40
		5. b/w 40 – 50		5. b/w 40 – 50
		6. > 50 (specify)		6. > 50 (specify)
8.	What was the aggregate amount of compensation you received?	1. < 100000 2. between 100000 and 1000000 3. between 1000000 and 2000000 4. between 2000000 and 3000000 5. between 3000000 and 4000000 6. between 4000000 and 5000000 7. > 5000000		Actual Amount
				Rs.
9.	What were the major components of compensation?	1. Cash for land 2. Cash for home 3. Cash for crops 4. Cash for trees 5. Land at free of cost		

10.	Did you receive land for land as a part of rehabilitation package?	1. Yes 2. No		
11.	If yes, how much land (in cents) did you receive?	1. < 5 2. b/w 5 to 10 3. > 10 (specify)		
12.	What was the nature of land you received as package?	Type of land	Cents	
		1. Paddy field		
		2. Dry land		
12 a.	Did you construct new home in the land given by the authority?	1. Yes	3. Cultivated land	
		2. No	4. Barren land	
			5. Waste land	
			Total land area	
13.	Specify the approximate period when your residential building was built?	1. < 5 year 2. between 5 and 10 years 3. between 10 and 15 years 4. between 15 and 20 years 5. > 20 years (specify)		
14.	Did you get any help from the authority to construct your house? If yes, specify the amount.	1. Yes 2. No		Rs.
15.	Did you get permission from the authority to take materials from the acquired land?	1. Yes 2. No		
16.	Did you receive any amount for transporting materials from your acquired land to resettled place? Specify the amount.	1. Yes 2. No		Rs.
17.	Did the revenue authorities insist on getting monetary benefits from you at the time of acquisition or disbursement?	1. Yes 2. No		
18.	If yes, how much?	1. < 5000 2. b/w 5000 – 10000 3. > 10000		
19.	In what ways did you spend the compensation amount?	On major items		%
		1. House-construction		
		2. Purchase additional land		
		3. Purchase new land and build home		
		4. Start new business / self-employment		
		5. Expand agriculture and allied Activities		
		6. Repay old loan		
		7. Educational purposes of children		
		8. Deposit with a bank		
		9. Marriage of children		
		10. Other consumption purposes		
		11. Purchase a new vehicle		
		12. Division among family members		
13. Start money-lending activities				



Were you satisfied with the compensation?		Highly Dissatisfied	Dissatisfied	Neutral	Satisfied	Highly Satisfied
20.	1	Enough to purchase new land				
	2	Enough To build a new house				
	3	Reasonable Land price in suburbs of the project and zero role land mafia				
	4	Proper Estimation of the values of assets including house				
	5	Humane approach of the officials				
	6	Quick payment of compensation				
21.	Was there any delay in getting compensation amount?	1. Yes 2. No				
22.	If yes, how many months were taken to get compensation?	1. < 6 month 2. between 6 and 12 months 3. between 12 and 24 months 4. between and 36 months 5. > 36 months				Specify period
23.	Did you have any idea about getting enhancement through litigation?	1. Yes 2. No				
24.	Were you involved in litigation for getting an enhanced amount?	1. Yes 2. No				
25.	If yes, how many times did you file suits for getting additional compensation?	1. Once                      2. Twice 3. Thrice                    4. More				
26.	Did you get additional amount through litigation?	1. Yes                      2. No				
27.	If yes, how much (in Rupees)?	1. < 100000 2. between 100000 and 500000 3. between 500000 and 1000000 4. between 1000000 and 2000000 5. > 2000000 (specify the amount)				
28.	How long did it take to get the compensatory amount?	1. < 1 year 2. between 1 and 5 years 3. between 5 and 10 years 4. > 10 years				
29.	How much did you spend for litigation (in Rupees)?	1. < 25000 2. between 25000 and 50000 3. between 50000 and 75000 4. between 75000 and 100000 5. > 100000 (specify the amount)				

## V. Socio-Economic Impact of Airport-Induced Land-Acquisition and Displacement

### V.1. The structure of house before and after displacement

			Before	After
1.	Is there any change in the ownership of housing?	1. Own		
		2. Rented		
		3. Jointly owned		
		4. Others (Specify)		
2.	If own house, specify the way of owning house	1. Govt. Provided		
		2. Inherited		
		3. Self-built/ Bought		
		4. Others		
3.	Type of Roof	1. Thatched / Grass leaves		
		2. Sheet		
		3. Tiled		
		4. Concrete		
		5. Asbestos		
		6. Others (Specify)		
4.	Flooring		Before	After
		1. Mud/cow dung		
		2. Cement		
		3. Mosaic		
		4. Marbles		
		5. Ceramic tiles		
6. Others (Specify)				
5.	Is there any change in the building structure of home?	1. Double storied 2. Single storied 3. Hut		
6.	Plinth area (in square feet)			
7.	No. of Dwelling rooms			
8.	Electrification	1. Electrified		
		2. Not electrified		
9.	Location of housing	1. Nearest to town		
		2. Far away from town		
10.	How long did you take to construct the new house?	1. One year 2. Two years 3. Three years 4. Four years 5. Five Years 6. More than five years		
11.	Did you apply loan for constructing the new house?	1. Yes      2. No		

12.	If yes, what was your source of finance?	1. Bank loan 2. KSFE 3. Money lenders 4. Friends 5. Relatives	
13.	Did you experience any malpractices/middlemen in the assessment of your land and other properties?	1. Yes 2. No	

**V.2. Basic Amenities: Water Availability, Hygiene and Source of Energy (Before & After)**

1.	Source of water		Before	After
	1. Own well / pipe			
	2. Neighbour's well / pipe			
	3. Public tap / well			
	4. Ponds / Canals			
	5. Public supply of water			
	6. Stream / Spring / Torrents			
	7. Others (Specify)			
2.	Type of fuel			
	1. Wood			
	2. Charcoal			
	3. Dung			
	4. Kerosene stove			
	5. Gas (LPG)			
	6. Biogas			
	7. Electricity			
8. Others (specify)				
3.	Latrine Facility	1. Septic latrine		
		2. Non-septic latrine		
		1. Open pit		
		2. Open space		
		3. Neighbour's latrine		
		4. Public toilet		

### V.3. Livelihood Status

1.	Is there any change in the occupational pattern of displaced inhabitants?		Before	After				
		1. Gulf/Abroad						
		2. Farming						
		3. Self-employment						
		4. Animal husbandry						
		5. Construction work						
		6. Driving						
		7. Govt. job						
		8. Shop keeping						
		9. Others (specify)						
2.	Employment status	1. Employed	Total	M	F	Total	M	F
		2. Unemployed						
3.	Did the Authority offer you a permanent job?	1. Yes 2. No						

### V.4. Livelihood loss to family members

Sl. No.	Family members who lost livelihood		Livelihood		Value of loss	
	Male	Female	Before	After	Labour-days lost/week	Income lost/week

### V.5. Livelihood gain to family members after the implementation of the project (specify)

1.	Type of job offered by the Airport Authority?	1. Trolley pullers (Handyman) 2. Security guard 3. Pushback drivers 4. Light vehicle drivers 5. Kitchen stewards 6. kitchen porter 7. General cleaner 8. Food handler 9. Fire fighter 10. Elevator-technician 11. Data loader 12. Electrical supervisor 13. Plumber 14. Others (specify)				
Sl. No.	Family members who gained jobs		Livelihood gain		Value of gain	
	Male	Female	Within the project	Out of the project	Labour-days gained/week	Income gained per week/month

1.						
2.						
	Did the authority guarantee job to you or any one of your family?					
						1. Yes 2. No

**V.6. Multiple Displacement / Revictimization**

1.	Did you face any previous displacement on account of this project?	1. Yes 2. No	
2.	If yes, how many times?	1. Once 2. Twice 3. Thrice 4. More than three times	
3.	Were there any special packages announced by the Authority for revictimization / multiple displacements?	1. Yes 2. No	
4.	If yes, what were they?	1. Hike in the compensation amount 2. Additional land 3. Preference for getting job 4. Others (specify)	

**V.7. Educational loss**

1.	Did you feel any trouble in relation to educational access to your children after displacement?	1. Yes 2. No	
2.	If yes, in what ways educational loss happened to your family?	1. Drop-outs 2. 1 year loss 3. 2 years loss 4. 3 years loss 5. 4 years loss 6. More than 4 years 7. Gave up the plan to go outside for higher education	

**V.8. Access to Common Properties**

1.	Were any grave-yards or shrines taken by the Authority for the Airport-expansion?	1. Yes 2. No	
		Before	After
1a.	Number of Worship centers		
1b.	Number of Graveyards		
2.	Did the acquisition adversely affect you in matters regarding distance and travel-facilities?	1. Yes 2. No	

3.	If yes, how many kilometers? 1. <1 KM 2. between 1 and 2 km 3. between 2 and 3 km 4. between 3 and 4 km 5. between 4 and 5 km 6. > 5 km (specify)	Before	After

### V.9. Community loss

1.	Did you face any community loss on account of displacement? 1. Common well 2. Common worship centers 3. Play-ground to children 4. Road connectivity 5. Pond 6. Public tap 7. Irrigation and power 8. Club activities	Before	After

### VI. Details of Resettlement

1.	Whether you resettled or not?	1. Yes 2. No	
2.	District in which you resettled		
3.	Block		
4.	Village		
5.	Panchayat		
6.	Town		
7.	Location	1. Rural 2. Semi urban 3. Town	
8.	Sex of the head of the family who received the title deed.	1. Male 2. Female	
9.	Nature of resettlement	1. Govt. 2. Own	
10.	Whether you have legal right on resettled land or not?	1. Yes 2. No	
11.	Whether the land is officially documented in your (respondent's) name?	1. Yes 2. No	
12.	If yes, area in cents	1. < 5 2. b/w 5 – 10 3. b/w 10 – 20 4. b/w 20 – 30 5. b/w 30 – 40 6. b/w 40 – 50 7. b/w 50 – 60 8. above 60 (specify)	

13.	Date of possession		
14.	Nature of possession	1. Permanent 2. Temporary / ad-hoc	
15.	Whether the title to the property was bought/inherited or granted by the government?	1. Govt. Provided 2. Inherited 3. Bought 4. Others	
16.	How far did it take to reach resettlement area from the acquisition zone?	1. <1 KM 2. b/w 1 – 5 km 3. b/w 5 – 10 km 4. b/w 10 – 20 km 5. > 10 km (specify)	
17.	Are there any restrictions imposed by the Authority on land and other properties?	1. Yes 2. No	
18.	If yes, what are they?	1. Not to sell for a specified period 2. Only for building house 3. Restrictions on constructing multiple storied apartments 4. Others (specify)	
19.	Were there any troubles in the new settled area?	1. Yes 2. No	
20.	If yes, what were they?	1. Lack of clean and safe drinking water 2. No proper road connectivity 3. Power shortage 4. It took more time to reach the town 5. Lack of proper shrines for worship 6. Long distance to educational institutions 7. Others (specify)	

## VII. Nature of Rehabilitation

1.	How many years did it take for rehabilitation?	1. <1 year 2. between 1 and 2 years 3. between 2 and 3 years 4. between 3 and 4 years 5. > 4 years (specify)	
2.	How old were you at the time of acquisition?		
3.	Where did you stay during the interim period?	1. Rented house 2. Relative's house 3. Friend's house 4. Temporary shed in rehabilitated area 5. Others (specify)	
4.	Did you receive any financial aids from the authority to pay rent during this interim period?	1. Yes 2. No	

5.	Was there any birth, death, marriage or some other important events during this period?	1. Yes (Specify) 2. No	
6.	What sorts of difficulties did you face on such occasions?	1. Stigmatization 2. Education loss 3. Livelihood loss 4. Transportation trouble 5. Others (specify)	
7.	Were you provided alternate land for agriculture if that were your livelihood?	1. Yes 2. No	
8.	Were you offered any self-employment schemes?	1. Yes 2. No	

### **VIII. Resettlement Environment**

1.	What was the immediate response of host population?	1. Very supportive 2. Supportive 3. Indifferent 4. Treated as new settlers 5. Arrogant attitude	
2.	Did you feel social exclusion in the resettled area?	1. Yes 2. No	
3.	Engagements with your family before and after displacement	Before	After
		1. Always 2. Occasionally 3. Festival season 4. Annually 5. No connection	1. Always 2. Occasionally 3. Festival season 4. Annually 5. No connection
4.	Did you participate in designing rehabilitation packages?	1. Yes 2. No	
5.	Did you experience impoverishment?	1. Yes 2. No	



Appendix II

How do you rate the look and feel of the new settlement?		Very Bad	Bad	Indifferent	Good	Very Good
6.	1 Basic facilities of the new settled areas					
	2 Approaches of the host population					
	3 Availability of jobs and livelihood security					
	4 Access to worship centers and graveyards					
	5 Availability of public utility-services					
	6 Access to educational institutions and healthcare centers					
	7 Neighbourhood cooperation					
7.	Your comments					
Remarks / Comments / Suggestions						

## APPENDIX III

Schedule Number 

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**Department of Economics, Dr. John Matthai Centre, Calicut University, Thrissur**  
**Interview Schedule for the study of**  
**Development-Induced Land Acquisition, Displacement and Resettlement: A Study on**  
**Airport Projects in Kerala**

**Interview Schedule II: Project Affected Persons (Economic Displacees)**

### 1. Profile of the Household / General Information

1.	Name of the Respondent				
2.	Panchayat/Municipality				
3.	Village				
4.	Taluk				
5.	District	1. Malappuram	2. Kannur		
6.	Ward No. & Name				
7.	House No. & Name				
8.	Sex of the house owner	1. Male	2. Female	3. Third Gender	
9.	Religion of the respondent	1. Hindu	2. Islam	3. Christian	4. Others
10.	Caste of the respondent	1. SC	2. ST	3. OBC	4. General
11.	Type of family	1. Joint	2. Nuclear	3. Single	
12.	Type of Ration-Card	1. AAY			
		2. Priority			
		3. Non-priority subsidy			
		4. Non-priority & non-subsidy			
13.	Economic Status	1. APL	2. BPL		
14.	Location	1. Rural	2. Semi Urban	3. Town	
15.	Annual income	1. <25000 2. b/w 25000 – 50000 3. b/w 50000 – 75000 4. 75000 – 100000 5. > 100000 (specify)			
16.	Components of Economic Displacement	1. Loss of land (Specify in cents) 2. Loss of job 3. Loss of dairy farms			

Appendix III

Column 3	<b>Relation to head</b>	(1) Head (2) Spouse of the head (3) Son/Daughter (4) Sons/Daughters in-law (5) Grandchild (6) Father/Mother-in-law (7) Brothers/Sisters in-law (8) parent (9) grand-parent (10) Others-(specify)
Column 5	<b>Sex</b>	(1) Male (2) Female (3) Third Gender
Column 6	<b>Marital status</b>	(1) Married (2) Unmarried (3) Widow/Widower (4) Divorced (5) Separated
Column 9	<b>Activity status</b>	(1) Employed (2) Unemployed (3) Student (4) Retired (Previously employed, at present no work) (5) Children
Column 11	<b>Nature of job</b>	(1) Permanent (2) Temporary (3) Casual workers
Column 12	<b>Agency</b>	(1) Government (2) Private (3) Self-employed (4) Quasi-government (5) Others-(specify)
Column 14	<b>Bank account</b>	(1) Yes (2) No

**II. Details of Household Members**

Sl. No.	Name	Relation to Head of the family	Age	Sex	Marital Status	Education Completed		Activity Status	Occupation	Nature of Job	Agency	Monthly income	Whether having bank Account
						General	Technical						
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1													
2													
3													
4													
5													
6													
7													

### III. Project Affected Persons (PAPs): Outlook & Expectations

1.	Which of the projects is nearest to your location?	1. Calicut Airport	2. Kannur Airport
2.	How long have you been residing at this place?	1. < 5 year 2. b/w 5 – 10 years 3. b/w 10 -15 years 4. b/w 15 - 20 years 5. > 20 years (specify)	
3.	Is your residence a new one?	1. Yes 2. No	
4.	How old is your dwelling?	1. < 1 year 2. b/w 1 – 2 years 3. b/w 2 -3 years 4. b/w 3 - 4 years 5. > 4 years (specify)	
5.	Did you face any previous displacement on account of this project?	1. Yes 2. No	
6.	If yes, how many times?	1. Once 2. Twice 3. Thrice 4. More than three times	
7.	Did you get the plan of the Authority to acquire your land for the extension of the airport?	1. Yes	2. No
8.	How many times did you receive the information?	1. Once 2. Twice 3. Thrice 4. More than three times	
9.	What was your first reaction to the news of land acquisition?	1. Extremely frustrated 2. Moderately frustrated 3. Indifferent 4. Satisfied 5. In a very happy mood	
10.	Are you willing to surrender your land for the project voluntarily?	1. Yes 2. No	

11.	If yes, give ranks for the factors that you have considered for giving your land to the authority.	1. Overestimation of values of land and other assets	
		2. Better compensation	
		3. Jobs assured in the project	
		4. Pleasure to participate in the nation building process	
		5. Lack of basic facilities in the present/original native place	
		6. New business opportunities	
		7. Happy to receive cash	
		8. To get cash for the properties which, otherwise, cannot be disposed of	
		9. Expecting better prospects after displacement	
		10. Damage to properties on account of airport operations	
		11. Sell my waste lands	
		12. Can dispose of my properties near the airports which are not marketable	
		13. Others (specify)	
12.	If no, give ranks for the factors that you have considered for not giving your land.	1. Underestimation of values of land and other Assets	
		2. Inadequate compensation	
		3. Fear of loss of homestead	
		4. Fear of loss of livelihood	
		5. There is no alternative land for constructing residential buildings	
		6. Fear of closing public roads	
		7. Difficulties in building new homestead	
		8. Reluctant to leave ancestral properties	
		9. Fear of demolition of worship centers	
		10. Fear of loss of traditional graveyard	
		11. Fear of loss of neighbourhood	
		12. Fear of loss of social fabric including town	
		13. Airport has already acquired excess land	
		14. Bitter experiences of acquisition in the past	
		15. False promises	
		16. Involvement of real estate mafia	
		17. High prices of land nearby airports	
		18. Disintegration of family	
		19. Fear of loss of education to children	
		20. Others (specify)	

13.	Did you face any damages on account of the airport projects?	1. Yes 2. No	
13a.	If yes, what are the damages?	Damages faced	Rank
		1. Damage to residences (jerking, scratch, etc.)	
		2. Sound pollution	
		3. Scarcity of water and contamination	
		4. Difficulties in transaction of land and other assets	
		5. Air pollution	
		6. Heavy water-flows during monsoon from airports	
		7. Dumping of wastages	
		8. Razing of hills	
		9. Troubles from mixing plant operations	
10. Others (specify)			
14.	Did you lodge any complaint against these damages?	1. Yes 2. No	
15.	If yes, to whom?	1. Airport Authority 2. Panchayat 3. Samara Samithi 4. District Collector 5. Chief Minister	
16.	Have you received any relief / compensation from the authority to manage the damages?	1. Yes 2. No	
17.	If yes, how much?	1. <10000 2. b/w 10000 – 20000 3. b/w 20002 – 30000 4. b/w 30000 – 40000 5. > 40000 (specify the amount)	
18.	Are there any other forms of assistance from the authority?	1. Yes 2. No	
19.	If yes, name the assistance you have received:	1. Build school for affected families 2. Support to health-care system / Medical camp 3. Build rest centers 4. Impart training for natives 5. Play-ground 6. Supply clean drinking waters 7. Digging wells 8. Others (specify)	
20.	Has any surveyor appointed by the authority visited your home / location?	1. Yes 2. No	

21.	If yes, how many times did he / she visited?	1. Once 2. Twice 3. Thrice 4. More than three times	
22.	Did you cooperate with the surveyor?	1. Strongly cooperated 2. Moderately cooperated 3. Neither cooperated nor opposed 4. Moderately opposed 5. Strongly opposed	
23.	Are there any forms of organized activities against the acquisition?	1. Yes 2. No	
24.	Do you support the activities of samara samiti?	1. Strongly support 2. Moderately 3. Indifferently 4. Never support 5. Strongly oppose	
25.	Have you participated in the agitation programmes against land-acquisition?	1. Yes 2. No	
26.	If yes, why did you participate in the agitation?	1. To stop the land acquisition	
		2. To get fair compensation	
		3. To get land at free of cost	
		4. To get jobs in the project	
		5. To design better rehabilitation packages	
		6. Against mixing plant	
		7. Others	
27.	Are there any health issues faced by your family on account of the project?	1. Yes 2. No	
28.	If yes, what are the issues?	1. Allergy 2. Asthma 3. Skin cancer 4. Hearing problem 5. Others (specify)	
29.	Are you against developmental projects?	1. Yes 2. No	
30.	Are you ready for sacrificing your homestead for a right cause?	1. Yes 2. No	

**Job opportunities offered by the authority to PAPs**

31.	Have you received any job inside the project?		1. Yes 2. No		
32.	Type of Job offered by the authority?		1. Trolley pullers 2. Security guard 3. Pushback drivers 4. Light vehicle drivers 5. Kitchen stewards 6. Kitchen porter 7. General cleaner 8. Food handler 9. Fire fighter 10. Elevator technician 11. Data loader 12. Electrical supervisor 13. Plumber 14. Others (specify)		
Sl. No.	Family members who gained jobs		Livelihood gain within the project labour-days gained/week	Value of gain	
	Male	Female		Income gained per week/month	
33.	Have you got job outside the project which is related to the Airport?				1. Yes 2. No
34.	If yes, what type of job? 1. Cargo business 2. Apartments / Shops (nuts, dates, sweets...) 3. Hotel near the Airport 4. Currency-exchange 5. Others (specify)				
35.	Did you get any project related temporary jobs?				1. Yes 2. No
36.	If yes, what types of jobs? 1. JCB operators 2. Lorry drivers 3. Land surveyors 4. Sub-contractors 5. Casual labourers 6. Other jobs (specify)				
37.	Has the Authority guaranteed you any jobs?				1. Yes (specify) 2. No



**Nature of the land possessed**

1.	Nature of ownership of your possessed land	1. Owned	2. Other	
2.	If not owned, specify the nature of title to the property.			
3.	Total land area	1. <10 3. b/w 20 – 30 5. b/w 40 – 50	2. b/w 10 – 20 4. b/w 30 – 40 6. > 50 (specify)	
4.	Nature of land / Type of land (in cents)	Type of land	Cents	
		1. Paddy field		
		2. Dry land		
		3. Cultivated land		
		4. Barren land		
		5. Any other		
	Total land area			

**The structure of house**

1.	Nature of ownership of housing?	1. Own	
		2. Rented	
		3. Jointly owned	
		4. Others (Specify)	
2.	If own house Way of Owning House	1. Govt. Provided	
		2. Inherited	
		3. Self-built/ Bought	
		4. Others	
3.	Type of Roof	1. Thatched / Grass leaves	
		2. Sheet	
		3. Tiled	
		4. Concrete	
		5. Asbestos	
		6. Others (Specify)	
4.	Flooring	1. Mud/cow dung	
		2. Cement	
		3. Mosaic	
		4. Marbles	
		5. Ceramic tiles	
		6. Others (Specify)	
5.	Electrification	1. Electrified	
		2. Not electrified	

6.	Location of housing	1. Nearest to town	
		2. Far away from town	
7.	How long did it take to construct the house?	1. One year 2. Two years 3. Three years 4. Four years 5. Five Years 6. More than five years	

### **Household Water Availability, Hygiene and Source of Energy**

1.	Source of water		
	1. Own well/pipe		
	2. Neighbour's well / pipe		
	3. Public tap / well		
	4. Ponds / Canals		
	5. Public supply of water		
	6. Stream / Spring / Torrents		
	7. Others (Specify)		
2.	Type of fuel		
	1. Wood		
	2. Charcoal		
	3. Dung		
	4. Kerosene stove		
	5. Gas (LPG)		
	6. Biogas		
	7. Electricity		
3.	Latrine Facility	1. Septic latrine	
		2. Non-septic latrine	
		1. Open pit	
		2. Open space	
		3. Neighbour's latrine	
		4. Public toilet	

**Anticipations of PAPs**

<p>1.</p>	<p>What is your expectation from the project if they acquire your homestead?</p>	<ol style="list-style-type: none"> <li>1. Fair compensation</li> <li>2. Free land</li> <li>3. Build home at free of cost</li> <li>4. Ensure basic facilities</li> <li>5. Prevent loss of neighbourhood</li> <li>6. Job as per qualification</li> <li>7. Utilize existing land properly</li> <li>8. Worship places</li> <li>9. Graveyards</li> <li>10. Play-ground</li> <li>11. Avoid delay in compensation</li> <li>12. Ensure participation of affected person in designing rehabilitation packages</li> <li>13. Consider replacement cost</li> <li>14. Set aside particular percentage of shares for PAPs</li> <li>15. Utilize CSR judiciously for the welfare of PAPs</li> <li>16. Others (specify)</li> </ol>	
<p><b>Remarks / Comments / Suggestions</b></p>			