

**TRANSFORMATION OF AGRICULTURE AND  
ENVIRONMENT IN WAYANAD (1882-2013)**

*Thesis  
submitted to the University of Calicut  
for the award of the Degree of*

**DOCTOR OF PHILOSOPHY IN HISTORY**

**ANOOP THANKACHAN K.**



**DEPARTMENT OF HISTORY  
UNIVERSITY OF CALICUT  
2020**

**Dr. M. P. MUJEEBU REHIMAN**  
ASSOCIATE PROFESSOR  
DEPARTMENT OF HISTORY  
UNIVERSITY OF CALICUT

---

## **CERTIFICATE**

This is to certify that the thesis entitled, **Transformation of Agriculture and Environment in Wayanad (1882-2013)**, submitted for the award of the degree of Doctor of Philosophy in History, University of Calicut is a record of bonafide research carried out by **Anoop Thankachan K.**, under my supervision. No part of the thesis has been submitted for the award of any Degree before.

C.U.Campus  
. . 2020

**Dr. M.P.Mujeebu Rehiman**  
(Supervising Teacher)

**Dr. M. P. MUJEEBU REHIMAN**  
ASSOCIATE PROFESSOR  
DEPARTMENT OF HISTORY  
UNIVERSITY OF CALICUT

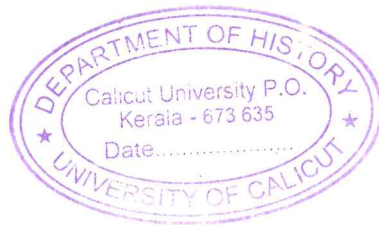
---

## **CERTIFICATE**

This is to certify that, the corrections suggested by the adjudicators to the thesis titled, **Transformation of Agriculture and Environment in Wayanad (1882-2013)**, submitted by **Anoop Thankachan K.**, have been done by the research scholar and the two copies of the corrected dissertation along with one soft copy have been submitted accordingly.

C.U.Campus  
28. 01. 2021

  
**Dr. M.P.Mujeebu Rehiman**  
(Supervising Teacher)



## **DECLARATION**

I, Anoop Thankachan K., do hereby declare that this thesis entitled, 'Transformation of Agriculture and Environment in Wayanad (1882-2013)' is a bonafide record of research work done by me and that it has not previously formed the basis for the award of any degrees.

C.U.Campus  
. . 2020

**Anoop Thankachan K.**

## **ACKNOWLEDGEMENT**

*I have immense pleasure in expressing my heartfelt gratitude to a number of people and institutions for their untiring assistance and encouragement during this research work and thesis preparation.*

*Foremost, I would like to extend my deep sense of gratitude to my supervising teacher Dr. M. P. Mujeebu Rehiman, Associate Professor, Department of History, University of Calicut for his encouragement, suggestions, comments and resourceful advice, without which this thesis would not have been materialised.*

*I express my sincere thanks to Dr. K. N. Ganesh, Professor (Rtd.) Department of History, University of Calicut who introduced me to Dr. M. P. Mujeebu Rehiman. I am thankful to Dr. K. Gopalankuuty, Professor (Rtd.) for his timely help when required.*

*I thank Professor Muhammed Maheen, Head, Department of History, University of Calicut for providing all institutional and research assistance in the Department. I am also grateful to the former Heads of the Department of History, Dr. Asokan Mundon, Professor (Rtd.) and Professor P. Sivadasan. I express my gratitude to Professor T. M. Vijayan, Dr. K. S. Madhavan, Dr. V. V. Haridas and other faculty members of the Department of History who encouraged me at different stages of this research work. I thank the staff in the office and library of the Department of History, Directorate of Research and College Development Council of University of Calicut.*

*I had fruitful discussions with Dr. V. S. Vijayan (Chairman, Salim Ali Foundation), Dr. Sebastian Joseph (Assistant Professor, Department of History, U. C. College, Aluva), Sri. M. Gangadharan Master (Wayanad Prakrithi Samrakshana Samithi) and Sri. Cheruvayal Raman (Traditional Farmer, Wayanad). I am deeply indebted to Smt. K. U. Cicily (Rtd. Teacher, Kendriya Vidyalaya, Kozhikode), for her untiring support and patience in editing this manuscript. I thank Sri. K. T. Thomachan (Associate Professor of Economics, St. Joseph's College, Devagiri) for giving necessary guidance in the statistical analysis. I express my sincere thanks to Dr. S. Nagesh (Former Head, Department of English, St. Joseph's College, Devagiri), Dr. Priya P. (Head, Department of History, Govt. Arts and Science College, Kozhikode) and Dr. K. Ramesan (Head, Department of Malayalam, Govt. College, Mananthavady) for their cooperation and giving time and effort in providing valuable suggestions.*

*I am thankful to the University Grants Commission for awarding me a fellowship under the Faculty Development Programme for pursuing this doctoral research. I remember with heartfelt gratitude the Principals of my institution,*

*Dr.K.M.Jose and Dr.V.Anil. Further I would like to thank my colleagues Smt. Suja K.S., Sri. Arun K., Sri. Leril James, Sri. K.B. Baiju, Sri. C.T. Sasi, Dr. Rajimol M.S., Sri. T.C. Santhosh, Sri. Krishnan Moothimoola, Sri. Antony Joseph, Sri. T.K. Bharathan, Sri. A.P. Aneesh, Sri. K. Dinesh and other staff members of the N.M.S.M. Govt. College, Kalpetta for their encouragement during the research work.*

*I am grateful to those who found time to share their valuable thoughts and memories. Sri. K. U. Mathai (Former President, Pulpally Grama Panchayath), Sri. P.U. Das (District Soil Conservation Officer, Wayanad), Late Sri. C. M. Francis (Padichira), Late Sri. P. L. Antony Master (Kalpetta), Sri. A. M. Bhaskaran (Pulpally), Sri. Baby Thombrayil (Choothupara) and Sri. Babu Joseph (Kenichira) are some of them. Their views and opinions have added value to my research work.*

*I am also indebted to Sri. Abdul Majeed and Sri. Samuel Varghese of Regional Archives, Kozhikode. I would like to take this opportunity to thank the staff of Regional Archives (Kozhikode), K. N. Raj library of Centre for Development Studies (Thiruvananthapuram), Forest Headquarters library (Vazhuthakkad, Thiruvananthapuram) Institute of Social and Economic Change (Bangalore), C. H. Muhammed Koya library (Calicut University), Kerala Institute for Research Training and Development Studies of Scheduled Castes and Scheduled Tribes (Kozhikode), Regional Agricultural Research Station (Ambalavayal), Kerala Agriculture University Central library (Mannuthy), Kerala Forest Research Institute (Peechi), State Central library (Thiruvananthapuram), M.S.Swaminathan Research Foundation (Puthoorvayal), Principal Agriculture Office (Kalpetta), Rubber Board Field offices (Kalpetta & Mananthavady), District office of Economics and Statistics Department (Kalpetta & Kozhikode), State library of Economics and Statistics Department (Thiruvananthapuram), Offices of the Executive engineer of Banasurasagar Irrigation & Electricity Projects (Padinjarathara), Office of the Executive Engineer of Karappuzha Project (Karappuzha), District Tourism Promotion Council (Kalpetta), Directorate of Tourism (Kalpetta), District office of Mining and Geology Department (Meenangadi), District Office, Soil Conservation (Kalpetta), District Office of Kerala Groundwater Department (Meenangadi), Deepthi Bhavan (Calicut University), C. K. G. Memorial Govt. College (Perambra) and N. M. S. M. Govt. College (Kalpetta).*

*I acknowledge the support and help extended by my beloved parents K. M. Thankachan and Valsamma Thankachan and other family members. My heartfelt appreciation for my wife, Anu George and son, Anupam K. Anoop for bearing with my eccentricities and being a constant source of motivation during the making of this thesis.*

*I am thankful to Sri.Rajesh and other members of Bina DTP centre, Villunniyal for promptly helping me with printing of the thesis. Freeland photographer Sri. Naveen Yohannan has given relevant photographs for this thesis.*

*I owe much to the inspiration and active co-operation given by my friends Smt. Smitha Thomas, Sri. T. J. Antony, Dr. Sonia Mathew, Lt. Col. Josy Bijay, Sri. K. George, Smt. Lissy P. A., Smt. Anitha Sinoy, Sri. Sinoy Abraham, Sri. P. K. Sugunan, Smt. Sreeparvathy D. and Dr. Haridasan K. P.*

*I express my deepest gratitude to all my friends who stood by me. I dedicate this work to the people and environment of Wayanad, of which I am only a miniscule fragment.*

**Anoop Thankachan K.**

## **ABBREVIATIONS**

RAK	:	Regional Archives, Kozhikode
KFHT	:	Forest Headquarters Central Library, Thiruvananthapuram
CDS	:	Centre for Development Studies, Thiruvananthapuram
RARS	:	Regional Agriculture Research Station, Ambalavayal
JNU	:	Jawaharlal Nehru University, New Delhi
KFRI	:	Kerala Forest Research Institute, Peechi
ACS	:	Acres and Cents
A.	:	Indian Anna
P.	:	Paisa
ha.	:	hectare



## CONTENTS

<i>Chapter</i>	<i>Title</i>	<i>Page No.</i>
	Introduction	1-37
1	The Historical Landscape of Wayanad	38-58
2	The Wayanad Woods under Colonial Administration	59-95
3	People and Agriculture in the Mountainous Landscape	96-151
4	Agriculture and Environment since Agrarian Migration	152-205
5	Changing Practices and its Impact on Environment and Agriculture	206-247
	Conclusion	248-254
	Glossary	255-257
	Appendices – Tables Maps Photographs	258-308
	Bibliography	309-340

## **INTRODUCTION**

Agriculture, which was being nurtured about 10000 years ago, is an essential milestone in the history of mankind. Agriculture forced men to live in groups and lead a settled life. Indeed, it moulded human culture and changed the nomadic way of life. The assumption that it is the privilege of man to use his intelligence to change the world is often questioned by many. It is highly relevant to study how man transformed the environment and the influence of the environment on human life. Ecology is the study of the control of surroundings on living things. Environmental history is not the study of living organisms, but it envisages the interactions of human beings with the environment. Some environmental extremists have the opinion that man has no right to change the environment in any way. The role of industrialization and urbanization in changing the mode of agriculture is often sidelined. It is a misconception that environmental destruction is the result of over-exploitation of nature by the villagers. Instead of promoting sustainable development, even governments celebrate projects for quick financial gains in the agricultural sector. The Green Revolution started in the sixties, aimed at massive food production, unfortunately culminated in excessive use of chemical fertilizers and pesticides which spoiled the quality of the soil. New hybrid varieties have been substituted for the indigenous varieties of rice. Now new agricultural practices like organic farming and zero budget farming are recommended by the agricultural scientists. Ordinary people should be made aware of the latest developments in various fields. Scientific studies and awareness programmes should go hand in hand. Without agrarian development, a country cannot prosper. Food production should be given top priority.

Environmental history always focuses on the environment, agriculture, and the life of human beings. Soil is the basis of human existence. Many civilizations of the world collapsed because of the corrupt land-use practices. Protection of natural resources like soil, water, and the air is essential for the survival of life on Earth. Thus environmental history provides lessons for sustainable development. These lessons help a judicious use of natural resources. What we learn from the past should be the guidelines for the future. Local history of environmental changes will lead to a better understanding of the relation between man and nature.

There has been a noticeable change in land use in Kerala in the twentieth century. A spectacular increase in population has also been observed during this period. All these changes are reflected in different ways in nature. The massive destruction caused by the 2018 flood also can be included as the ill effects of irrational use of land. To study the variations occurring in the most sensitive Western Ghats in the Indian subcontinent, the Government of India detailed two committees- Gadgil Commission and Kasturirangan Committee. The Western Ghats Ecology Expert Panel under the leadership of Prof. Madhav Gadgil submitted its report on 31<sup>st</sup> August 2011, and the Report of the High-Level Working Group of Western Ghats under the direction of K. Kasturirangan was filed on 15<sup>th</sup> April 2013. The contents of these reports can be summarized thus;

1. This most sensitive terrain has experienced a negative transformation in the previous century.
2. This transformation will affect the future as well.
3. The ways and means to save the ecology of the area are also suggested.

A proper plan of action is yet to be chalked out in order to implement the above recommendations.

Since the majority of rivers of Kerala originate from the Ghat region, the climate of Kerala is also dependent on the Western Ghats. In other words, the people of midland and coastal area look to the Western Ghats for rain and water. Meanwhile, there is a bit of apprehension about the ecological changes that manifested recently in the Western Ghats. This is because, according to the scientific understanding, any disaster to the mountainous landscape, that is, the Western Ghats, will affect entire Kerala drastically. Indeed, the continuous migration that started from the first half of the twentieth century, among several other things, had its share to it.

Wayanad, located in the northern part of Kerala and also on the Western Ghats, is perhaps a typical example, where the drastic changes were taking place in agriculture and commerce in the last two centuries and how they have impacted on the environment, as well as the social life. Originally, an isolated hilly area full of forest land supplied with enough rainfall, inhabited by the *Adivasis* or forest dwellers, it saw a rapid change in terms of ownership of land, introduction of new crops and new technologies to literally change the landscape with the inevitable problems that accompany such a massive shift in agricultural practices.

Long before the twentieth century, at different stages, different sets of people migrated to Wayanad, and accordingly, the agricultural pattern also differed. In fact, Wayanad was the home of many *Adivasis* and all these impacts occurred after the incoming of Jains, Nairs, Chettis, etc., who mainly gave importance to food crops, but it was a rather slow process. On the contrary, by the introduction of commercialization in the field of agriculture by the British, many places in Wayanad were opened to cash yielding plantations.

## **Objectives**

Historiography of Kerala has immensely been focusing on the midland history, which completely eclipsed two ecological zones i.e., the forests as well as the oceans. The present study is intended to be an attempt to mark Wayanad in the Western Ghats of Kerala, which is known for its unique landscape, flora and fauna. Migration from the south after 1930 has caused tremendous changes in every aspect of life in Wayanad. Within a short period, cultivation and mode of cultivation improved a lot in 20 percent of the land approximately. It is a fact that rapid changes in land use for cultivation caused a break down in the ecological balance, and that in turn resulted in a disastrous situation altogether. Indeed Wayanad is a region dependent upon agriculture. Therefore studying the environmental changes in this region is impossible without an understanding in cultivation and different modes of cultivation.

## **Methodology**

This study follows the methodology of historical research by which the sources were collected from archives, from field research and from libraries. Those sources were subjected to strict analytical process and the presentation of which is in both analytical and interpretative manner. The present study is showing the contemporary trends with regard to the history of people, the environment, and agriculture of the territory. In several occasions the study transcends the disciplinary boundaries historical research. Here, an attempt is made to search for environmental history and agrarian history, since the topics are under-explored areas.

Studies have already taken place about the migrations to Malabar, Wayanad in particular, and the socio-economic transitions that followed in due course. In addition to this, a thorough search into the cultural patterns of

the indigenous people also was brought out authentically. Attempts have been made to study the process of the land alienation of the *adivasis*. However no indepth studies have been made in the interaction of agricultural expansion and its impact on the environment in Wayanad.

The changes that took place in the environment and agriculture of modern Wayanad is mainly due to the interventions that have initiated by the colonial administrators. The Madras Forest Act 1882, focuses on the transformation of forests in Malabar, especially in Wayanad. That is the justification for selection of particular span of time for this study. According to historians, mass migration to Wayanad started in the 1930's. To assess the agro-ecological changes of Wayanad today, one needs to understand the changes since nineteenth century. A keen observer can easily make out the effects of the movement and the set back faced by the environment and indigenous people after migration. The methodology followed is both analytical and interpretative. To assess the land use pattern over the years for the state of land in Wayanad District, a statistical tool known as exponential trend analysis has been used. For the form of an equation:

$$\text{Log (Yt)} = a + b t$$

(Y – Variable, t – time )

## **Sources**

The present study is largely depending upon the primary sources such as papers and reports related to forest and agricultural statistics, apart from census reports, which have been extensively used in order to come to the findings. In addition to these primary sources, plenty of secondary sources are also made use of for better understanding of the problem. Fieldwork was another mode of collection of data, which could supplement the archival sources. The researcher has made an attempt to tap the collective memory of

indigenous people, often set in the form of oral narratives. The fieldwork has also provided an opportunity to the collection and utilization of private papers, in the form of diaries, letters, travelogues (of Europeans) and other documents in *tharavadus*. Moreover, face to face interactions with experienced farmers both indigenous and migrants, labourers of various fields, environmental activists and proficient personalities in different disciplines have provided insights about the changes that occurred in the environment and life pattern in Wayanad.

The fieldwork in various parts of Wayanad, has helped the researcher to obtain first hand information regarding the impact on the environment. The manifestations of which, for instance, forests have been highly reduced, streams have been dried, hills are flattened, many paddy fields are being disappeared, and huge mansions have come up, are alarmingly noticed. Material pieces of evidence, like the fragments of *Keni*<sup>1</sup>, *Serambi*<sup>2</sup>, etc. help to formulate an understanding of the practices of old Wayanad. The indigenous people have a collective memory of this in the form of oral narratives. Oral traditions of *adivasis*, literary works of eminent writers, the written documents of *tharavdus*, and European travelers' accounts etc. throw light on the ancient past. Moreover, face to face interactions with experienced farmers, including both *adivasis* and migrants, labourers of various fields, environmental activists, and proficient personalities in different disciplines will give us abundant ideas about the changes in the environment. Census reports, forest, and agricultural statistics may be used to corroborate the final remarks. In addition to these primary sources, plenty of secondary sources are also in store for illustration. So the approach and methodology would be

---

<sup>1</sup> It is a community drinking water source of adivasis of Wayanad. *Kenis* are located on wetlands, on the edge or middle of the paddy fields. Cylindrical in shape, they have a diameter and a depth of around one metre only. The wall is of a specific type of wood. See Appendix III: 1

<sup>2</sup> Old Forest Inspection Bungalow. See Appendix III: 2

interdisciplinary in nature. It is required to be familiar with the previous works on Environmental History and Agrarian Studies. It may lead us to a much broader and outlook.

## **Review of Literature**

The natural environment provides the first canvas for a variety of cultural processes.<sup>3</sup> There is a famous saying: ‘Geographical factors play a decisive role in shaping the history of humanity.’ Organisms and their environment regularly interact with each other, and this interaction changes both.<sup>4</sup> In Masanobu Fukuoka’s view, the nature destroyed by human intervention is still called as nature.<sup>5</sup> We had a firm belief that there is no problem to foster and to eat the things that we like<sup>6</sup>, and our intelligence is far more superior to nature.<sup>7</sup>

In a primitive agricultural community, each family produced all that was needed for its subsistence, which which made comparatively the least damage to the nature.<sup>8</sup> Ever since the Industrial Revolution, ecological disruption had been accelerated, which dramatically transformed human abilities to manipulate nature.<sup>9</sup> The dominating attitude towards life in early modern Europe was perhaps best expressed in the words of the English

---

<sup>3</sup> T. Sabu, et. al., ‘Hortus Malabaricus and the Biocultural Diversity of India’, in Vinod T. R., et. al., (Ed.), *Proceedings of Kerala Environment Congress 2013*, Focal Theme Culture and Heritage for Environment Management, 2013, Centre for Environment and Development, Thiruvananthapuram, 2013, p. 116.

<sup>4</sup> Shalini Sareen, *Environmental Studies*, IVY Publishing House, New Delhi, 2005, p. 1.

<sup>5</sup> Masanobu Fukuoka, *Prakrthiyilekku Madangan* (Mal.), (Tr.) K. M. R. Mohan, *The Road Back to Nature: Regaining the Paradise Lost*, D.C.Books, Kottayam, 2004, p. 13.

<sup>6</sup> *Ibid.*, p. 25.

<sup>7</sup> *Ibid.*, p. 13.

<sup>8</sup> Bertrand Russell & Dora Russell, *The Prospects of Industrial Civilization*, Ruskin House, George Allen & Unwin, London, 1959, p. 35.

<sup>9</sup> William M. Covert, *The Smoke of London: Energy and Environment in the Early Modern City*, Cambridge University Press, Cambridge, 2016, p. 5.



philosopher and statesman, Francis Bacon, who declared, 'the world is made for man, not man for the world.'<sup>10</sup> Reflection on the postmodern condition and the environmental crisis made people think and accept what is better for human civilization.<sup>11</sup> They both required efforts to understand the culture of modern civilization.<sup>12</sup>

Landscape variation is being increasingly recognized in agricultural and environmental studies.<sup>13</sup> Over the last fifty years, the science of ecology, the struggles of ecological activists, and the scholarship of environmental historians have combined to differentiate the physical and conceptual field with which their concerns to be located.<sup>14</sup> According to the Millennium Ecosystem Assessment (2005), the first comprehensive global report on the health of the planet, humankind's ever-growing demands for natural resources, are severely damaging the ecosystem 'services' that support life.<sup>15</sup> The urgency of managing land resources, including eco-friendly, economically advantageous, and socially acceptable agricultural technologies, would mitigate or alleviate many problems faced by dryland agriculture.<sup>16</sup>

Environmental history is derived in part from the recognition of the implications of ecological science for understanding the history of the human

---

<sup>10</sup> Stephen Mosely, 'The Environment in World History', in Peter N. Stears (Ed.), *Themes in World History Series*, Routledge, New York, 2010, p. 113.

<sup>11</sup> Arran E. Gare, *Postmodernism and the Environmental Crisis*, Routledge, London, 1995, p. 1.

<sup>12</sup> *Ibid.*

<sup>13</sup> Francis J. Larney, et. al., 'Dryland Agriculture on the Canadian Prairies: Current Issues and Future Challenges', in Srinivas C. Rao & John Ryan (Ed.), *Challenges and Strategies for Dryland Agriculture*, Scientific Publishers (India), Jodhpur, 2004, p. 124.

<sup>14</sup> Arun Agarwal & K. Sivaramakrishnan (Ed.), *Social Nature: Resources Representations and Rule in India*, Oxford University Press, New Delhi, 2001, p. 2.

<sup>15</sup> Stephen Mosely, *Op. Cit.*, p. 1.

<sup>16</sup> Harish P. Singh, et. al., 'Dryland Agriculture in India', in Srinivas C. Rao & John Ryan (Ed.), *Op. Cit.*, p. 90.

species.<sup>17</sup> Cultural ecology is one of the two major subdivisions of human ecology, the other being human biological ecology.<sup>18</sup> With renewed environmental concern among social scientists in the 1960's and 1970's, scholars initially were preoccupied with explaining ecological devastation.<sup>19</sup> Their central concern was how human behaviour, capitalist institutions, a culture of mass consumption, failing governments and states, and industrial and technological developments, among others, contributed to the ongoing deterioration of the physical environment.<sup>20</sup> Roderick Nash<sup>21</sup> coined the term 'environmental history', in an article which emphasizes the impact of past human societies on the environment, published in the *Pacific Historical Review* in 1972.<sup>22</sup>

Meanwhile, in France, the ecological approach to history was developed by *Annales* historians. Fernand Braudel advocated 'total history,' which meant both inter-disciplinary and division of society into three levels with corresponding temporalities.<sup>23</sup> Historians, he argued, must focus not on politics or economic conjectures, but on the interaction of deep geographical, meteorological, economic, agricultural and demographic structures that

---

<sup>17</sup> J. Donald Hughes, *An Environmental History of the World: Humankind's Changing Role in the Community of Life*, 2<sup>nd</sup> Edition, Routledge, Newyork, 2010, p. 5.

<sup>18</sup> Mark Q. Sutton & E.N.Anderson, *Introduction to Cultural Ecology*, Berg, Oxford, 2004, p. xi.

<sup>19</sup> Arthur P. J. Mol, et. al., 'Ecological Modernisation: Three Decades of Policy, Practice and Theoretical Reflection', in Arthur P. J. Mol, et. al., (Ed.), *The Ecological Modernisation Reader: Environmental Reform in Theory and Practice*, Routledge, Newyork, 2010, p. 3.

<sup>20</sup> *Ibid.*

<sup>21</sup> He was the Professor of History and Environmental Studies. In 1967 Roderick Nash published '*Wilderness and the American Mind*'.

<sup>22</sup> <http://www.eh-reources.org>>what is environmental history?, accessed on 10-06-2017, 7.20 am.

<sup>23</sup> Kevin Passmore, 'History and Historiography since 1945', in Roger E. Backhouse & Philippe Fontaine (Ed.), *A Historiography of Modern Social Sciences*, Cambridge University Press, New York, 2014, p. 36.

changed almost imperceptibly over the ‘*longue duree*’(long term).<sup>24</sup> His ‘Annales’ focused on particular regions where each region has its specialities.<sup>25</sup> Later, historians developed and diversified the above idea to a great extent.

Environmental History in Europe emerged as a sub-discipline of Environmental Science in the 1980’s. Many scholars came into this field, aiming at an earnest study about the problem. The overemphasis of environmental historians on the processes of ecological degradation and the identification of human agents are behind these processes.<sup>26</sup> Most of these writings were the reactions to the reshuffling of nature due to human intervention. As we proceed with these studies, we learn that there are three categories of environmental history:

1. The material environmental history that deals with man and his relation to other living organisms.
2. Cultural or Intellectual environmental history that covers how humans perceived nature over different periods.
3. The political environmental history that brings laws and policies related to the environment.

Since the 1970s, environmental history has evolved into a self-conscious and self-aware scholarly field that boasts journals, university programmes, and international organisations devoted to its practice and

---

<sup>24</sup> *Ibid.*

<sup>25</sup> *Ibid.*

<sup>26</sup> Ramachandra Guha, ‘Writing Environmental History in India’, *Studies in History*, 9, 1, n.s., Sage Publications, New Delhi, 1993, p.1, [journals.sagepub.com>dol>pdf](http://journals.sagepub.com>dol>pdf), accessed on 17-06-2017, 9.20 pm.

promotion.<sup>27</sup> Donald E. Worster's *Nature's Economy: A History of Ecological Ideas* examines the science of ecology to have immense public importance in the twentieth century.<sup>28</sup> Historians and others are active in this field in many parts of the world, the literature is vast and growing, and the subject is taught in schools and universities.<sup>29</sup> As a discipline, Environmental History registered its rise in the West, particularly in the United States.<sup>30</sup>

Alfred Crosby's '*The Columbian Exchange*' which showed "how the European conquest of Americas was more than a military, political and religious process since it involved invasion by European 'portmanteau biota' including domestic species and opportunistic animals".<sup>31</sup> Donald Hughes quotes Alfred Crosby, "Eurasian plants, whether cultivated ones or weeds, replaced native species, and the impact of introduced microorganisms on the indigenous human population was even more devastating than warfare".<sup>32</sup> Alfred Crosby, in his monumental work, '*Ecological Imperialism: The Biological Expansion of Europe 900-1900*' says "in 1982, the total value of all agricultural exports in the world, of all agricultural products that crossed national borders, was 210 billion dollars".<sup>33</sup> According to Crosby, "The success of European ecological imperialism in the Americas was so great that the Europeans began to take for granted that similar triumphs would follow

---

<sup>27</sup> J. R. McNeill & Erin Stewart Mauldin, 'Global Environmental History: An Introduction', in J. R. McNeill & Erin Stewart Mauldin (Ed.), *A Companion to Global Environmental History*, Wiley-Blackwell, West Sussex, U.K., 2012, p. 1.

<sup>28</sup> Donald Worster, *Nature's Economy : A History of Ecological Ideas*, Cambridge University Press, Second Edition, New York, 1994, p. iv.

<sup>29</sup> J. Donald Hughes, *What is Environmental History?*, 2<sup>nd</sup> Edition , Polity Press, Cambridge, 2016, p. 1.

<sup>30</sup> Vandana Swami, 'Environmental History and British Colonialism in India: A Prime Political Agenda', *The New Centennial Review*, Vol.III, No.3, Michigan State University Press, p. 113, [www.jstor.org/stable/41949868](http://www.jstor.org/stable/41949868), accessed on 06-07-2017, 5.30 am.

<sup>31</sup> J. Donald Hughes, *An Environmental ...*, *Op. Cit.*, p. 4.

<sup>32</sup> *Ibid.*, pp. 4-5.

<sup>33</sup> Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe 900-1900*, Cambridge University Press, 1995, p. 3.

wherever the climate, diseases and the environment were not outright hostile’’.<sup>34</sup> Crosby is describing the biopolitics of white colonies.

The book entitled, *What is Environmental History?* by J. Donald Hughes discusses various themes of Environmental History, forerunners of Environmental History, and the emergence of Environmental History in the U.S. and the rest of the world, its methodology, and environmental movements. He also points out that the vital thrust of environmental history is the study of political expressions of environmental policy.<sup>35</sup> He adds, “Environmental history is the humanistic inquiry, and the historians in this field are interested in what people think about the natural environment, and how they have expressed their ideas of nature in literature and art”.<sup>36</sup> In yet another work, *An Environmental History of the World: Humankind’s Changing role in the Community of life*, Hughes says, “Ecology shows that when one species dominates an ecosystem, it is in the process of collapse, since overpopulation leads to a crash”.<sup>37</sup> “Urban residents of the industrialized nations leave huge ‘ecological footprint’ across the world: Villagers who live on the edge of natural reserves are often protectors of them, but sometimes they are forced into poaching by economic circumstances’’.<sup>38</sup>

Mauro Agnoletti’s and Saimone Neri Serneri’s edited work titled, *The Basic Environmental History* deals with the themes like energy, economic history, environmental history of soils, water resources, pollution and protection, urban development, History of waste management technological hazards and disasters and accidents. In its first chapter, *Energy in History*, the

---

<sup>34</sup> *Ibid.*, p. 297.

<sup>35</sup> *Ibid.*, p. 13.

<sup>36</sup> *Ibid.*, p. 14.

<sup>37</sup> J. Donald Hughes, *An Environmental...., Op.Cit.*, p. 240.

<sup>38</sup> *Ibid.*

author Paolo Malanima distinguished pre-modern organic vegetable Economies and its three agents like food, fire, and agriculture.<sup>39</sup> It also points out energy consumption measures and their future. Mauro Agnoletti's work explores the different levels of rural development in Italy with the location of the historical landscape are surveyed.<sup>40</sup> He overviewed Italy's landscape heritage. With the help of maps and graphs, he vividly portrays the transformation of the Rural and Forest Landscape of Italy from its Unification to the Present Day.<sup>41</sup>

The work, *The Republic of Nature, An Environmental History of the United States*, written by Mark Fiege, depicts the hard work of thousands of slaves in South Carolina plantations;<sup>42</sup> in its foreword, William Cronon declares that “the author applied environmental perspective to historical events. He tries to attempt a storytelling style from the colonial period to the present day atomic threats”.

I. G. Simmons authored the work, ‘*Global Environmental History 10000 B.C. to 2000*’, in which he attempts to trace the changes from “gatherer hunters to today's electronic world dominated by material relating to ecology, the basic environmental relations of the phase, its demographic characteristics and social properties which seem most relevant”.<sup>43</sup> At a sub-global scale, one

---

<sup>39</sup> Paolo Malanima, ‘Energy in History’, in Mauro Agnoletti & Saimone Neri Serneri (Ed.), *The Basic Environmental History*, Springer, Switzerland, 2014, p. 7.

<sup>40</sup> Mauro Agnoletti, ‘Italian Historical Rural Landscapes: Dynamics, Data Analysis and Research Findings’, in Mauro Agnoletti (Ed.), *Italian Historical Rural Landscapes, Cultural Values for the Environment and Rural Development*, Springer, London, 2013, p. 18.

<sup>41</sup> *Ibid.*, pp. 11-13.

<sup>42</sup> Mark Fiege, *The Republic of Nature, An Environmental History of the United States*, University of Washington Press, U.S.A., 2012, p. 109.

<sup>43</sup> I. G. Simmons, *Global Environmental History 10000 B.C. to 2000*, Edinburg University Press, Edinburg, 2008, p. 20.

of the surprising findings was a correlation between human population density and species richness.<sup>44</sup>

Apart from the Western countries, in many oriental countries, also a series of attempts were carried out in this area. There are no other regions on the earth without environmental devastation in the modern era.

There are other related disciplines of environmental history, which connects aspects like gender to the environment. For example, Eco-feminism is a branch of feminism that examines the connections between women and nature.<sup>45</sup> Eco-feminism puts forth the idea that life in nature is maintained through cooperation, mutual care, and love.<sup>46</sup> In India, the full range of participation of women can be seen in several environmental struggles like the Chipko movement. According to Peter Hay, the ethics of Eco-feminism are related to a theory of power, and the lack of an adequate account of social structure and political power in radical eco philosophies has attracted sustained eco-feminist criticisms.<sup>47</sup> Nevertheless, it is a fact that many civilizations of the world treat the Earth as 'Great Mother Image'.<sup>48</sup>

From time immemorial, many traditional societies all over the world adored nature and considered certain plants and animals as divine.<sup>49</sup> A very well known speech by Chief Seattle is a solemn and heart-throbbing piece of literature, favouring the bond between the humans and the environment and, above all, highlighting the environmental values. Aborigines in various parts

---

<sup>44</sup> *Ibid.*, p. 243.

<sup>45</sup> Kathryn Miles, *Ecofeminism : Sociology and Environmentalism*, <https://www.britannica.com/topic/eco>, accessed on 20-07-2017, 5.20 am.

<sup>46</sup> *The Growing Importance of Ecofeminism- Voices for Biodiversity*, [voicesforbiodiversity.org/articles](http://voicesforbiodiversity.org/articles), accessed on 20-07-2017, 5.35 am.

<sup>47</sup> Peter Hay, *A Companion to Environmental Thought*, Rawat, Jaipur, 2002, p. 72.

<sup>48</sup> *Ibid.*, p. 79.

<sup>49</sup> Mohan Pai, *The Western Ghats*, M/s Narcinva Damodar Naik, Margoa, Goa, 2005, p. 104.

of India also revered nature, which they considered as an indispensable identity of their life.

From the ancient period itself, the Indian rulers used forest as a royal property, though they allowed the villagers to collect forest produce for their necessities. There are several pieces of evidence to show Kings enjoying hunting as one of their leisure time entertainment. In the olden days, the Western Ghats were looked upon as the source of timber, spices, and ivory,<sup>50</sup> and these commodities were exported to other countries. In due course, a part of the uncultivated land till then became occupied due to the movement of people into different areas. The medieval Indian revenue accounts also throw light on the condition of forest and agriculture. From these, we can assume that no significant alteration of the landscape had taken place. During British rule, the forest was depleted for setting up of estates and timber trade.<sup>51</sup> Robert Peckham says, “In many parts of Asia, European empires established new models of statehood that territorialized Asian landscapes, imposing formal frontiers and indigenous pattern of land tenure<sup>52</sup>. Agricultural hinterlands were opened up, and new crops introduced’’.<sup>53</sup> During the 19<sup>th</sup> Century, British East India Company brought a significant part of India under its fold; the inadequate productivity of the land to produce commercial crops was a matter of concern for the British, and they wanted to

---

<sup>50</sup> V. Ramachandran, ‘Approach to Development in the Western Ghats’, in K.S.S.Nair, et. al., (Ed.), *Eco development of Western Ghats*, Kerala Forest Research Institute, Peechi, Kerala, India, p.7, KFRI Library Cataloging in Publication data (Hereafter KFRIL).

<sup>51</sup> T. T. Srikumar, ‘Agolavalkaranavum Paristhithiyum’ in M.A.Oommen (Ed.), *Agolavalkaranam: Artham Vyapthi Sidhandham* (Mal.), Kerala Bhasha Institute, Thiruvananthapuram, 2000, p. 229.

<sup>52</sup> Robert Peckham, *Epidemics in Modern Asia*, Cambridge University Press, Cambridge, 2016, p. 147.

<sup>53</sup> *Ibid.*



improve the situation.<sup>54</sup> There are many official documents, including the corresponding files on forests and agriculture in India, which reveal the policies and programmes.

As it comes to time and space, South Asia's environmental historiography is focusing on three fields. Firstly, the environmental landscape of the subcontinent is determined by the government forest policy, secondly, by its irrigation policy like canal irrigation and large dam projects and thirdly, by its wildlife policy, that is, wildlife preservation.<sup>55</sup> Recently a remarkable volume of literature has come upon the subject; much of it based on extensive archival and oral research.<sup>56</sup> This paved the way for a spectacular growth of public consciousness about the forms of environmental degradation in India.<sup>57</sup>

Analyzing the colonial environmental policy, Madhav Gadgil and Ramachandra Guha made a pithy remark: if in the neo-Europe, ecological imperialism paved the way for political consolidation; in India, the causation ran the other way, their political victory equipping the British for an unprecedented intervention in the ecological and social fabric of Indian Civilization.<sup>58</sup> Guha views "colonial forest policy and conservation primarily

---

<sup>54</sup> G. Narayanaswamy, et. al., 'Fertilizers, Manures and Biofertilizers' in N. N. Goswami (Ed.), *Fundamentals of Soil Science*, Indian Society of Soil Science, New Delhi, 2012, p. 579.

<sup>55</sup> Michael Mann, *Environmental History and Historiography of South Asia: Context and some Recent Publications*, 2014, p. 326, in <https://edoc.hu-berlin.de/handle>, pdf accessed on 25-10-2017, 10.15 pm.

<sup>56</sup> David Arnold, 'Disease, Resistance and India's Ecological Frontier' in Mahesh Rangarajan & K.Sivaramakrishnan (Ed.), *India's Environmental History: From Ancient Times to the Colonial Period*, Vol.II, Permanent Black, New Delhi, 2011, p. 141.

<sup>57</sup> Ramachandra Guha, 'Introduction', in idem, (Ed.), *Social Ecology*, Oxford University Press, New Delhi, 2010, p. 1.

<sup>58</sup> Anonymous Author, *History of Ecology and Environment in India*, Rai Technology University, Bangalore, p.215, 164.100.133.129>, accessed on 26-11-2017, 6.15 am.

are driven by the materialistic consideration of serving the strategic and revenue interest of the British Empire”.<sup>59</sup>

Ramachandra Guha’s *The Unquiet Woods: Ecological Change and Peasant Resistance in Himalaya* explains the lower class protest for landscape, caste, agrarian relations, and the role of women for the preservation of environment in the Himalayan region. He attempts to depict the ecological change due to commercial forestry and the peasant initiative called Chipko Movement. He compares the ideology of Sunderlal Bahuguna and Chandi Prasad Bhatt, the leaders of the Movement. For example, regarding the identification of agents of deforestation, Bahuguna views, representatives of forest departments were in an unholy alliance with the timber contractors. On the other hand, Bhatt states, that due to the forest policy influenced by commercial interests, villagers got alienated from forests.<sup>60</sup> In the critical essay added at the end of this work, Joan Martinez-Alier says that the work of Guha goes over the history of a region that has a profound significance for India’s culture across many centuries preceding the Chipko movement.<sup>61</sup>

There are two volumes of *India’s Environmental History: From Ancient Times to the Colonial Period and Colonialism, Modernity and the Nation* edited by Mahesh Rangarajan and K. Sivaramakrishnan, focusing on a variety of themes comprising ecology and archeology; literary imageries and states of nature; animals, places and politics, the British state and India’s environment; agrarian change/forest transformations, animals, identity,

---

<sup>59</sup> Vikas Kumar, ‘A Historical Study of Environment: Colonial and Post-Colonial Situation in India (Chotanagpur)’, in the *Journal of Advanced Research Humanities and Social Science*, Vol.I, Issue1, 2014, science.adrpublications.in>download, accessed on 18-09-2017, 8.26 pm.

<sup>60</sup> Ramachandra Guha, *The Unquiet Woods: Ecological Change and Peasant Resistance in Himalaya*, 20<sup>th</sup> Anniversary Edition, Permanent Black, New Delhi, 2010, p.182.

<sup>61</sup> *Ibid.*, p. 223.

power, and development.<sup>62</sup> Sivaramakrishnan and Cederlof, in their *Introduction to Ecological Nationalisms*, define ecological nationalism as a space for the cultural and political struggle for identity and livelihood.<sup>63</sup> In the same work, Kathleen D. Morrison wrote an article on the spice trade in south India and European pepper consumption. Claude A. Garcia and J. P. Pascal mention the sacred forests of Kodagu where the encroachment of many sacred forests has appropriately taken place by a neighboring planter for the establishment of the coffee plantation.<sup>64</sup> They add that today's sacred groves are considered as the forest under the control of the forest department.<sup>65</sup> Sacred forests appear as proof of ecological wisdom in the old faith and traditional practices.<sup>66</sup>

V. P. Agarwala's *Forests in India: Environmental and Production Frontiers* discusses the land use and forest area in India.<sup>67</sup> Being a retired I.F.S. officer, Agarwala depicts the inter-State movement of timber production.<sup>68</sup> In India, Eucalyptus<sup>69</sup> species was first introduced around 1790

---

<sup>62</sup> Meena Bhargava, 'India's Ecological Past', in *Economic and Political Weekly*, Vol. XLVI, No. 53, 31 December 2011.

<sup>63</sup> Kathleen D. Morrison, 'Environmental History, the Spice Trade, and the State in South India' in Mahesh Rangarajan and K. Sivaramakrishnan (Ed.), *India's Environmental History: From Ancient Times to the Colonial Period*, Vol. I, Permanent Black, New Delhi, p. 292.

<sup>64</sup> Claude A. Garcia and J. P. Pascal, 'Sacred Forests of Kodagu: Ecological Value and Social Role' in Mahesh Rangarajan and K. Sivaramakrishnan (Ed.), Vol. I, *Op. Cit.*, p. 222.

<sup>65</sup> *Ibid.*, p. 223.

<sup>66</sup> *Ibid.*, p. 226.

<sup>67</sup> V. P. Agarwala, *Forests in India: Environmental and Production Frontiers*, Oxford & I.B.H. publishing, New Delhi, 1985, p. vii.

<sup>68</sup> *Ibid.*, p. 137.

<sup>69</sup> Eucalyptus is a fast growing, medium- sized to tall tree attaining 20- 50m. in height and upto 2m in diameter and strongly coppicing tree possessing a wide range of soil and climatic adaptability. Eucalyptus is known for its drought hardiness, although annual rainfall of 800 mm is preferred. The species grows under a wide range of climatic/soil conditions from warm to hot, sub humid to humid and from good to degraded soils.

at Nandi Hill near Mysore.<sup>70</sup> About 1858, exotic Acacia or wattle species were introduced in South India, and this resulted subsequently in its large-scale plantations in Nilgiris.<sup>71</sup>

Guha says in India, conflicts over water and forests more sharply foreground the question of alternative uses—subsistence *versus* commerce, local *versus* national, peasants *versus* industry.<sup>72</sup> Diversity, sustainability, and equity: these are the building blocks of an environmental ethic in the making.<sup>73</sup> In his book, *How Much Should a Person Consume? Thinking Through the Environment*, Guha recollects the term ‘social ecology’ used both by the Lucknow sociologist Radhakamal Mukherjee and the veteran radical Murray Bookchin.<sup>74</sup> The above sociologists are of the notion that, “nearly all our present ecological problems arise from deep-seated social problems.”<sup>75</sup>

Madhav Gadgil and his co-workers have drafted a document for the National Council of Educational Research and Training that mainly emphasizes ‘learn about the environment’ and ‘learn through the environment’ as well as ‘for the environment’.<sup>76</sup> Ramachandra Guha named the contributions of Madhav Gadgil as Democratic Social Ecology. This eminent scientist, Gadgil was appointed as the Chairman of the Commission of Western Ghats Ecology Expert Panel (WGEEP), by the Government of India. Several scholars actively participated in the recent Western Ghats

---

<sup>70</sup> V. P. Agarwala, *Op. Cit.*, p. 191.

<sup>71</sup> *Ibid.*, p. 31.

<sup>72</sup> Ramachandra Guha, *How Much Should a Person Consume? Thinking through the Environment*, Permanent Black, Ranikhet, 2008, p. 86.

<sup>73</sup> *Ibid.*, p. 88.

<sup>74</sup> *Ibid.*

<sup>75</sup> Murray Bookchin, *What is Social Ecology?*, p.1, [www.psiichenatura.it>fileadmin>img](http://www.psiichenatura.it/fileadmin/img), accessed on 03-07-2017, 8.20 am.

<sup>76</sup> Ramachandra Guha, *How Much Should... Op. Cit.*, p. 217.

conservation debates.<sup>77</sup> However, it is clear that democratic and sustainable solutions are required for the maintenance of the Western Ghats.<sup>78</sup>

David Ludden's edited work, *Agricultural Production and Indian History*, examines the agricultural production in colonial India and analyzes how commercialization redefines the agrarian landscape of the region.<sup>79</sup> He says, "We inherit evidence on agriculture in proportion to its success".<sup>80</sup> "Colonial rules and measures codified agriculture inside political economy".<sup>81</sup> According to him, farming was construed as an enterprise and agriculture as a subject defined by input-output accounting.<sup>82</sup> It also illustrates the strong bond between agriculture and environment.

Sumit Guha in his work, *Health and Population in South Asia: from Earliest Times to the Present*, analyses the relation between demography, climate, health, medicine, and culture. In his words, "the effect of organized intra-species violence was, directly or indirectly, one of the most important causes of past population declines, but exploited peasant populations could also be ravaged by harvest failures resulting from climatic variability or land degradation".<sup>83</sup> He points out that, resources like timber became scarce several

---

<sup>77</sup> 'Interview with V. S. Vijayan by K. Sreejith', in Manila C. Mohan (Ed.) , *Madhav Gadgilum Pachimaghatta Samrakshnavum* (Mal.), Mathrubhumi Books, Kozhikode, 2014, p. 60.

<sup>78</sup> Aravindhan Nagarajan, et. al., 'Appraising the Debate on Biodiversity Conservation in the Western Ghats', in *Economic and Political Weekly*, 25 July 2015, Vol.L, No.30, p. 55.

<sup>79</sup> David Ludden, 'Introduction: Agricultural Production and Indian History' in David Ludden (Ed.), *Agricultural Production and Indian History*, Oxford University Press, New Delhi, 1994, pp. vi-vii.

<sup>80</sup> *Ibid.*, p. 4.

<sup>81</sup> *Ibid.*

<sup>82</sup> *Ibid.*

<sup>83</sup> Sumit Guha, *Health and Population in South Asia: From Earliest Times to the Present*, Permanent Black, New Delhi, 2001, p. 5.

centuries earlier, as intensifying human impact slowly reshaped the landscape.<sup>84</sup>

*Modernising Nature: Forestry and Imperial Eco- development 1800-1950*, is the work written by Ravi Rajan. He says colonial scientific resource management frameworks established in the mid-nineteenth century and later, are especially relevant to the post-colonial context.<sup>85</sup> Nevertheless, by the late eighteenth century itself, research on the environmental impacts of deforestation had established a domain for scientific enquiry in some regions of the world.<sup>86</sup>

Deepak Kumar, has co-edited *The British Empire and the Natural World: Ecological Encounters in South Asia* which is an analysis of environmental impacts under British colonialism.<sup>87</sup> Recently, Neeladri Bhattacharya has published a work, *The Great Agrarian Conquest: The Colonial Reshaping of a Rural World*. In this work he says the agrarian colonisation was a deep conquest.<sup>88</sup>

*Forests, Environment, and People: Ecological Values and Social Cost* is an edited work of Walter Fernandes. In its introductory chapter, the author suggests that the first condition for healthy forest and environmental policy is that while taking decisions concerning investment, one should count the

---

<sup>84</sup> *Ibid.*, p. 60.

<sup>85</sup> S. Ravi Rajan, *Modernising Nature: Forestry and Imperial Eco- development 1800-1950*, Clarendon Press, Oxford, 2006, p. 5.

<sup>86</sup> *Ibid.*, p. 524.

<sup>87</sup> Deepak Kumar, et. al., (Ed.), *The British Empire and the Natural World: Ecological Encounters in South Asia*, Oxford University Press, 2011, Google Books, accessed on 15-07-2017, 7.30 pm.

<sup>88</sup> Neeladri Bhattacharya, *The Great Agrarian Conquest: The Colonial Reshaping of a Rural World*, SUNI Press, New York, 2019, p. 1, Google Books, accessed on 14-11-2019, 8.30 am

social and ecological benefits, not merely immediate financial gains.<sup>89</sup> He concludes that the socio-political, environmental, industrial, or revenue, can be ignored, but the development of human resources has to get priority over the others.<sup>90</sup> In the same work, there is an article by Madhav Gadgil, S.Narendra Prasad, and Rauf Ali, in which they severely criticize the contemporary approach towards the protection of the Wildlife Sanctuaries and National Parks, by law and force.<sup>91</sup> This attitude should be changed, and the cooperation of the local population is required automatically.<sup>92</sup>

Sumi Krishna's edited work *Agriculture and Changing Environment in North Eastern India* focuses on the diverse landscapes, societies, and cultures of northeastern India, forged through complex biogeographic and socio-political forces, are now facing rapid transition.<sup>93</sup> In this work Walter Fernandes, emphatically says that "the environment is understood in the West and Indian urban middle class primarily as 'nature,' while traditional communities, particularly those of the poor, view it as their livelihood".<sup>94</sup> He adds that the traditional tribal culture of Land use, i.e., the land in particular as community sustenance has come down from ancestors.<sup>95</sup> *Sacred Geography*

---

<sup>89</sup> Walter Fernandes, 'Forest, Environment and People: An Introduction' in Walter Fernandes (Ed.), *Forests, Environment and People: Ecological Values and Social Cost*, Indian Social institute, New Delhi, 1983, p. 5.

<sup>90</sup> *Ibid.*, p. 6.

<sup>91</sup> Madhav Gadgil, et. al., 'Forest management and Forest Policy in India: A Critical Review' in Walter Fernandes (Ed.), *Forests, Environment..., Op. Cit.*, p. 40.

<sup>92</sup> *Ibid.*

<sup>93</sup> Sumi Krishna, 'Preface,' in Sumi Krishna (Ed.), *Agriculture and Changing Environment in Northeastern India*, Routledge, New Delhi, 2012, p. ii.

<sup>94</sup> Walter Fernandes, 'Land, Environmental Degradation and Conflicts in Northeastern India' in Sumi Krishna (Ed.), *Op. Cit.*, p. 119.

<sup>95</sup> *Ibid.*, p. 121.

of *Goddesses in South Asia* is an edited work of Rana P. B. Singh. This work provides an ancient Indian perception of nature<sup>96</sup>.

*Teak and Arecanut: Colonial State, Forest, and People in Western Ghats (South India) 1800-1947* of Marlene Buchy is the study of the ecological history of the forests of Uttara Kannada during the Colonial period. The author tries to explain the forest and its management, scientific forestry, agrarian system, and forms of peasant resistance. The enormous quantities of wood are considered as the localized wealth that means the forest was at the centre of agricultural life.<sup>97</sup> Wildlife conservation, consequently, was aimed at the expansion of the colonial economy and infrastructural development.<sup>98</sup> In its concluding chapter, she winds up, “today’s crisis is the result of a combination of factors which link a socially ill-adapted forest policy, ecologically open to criticism, with a growing population and national policy serving the interests of an urban and administrative elite who embodies a colonizing attitude”.<sup>99</sup> She finds no proof in her records that pre-colonial times were golden age during which community management of forest resources was the rule, or that the local populations were spontaneously inclined to nature conservation.<sup>100</sup>

Analysing the post-colonial period, Vikas Kumar opined that after independence, massive industrialization and modernization adopted by the

---

<sup>96</sup> Rana P. B. Singh, ‘Visioning Sacred Geography : Remembering David Kinsely’ in Rana P. B. Singh (Ed.), *Sacred Geography of Goddesses in South Asia : Essays in Memory of David Kinsely*, Cambridge Scholars Publishing, U.K., 2010, p. 9.

<sup>97</sup> Marlene Buchy, *Teak and Arecanut: Colonial State, Forest and People in Western Ghats (South India) 1800-1947*, Institute Francais De Pondichery, Indira Gandhi National Centre for the Arts, Publication division of department de sciences sociales, 1996, p. 141.

<sup>98</sup> Vijaya Ramadas, *The Raj and the Paradoxes of Wildlife Conservation: British Attitude and Expediencies*, Abstract, Mandala, <https://doi.org/10.1017/S0018246X14000259>, published online: 09 February 2015, accessed on 11-11-2017, 7.20 am.

<sup>99</sup> Marlene Buchy, *Op. Cit.*, p. 227.

<sup>100</sup> Jacques Pouchepadass, ‘Forewords’, in Marlene Buchy, *Teak and Arecanut..., Op. Cit.*, p. xv.



Indian government for country's economic growth converted several forested lands into dusty mining belts, which had adversely affected the socio-economic lives of people in general and tribals in particular.<sup>101</sup> The socio-economic and ecological approaches in agriculture brought broadly a new vision in the anthropological discipline during the 20<sup>th</sup> century.<sup>102</sup>

Pushpanjoli Deori's *Environmental History of Naga Hills: 1881-1947* points out the rich biological diversities and cultural diversities of the region. This work links deforestation to climatic changes and rainfall reduction.<sup>103</sup> The problems of the *adivasis* are not only restricted to the North-Eastern areas but also the rest of the subcontinent as a whole. Hari Charan Behera, in his *Agrarian Transformation in Tribal Areas: Emerging Trends and Issues*, examined the trends in agriculture and cropping pattern in *adivasi* areas, giving much importance to *adivasis* and agrarian studies. Their knowledge and technological adoption were based on the existing environment and society.<sup>104</sup> He says the forest is an inalienable part of the indigenous community in India, and most of them are settled in the forested areas.<sup>105</sup> But he mainly examines the North Indian situation and neglects the transformation of the forest during the Colonial period.

In addition to these, several Environmental activists wrote articles related to the environment and its conservation. Mohan Pai's work, *The Western Ghats*, attempts to trace the history and geography of Western Ghats. He presents the available information related to the geological origin of the Western Ghats and its cultural history. It also deals with the early inhabitants

---

<sup>101</sup> Vikas Kumar, *Op. Cit.*

<sup>102</sup> Hari Charan Behera, *Agrarian Transformation in Tribal Areas: Emerging Trends and Issues*, Discovery Publishing House, New Delhi, 2010, p. 2.

<sup>103</sup> Pushpanjoli Deori, *Environmental History of Naga Hills: 1881-1947*, Maulana Abdul Kalam Azad Institute of Asian Studies, Kolkatta, 2005, p. 10.

<sup>104</sup> Hari Charan Behera, *Op. Cit.*, p. 191.

<sup>105</sup> *Ibid.*, p. 64.

of the Western Ghats, flora and fauna, and the topography. The author shares the idea that despite conservation measures adopted by various agencies, the rate of deforestation has accelerated in recent years.<sup>106</sup>

*The Violence of the Green Revolution: Agriculture, Ecology and Politics in the South* of Vandana Shiva, covers the invisible ecological, political, and cultural costs of the Green Revolution.<sup>107</sup> She says Green Revolution was based on the assumption that technology is a superior substitute for nature.<sup>108</sup> As Gandhiji challenged the processes of colonization linked with the first industrial revolution, with the spinning wheel, peasants and third world groups are challenging the new form of colonialism associated with the biotechnology revolution with their indigenous seeds.<sup>109</sup> By borrowing a piece from A.S.Johnson's article in *Cropping Patterns in India* (1978), she says, the British considered India's soils and climate among the most underused in the world.<sup>110</sup> At large, she remarks that the 'Green Revolution' is the name given to the science-based transformation of Third World agriculture.<sup>111</sup>

Several works on changing land use and its structure have been published in India. These are mainly associated with urban development and urbanization. For example, R. K. Wishwakarma conducted a study to examine how the environmental factors are affecting land property values in 13 different localities of urban Delhi, based on data collected for 446 households

---

<sup>106</sup> Mohan Pai, *Op. Cit.*, p. 108.

<sup>107</sup> Vandana Shiva, *The Violence of the Green Revolution: Agriculture, Ecology and Politics in the South*, Other India Press, New Delhi, 2001, p. 15.

<sup>108</sup> *Ibid.*, p. 24.

<sup>109</sup> *Ibid.*, p. 16.

<sup>110</sup> *Ibid.*, p. 35.

<sup>111</sup> *Ibid.*, p. 19.

for the period 1977-78 in Delhi.<sup>112</sup> He points out, “New Delhi is characterized by spacious and green vistas and by uneconomic use of land, lacking compactness and social cohesion”.<sup>113</sup>

C. T. Kurien’s *Dynamics of Rural Transformation: A Study of Tamil Nadu 1950-1980* is the study of changes in the rural economy of Tamil Nadu. He classified the rural households of Tamil Nadu on the basis of the ownership and operation of land in 1961-62 and 1971-72.<sup>114</sup> Over the period from 1950 to 1975, agriculture in Tamil Nadu shows certain stability in terms of cropping patterns and a big improvement in terms of output and productivity due to multiple causes.<sup>115</sup> Being a Professor of Economics, his work marks the rural transformation and agrarian study in Modern Tamil Nadu.

Apart from Agrarian Studies, there are many works on Environmental Science. Some of these focus on climate change and the changing pattern of cultivation. These works are also worthwhile for environmental history, though it is a part of pure science. It also helps us to understand how society behaves towards environmental problems. For example, *Environmental Stress in Crop Plants* edited by G. S. Dhaliwal and Ramesh Arora point out the fact that the green revolution in rice and wheat, which consisted of improved varieties of seeds, expanded irrigation and increased use of chemical fertilizers and pesticides began in the 1960s and contributed significantly to narrowing the gap between food production and population.<sup>116</sup> Stress ecology

---

<sup>112</sup> R. K. Wishwakarma, *Land and Property Values: An Analysis of Environmental Impact*, Centre for Urban Studies, The Indian Institute of Public Administration, New Delhi, 1980, p. 30.

<sup>113</sup> *Ibid.*, p. 13.

<sup>114</sup> C. T. Kurien, *Dynamics of Rural Transformation: A Study of TamilNadu 1950-1980*, Second Edition, Orient Longman, Madras, 1989, p. 7.

<sup>115</sup> *Ibid.*, p. 110.

<sup>116</sup> G. S. Dhaliwal & Ramesh Arora (Ed.), *Environmental Stress in Crop Plants*, Commonwealth, Indian Ecological Society, New Delhi, 1999, p. 1.

represents a new field of study which attempts to evaluate the impact of natural or foreign perturbations on the structure and function of ecological systems.<sup>117</sup> In addition, S.C. Bhatia's *Global Climate Change and Cultivated Production* discusses the impact of climate change on agriculture. He also states that human activities have increased the atmospheric concentrations of GHCs (Green House Concentrations - e.g., CO<sub>2</sub>, methane, nitrous oxide, halocarbons), and warming potential.<sup>118</sup>

The above findings help us to form a scientific base for Environmental History. While the early environmental history covers the pollution and resource depletion, today the researchers mainly focus on climate change, and various policies contributed to this effect.

The book '*The Agrarian Transition and Socio-Economic Changes in Baroda State*' written by V. Chithra Devi, explains the commercialization of agriculture and how it affects the peasants of Baroda. She illustrates the changes in the area cultivated, with the help of suitable tables. Like in any other part of India, the commercialization of agriculture in Baroda, commenced in the middle of the 19<sup>th</sup> century.<sup>119</sup> It led to the increasing indebtedness and large-scale alienation of land in the early decades of the 20<sup>th</sup> century.<sup>120</sup>

Regarding the Chronology of Indian Environmental History, Mahesh Rangarajan says, from around 1980, environmental concerns merge with historical ones.<sup>121</sup> He also says, "Madhav Gadgil and Ramachandra Guha, the

---

<sup>117</sup> *Ibid.*, p. 2.

<sup>118</sup> S. C. Bhatia, *Global Climate Change and Cultivated Production*, Agrotech Press, New Delhi, 2013, p. 220.

<sup>119</sup> V. Chithra Devi, *The Agrarian Transition and Socio-Economic Changes in Baroda State*, Sunday Circle, Thiruvananthapuram, 2008, p. 102.

<sup>120</sup> *Ibid.*, p. 131.

<sup>121</sup> Mahesh Rangarajan, *Nature and Nation: Essays on Environmental History*, Permanent Black in Association with Ashoka University, New Delhi, 2015, p. 6.

principal contributors of Indian Environmental History, pointed that the colonial-imperial era was a watershed as it unleashed newer levels of exploitation of nature as well as new, more intrusive systems of resource control and the local systems of resource use and renewal were on careful examination”.<sup>122</sup>

Over the past eighty years, large-scale changes took place in the environment of Kerala due to several factors. Statistics show that Kerala is conceived to be India’s most developed state in terms of socio-economic and political conditions. The people of Kerala are ever willing to make use of the opportunities in our country and abroad. At the same time, recent researches raised many questions against the Kerala Model of development. It is a fact that they were not concerned about environmental factors. Besides this, the conditions of the marginalized groups did not improve much. At this juncture, the historians turned their attention towards the Environmental History of Kerala.

C.K.Karunakaran Pillai, a former Chief Conservator of Forests, Kerala, has written ‘*Politics of Vanishing Forests in Kerala*’. It portrays the means of forest destruction in Kerala. He says that the first four decades of the 20<sup>th</sup> century could be reckoned as the golden period in the history of conservation of natural forests.<sup>123</sup> The situation changed due to the Governmental policy to lease out the Reserve forest in the name of ‘Grow more food programme’.<sup>124</sup> Though not a historian, he analyses various Government committee reports and dissenting notes related to the conservation of forest. But his studies mainly cover the southern parts of Kerala.

---

<sup>122</sup> *Ibid.*, p. 8.

<sup>123</sup> C. K. Karunakaran Pillai, *Politics of Vanishing Forests in Kerala*, Kerala Sastra Sahithya Parishad, Thrissur, 2003, p. 11.

<sup>124</sup> *Ibid.*

Sebastian Joseph's work, *Cochin Forests and the British Techno-ecological Imperialism in India*, states that Environmental Historians of South Asia mainly concentrate on the struggle between the Peasant and Colonial state over the latter's forest policies.<sup>125</sup> He indicates Guha's ecological dimension to the study of agrarian history.<sup>126</sup> But Sebastian Joseph's primary focus is on the forest tramway that was introduced to extract timber from the impenetrable forest of Cochin during the Second World War.<sup>127</sup> "British had ecologically colonized India, and the tramway was the symbol of colonial technology".<sup>128</sup> Sebastian Joseph's article '*Ecological Imperialism: Colonial Forest Policy in Cochin*' studies the setting up of 'forest tramway' mainly for the timber trade. The colonial target was golden teak<sup>129</sup> in the Parambikkulam forest. His researches mainly focus on Cochin State and the transformation of the landscape of southern parts of Kerala.

G. Madhusoodanan's Malayalam work *Nashtamakunna Nammude Swapnabhoomi: Keralathinte Paristhithika Charithram* discuss the environmental history of Kerala for the last sixty years. It gives an account of the natural resources and its overconsumption by the people in the post-independence period. He analyses the growing energy demand, growth of tourism and construction sector, forest depletion, and the collapse of the agriculture sector in Kerala as a whole. It also points out the evil effects of Fossil capitalism upon the environment in the twentieth century.<sup>130</sup> Though

---

<sup>125</sup> Sebastian Joseph, *Cochin Forests and the British Techno-ecological Imperialism in India*, Primus Books, New Delhi, 2016, p. 11.

<sup>126</sup> *Ibid.*, p. 20.

<sup>127</sup> *Ibid.*, p. 8.

<sup>128</sup> *Ibid.*, p. 128.

<sup>129</sup> Sebastian Joseph, 'From the Timber to the Smoke: Situating Indian Environmental History', Unpublished Article, p.3.

<sup>130</sup> G. Madhusoodanan, *Nashtamakunna Nammude Swapnabhoomi: Keralathinte Paristhithika Charithram* (Mal.), Kerala Sahitya Academy, Thrissur, 2017, p. 257.

he covers Kerala as a whole, it did not go into the in-depth survey of the region of Wayanad.

K. V. Kunhi Krishnan's *Forest Policy and Administration in British Malabar : 1800-1947*, is an unpublished work<sup>131</sup> which discusses the British forest policy and its impact on Colonial Malabar. Though he provided vivid picture on the growth of forest plantations in British Malabar, the work did not give importance to the agrarian transformation of Wayanad.

The hollowness of Kerala Model Development reveals by P.K. Prakash in his work *Anyadheenappedunna Bhoomi: Adivasi Bhoomi Prasnattinte Charithravum Rashtreeyavum*. He points out that each migration in the Western Ghats resulted in the *adivasi* land alienation.<sup>132</sup> He has used the census reports and forest administration reports. But his attention mainly centred on some particular places in the Western Ghats.

Abraham Vijayan's, '*Caste, Class and Agrarian Relations in Kerala*', made an attempt to provide the problem of land and its utilization from a sociological point of view. He throws light on the class relations of landowners and landless. Caste, class, and agrarian relations are closely interwoven and referred in different ways in the phenomenon of social stratification.<sup>133</sup> But in his analysis, he gave significance to Palghat Taluk.

Nandita Krishna says, the worship of Mariyamma Devi by Adiya Community, which has migrated from Kodagu and *Nadunnekkal*, is a ritual

---

<sup>131</sup> K. V. Kunhi Krishnan, 'Forest Policy and Administration in British Malabar: 1800-1947', Unpublished Ph.D.Thesis, Department of History, University of Calicut, 1995, p. 118.

<sup>132</sup> P. K. Prakash, *Anyadheenappedunna Bhoomi: Adivasi Bhoomi Prasnattinte Charithravum Rashtreeyavum* (Mal.), Jayachandran Suhrudsangham, Kozhikode, 2002, p. 31.

<sup>133</sup> Abraham Vijayan, *Caste, Class and Agrarian Relations in Kerala*, Reliance Publishing House, New Delhi, 1998, p. 187.

and custom to bring prosperity, prevalent in Wayanad.<sup>134</sup> Members of the Kattunaika community, also known as Thenkurumar, collect forest resources like honey and stay in the forests and are worshippers of Vishnu known as Perumashi.<sup>135</sup> Rajan Gurukkal says *adivasi* culture constitutes the most archaic stratum of Kerala's heritage and most relevant aspect in the context of environmental sustainability.<sup>136</sup> "Historicizing the tribal means of subsistence and modes of survival we reach out ancient social formations based on economies resulting from human adaptation to natural ecosystems".<sup>137</sup>

From the British period itself, some foreigners collected factual information about Wayanad and its forest. These are considered as relevant source materials for the reconstruction of the environmental history of Wayanad. Fr. Jefreeno, a French Priest, visited Wayanad for missionary activities, wrote a diary related to his Wayanad.<sup>138</sup> It is interesting to note that though he was a priest of missionary activities, his diary had details of the methods of cultivation in Wayanad. He narrated the availability and fertility of the soil, due to which there was no need for rotation of crops in this region.<sup>139</sup> Rhodes Morgan, the District Forest Officer of Malabar in 1887, had said that the forests were worked on the native system for many years, no efforts were made to improve them till then, and trees were indiscriminately felled.<sup>140</sup>

---

<sup>134</sup> K. P. Laladhas, et. al., 'Culture Heritage and Biodiversity Register', in Vinod T.R., et. al., (Ed.), *Op. Cit.*, p. 20.

<sup>135</sup> *Ibid.*

<sup>136</sup> Rajan Gurukkal, 'Some Aspects of Kerala's Cultural Heritage and Ecological Sustainability', in Vinod T.R., et. al., (Ed.), *Op. Cit.*, p. 83.

<sup>137</sup> *Ibid.*

<sup>138</sup> Fr. Jefreeno, *Jefreenoyude Diarykkurippukal*, (Mal.), 2 July 1909, Pallikkunnu Lourde Matha Church, Bishop's House of Calicut, 1977, p. 18.

<sup>139</sup> *Ibid.*

<sup>140</sup> Rhodes Morgan, 'Wayanad Forest', in O. K. Johny (Ed.), *Edakkal Caves and the History of Wayanad*, Mathrubhumi Books, Kozhikode, 2008, p. 141.



*Malabar Manual* of William Logan, *Gazetteers* of C. A. Innes, and *Wayanad: Its People and Tradition* by C.Gopalan Nair explained Wayanad till the twentieth century. *Wayanad Rekhakal* of O. K.Johny, *Ariyappedatha Wayanad* of Mundakkayam Gopi, and articles and books of K. K. N. Kurup reflect the more or less status of modern Wayanad. The literary works of renowned Malayalam authors, S. K. Pottakkad, K. J. Baby, P.Valasala, K. Panur, etc. are sources of immense information about the people and their culture in Wayanad.

T. G. Jacob, in his *Wayanad, Misery in An Emerald Bowl: Essays on the Ongoing Crisis in the Cash Crop Economy- Kerala* says the migrants considered *Adivasis* as primitive, unclean, stupid, irresponsible, lazy, etc.<sup>141</sup> According to the author, “they were primitive because, the preservation of mother nature was their agenda rather than raping her, they were unclean because they were using natural gifts to keep themselves clean, they were stupid because they could not speak the truncated Travancorean Malayalam nor did they know how to make money by growing cash crops, they were irresponsible because they minded their own business instead of being at the beck and call of those who offered them new means of livelihood,<sup>142</sup> they were lazy because they loved earth and abhorred hurting it”.<sup>143</sup> He points out that the worldview of the *Adivasis* was antithetical to the invaders who wanted to devour everything that could be devoured.<sup>144</sup> “The worldview of the *adivasis* was honesty, greedlessness, worship of the earth and all that it offers as divine and supernatural; they treated themselves as children of nature counterposed with the greedy, rootless and vicious settlers”.<sup>145</sup> His remarks

---

<sup>141</sup> T. G. Jacob, *Wayanad Misery in an Emerald Bowl: Essays on the Ongoing Crisis in the Cash Crop Economy- Kerala*, Vikas Adhyayan Kendra, Mumbai, 2006, p. 28.

<sup>142</sup> *Ibid.*

<sup>143</sup> *Ibid.*, p. 29.

<sup>144</sup> *Ibid.*

<sup>145</sup> *Ibid.*

that the opening up of medium and large plantations by the colonial planters reduced this forest cover approximately to 25% of the total land area, which could be called near the critical minimum for maintaining the ecological balance of the terrain.<sup>146</sup> T. G. Jacob sums up his work on the recent agrarian crisis in Wayanad and links it with the world scenario. Though he touches the aspects of environment and agriculture, its conclusions are mainly economic.

The historical research undertaken by P. T. Sebastian, Joy Varkey, and Joshy Mathew on migration and the socio-economic development of Wayanad are worth mentioning. However, the focus all these works is mainly on social movement rather than impact on environment and agriculture. Researchers like Ratheesh Narayanan offers us insights into biodiversity and agriculture through the lense of botanical sciences. However, these tertiary sources will lead us to new dimensions in this study.

R. U. Sayce said, “Our knowledge of culture in any country is inadequate until we can see it as a whole and can describe the distribution of each element, with all its variations and its adaptations to local conditions”.<sup>147</sup> As Sumit Sarkar says, much Environment history in India, as well in many other countries, has been inspired by what is aptly termed the ‘acadian principle’.<sup>148</sup> This means romanticizing the pastoral and rendering it pristine, idyllic, and generally more virtuous than other domains.<sup>149</sup> Environmental historians have also come to pay increasing attention to the disruption of nomadic- pastoral population flows and ways of living.<sup>150</sup> According to Environmental historians current narratives, both the thing and

---

<sup>146</sup> *Ibid.*, p. 104.

<sup>147</sup> R. U. Sayce, ‘The Ecological Study of Culture’, in George A. Theodorson (Ed.), *Studies in Human Ecology*, Harper and Row Publishers, New York, 1961, pp. 449 -450.

<sup>148</sup> Sumit Sarkar, *Modern Times: India 1880’s-1950’s Environment, Economy, Culture*, Permanent Black, New Delhi, 2015, p. 79.

<sup>149</sup> *Ibid.*

<sup>150</sup> *Ibid.*, p. 91.

the word ‘pollution’ were new in the 19<sup>th</sup> century.<sup>151</sup> The domain of environmental history in which the most robust body of scholarly debate exists in India, ask questions that more modern and emerging environmental accounts of India, primarily as they deal with issues of water, air, industry, and climate change, may find generative for their development.<sup>152</sup> Studies that use historically situated comparative approaches to understand histories of the environment may prove valuable for they can locate Indian forest history in a broader global context and provide connections with the contemporary period.<sup>153</sup>

Understanding how past societies have coped with environmental change can teach us lessons for the future.<sup>154</sup> So the environmental history is not only the study of the past but also a review of the possibilities of the life of future generations. Environmental change is not adverse in itself if we respond to it in the right way.<sup>155</sup> The most significant departure from necessary ecological constraints has been the increase in human numbers far beyond the level that could be supported by natural ecosystems.<sup>156</sup>

However, there have been few studies devoted to the change in the environmental and agrarian aspects of Wayanad that treat both the nineteenth

---

<sup>151</sup> William M. Covert, *The Smoke of London: Energy and Environment in the Early Modern City*, Cambridge University Press, Cambridge, 2016, p. 5.

<sup>152</sup> K. Sivaramakrishnan, ‘Forests and the Environmental History of Modern India’, in *The Journal of Peasant Studies*, Vol. 36, 2009, Issue 2, pp. 299-324, published online: 22 Jul 2009, <http://dx.doi.org/10.1080/03066150902928280>, accessed on 17-06-2017, 11.55 am.

<sup>153</sup> Meena Bhargava, ‘India’s Ecological Past’, (Review of Mahesh Rangarajan & K Sivaramakrishnan (Ed.), *India’s Environmental History: A Reader*, 2 volume work), in *Economic and Political Weekly*, Vol.46, No.53, 31 December 2011, pp.32-34.

<sup>154</sup> Ian Whyte, *World Without End?: Environmental Disaster and the Collapse of Empires*, I.B.Tauris, New York, 2008, p. 8.

<sup>155</sup> *Ibid.*, p. 215.

<sup>156</sup> Clive Ponting, ‘Human Environmental History Since the Origin of Agriculture’, in Jan J. Boersema & Lucas Reijnders (Ed.), *Principles of Environmental Sciences*, Springer, United Kingdom, 2009, p. 34.

and twentieth centuries and sees its beginnings with the advent of the British and the advent of the migrants in the 1930's as part of the same continuum. Those studies see these periods as different in terms of the impact on the environment as well as on agricultural practices. This study places the origin of the change in the first half of the nineteenth century with British Colonialism and sees the mass migration of the twentieth century as a continuation of the earlier colonialism.

This study blends environmental history and agrarian studies. The aims of applied research are more easily subjected to ethical investigation.<sup>157</sup> Environmental history needs immense probabilities for future research. It is interesting to note that different creatures and communities had perceived the environment differently. We have to avoid Environmental Romanticism and Environmental Extremism to have a better understanding of the environment and agriculture.

### **Chapterisation**

The thesis is organized thematically into five chapters, apart from Introductory and conclusion. The natural landscape, climate, early inhabitants, and the general history of Wayand is dealt with the first chapter, entitled, 'Historical Landscape of Wayanad'. It is other wise the background chapter. The natural landscape includes its location, geographical specificities such as mountainous regions, rivers and streams. Climatic conditions vary as per the seasons. Rainfall, temperature, and misty conditions are the significant factors that can be noted in this region. Various indigenous people inhabited this region and their origin and further spread discussed in this part.

---

<sup>157</sup> Nicholas Walliman, *Your Research Project*, 2<sup>nd</sup> Edition, Vistaar Publications, New Delhi, 2006, p. 341.

The second chapter, 'The Wayanad Woods under Colonial Administration', deals with the changes that occurred to the forest wealth in the nineteenth century and the first quarter of the twentieth century and the intervention of British rule with their different policies which brought about these changes. The forest region in Wayanad was rich with varieties of plants and animals. The natural ecosystem was altered due to the advent of the British. The agricultural production and pattern of cultivation are discussed in the third chapter, titled, 'People and Agriculture in the Mountaineous Landscape'. A short history of the earlier cultivators as well the agricultural practices are detailed in this chapter. The mode of cultivation of the earlier inhabitants was very simple.

Changes were occurred in this agricultural set up with the arrival of the British. The environmental conditions and the agricultural pattern altered after the migration of people from Travancore in the 1930 onwards, even before the British left India. The process of migration continued even after independence. These details are included in the fourth chapter, 'Agriculture and Environment since Agrarian Migration'. The intensive flow of migrants to Malabar and renewed policies during the post-independence period and the changes in the environmental patterns are analysed in this chapter. Interestingly, various policies adopted by the Government accelerated this process. Demographic change in the region during this period is explained in this chapter.

The changes in the agriculture and environment which we experience in today's Wayanad, are being discussed in the fifth chapter titled, 'Changing practices and its impact on Environment and Agriculture'. The chapter examines the increase in population, which caused pollution, impacting the environmental conditions. It also offers an evaluation of the modern trends in Wayanad, like the approach and attitude of farmers towards agriculture and

the new challenges in the field of agriculture. The concluding chapter summarises the significant findings of the thesis in detail.

The chapters that follow will have be discussing the changes that Wayanad witnessed in the twentieth century, due to various factors and the part played by different sects of people.

# CHAPTER 1

## THE HISTORICAL LANDSCAPE OF WAYANAD

Human nature is influenced by his environmental elements and vice versa. Therefore, the attempt to understand the environment is as significant as the efforts to understand human nature. This inseparable-give and take- the relationship between man and environment, is an essential factor of historical research. As such, man exploits nature at large for his sustenance. With the industrial revolution, onwards the man started ignoring nature and utilizing it in all possible ways, forgetting the fact that his dependence on nature is inevitable for his existence. His approach to agriculture has changed a lot which was, once, his means of living. It has become a universal phenomenon now. Nevertheless, if we analyse the causal factors of these changes in a particular locality, we may get an idea of how it has been influenced by the collective history of that place as well.

Here, an attempt is made to investigate such changes which took place in Wayanad, a hilly northern district of Kerala. This chapter is arranged in two different parts; the first part is an overview of important specialities of the topography of Wayanad and the second part discusses the history of Wayanad till the early decades of 20<sup>th</sup> century including political history of different periods, and social issues such as the migration in Wayanad in different stages etc.

India is host to a diversity of regional climates and topographies.<sup>1</sup> The Indian subcontinent is formed of two-crust blocks of different natures and constitutions, namely the Himalayas-which are 1600 miles long, folded beds

---

<sup>1</sup> Mahesh Rangarajan, *Nature and Nation: Essays on Environmental History*, Permanent Black, Ashoka University, New Delhi, 2015, p. 3.

younger rocks- and the Deccan plateau<sup>2</sup> which is the oldest and stablest blocks of the earth's surface, in comparison with the Himalayas.<sup>3</sup> Wayanad is situated at an altitude of 700m to 2100m above the sea level which is located between the northern latitude of 11<sup>o</sup> 27 and 15<sup>o</sup> 58 and to east 75<sup>o</sup> 47 and 70<sup>o</sup> 27. Wayanad, a lot of geographical and cultural specialities, been formed as the 13<sup>th</sup> district of Kerala on 1<sup>st</sup> November 1980. It shares its boundaries with Coorg, Mysore and Chamaraja Nagar districts of Karnataka and Nilgiris of Tamilnadu. It also shares its border with Calicut, Kannur and Malappuram districts in Kerala. It has an area of 2132 km<sup>2</sup> and a population of 817420 as per the census in 2011.

Wayanad is a region of thick forests, hills, hill slopes and low lying areas. These low lying areas have fields and rivers, making the region cultivable. Kabani, which is a tributary of Kaveri is a blessing to Wayanad. Flowing towards the east, it joins the Bay of Bengal. Brahmagiri and Chembra are the highest peaks in Wayanad. Water sources like, streams and rivers act as a big boon for the survival and existence of animals and biodiversity of Wayanad. Its animal wealth is remarkable. Being a part of the Nilgiris biosphere reserve in the Western Ghats, Wayanad is known for its flora and fauna for centuries. The climatic condition of Wayanad is entirely different from that of the other regions of Kerala, due to its height from the sea level and the varieties of plants it possesses.

The land is the fundamental livelihood asset in any agrarian society.<sup>4</sup> The British Government attempted to understand the structure of the soil of the Malabar district. *A Soil Survey of the Malabar District* says the area surveyed consists of the plains or the table-land portions of the eight taluks of

---

<sup>2</sup> G. S. Puri, *Indian Forest Ecology: A Comprehensive Survey of Vegetation and its Environment in the Indian Subcontinent*, Vol. II, Oxford, New Delhi, 1960, p. 474.

<sup>3</sup> *Ibid.*, p. 477.

<sup>4</sup> P. Indira Devi, et. al., *National Agricultural Innovation Project: Base-line Survey Report of 'Multi Enterprise Farming Models to Address the Agrarian Crisis of Wayanad District of Kerala': Socio-Economic Status of Wayanad District*, Kerala Agricultural University, Poorna Publications, Kozhikode, 2012, p. 64.



Chirakkal, Kottayam, Kurumbranad, Calicut, Ernad, Walluvanad, Ponnani and Palghat. The taluk of Wayanad, being too hilly, is not included in the survey.<sup>5</sup> Wayanad district consists of 5.47 percent of the total geographical area of the state.<sup>6</sup> The district has the highest proportion of area under forests (37.07 percent) higher than the state average of 27.83 percent.<sup>7</sup> On 28<sup>th</sup> May 1906 the District Forest Officer of South Malabar P.M. Lushington wrote a memorandum and on 9<sup>th</sup> July 1906, the Collector and President, District Board of Malabar A.R. Knapp approved it. In that memorandum he divided the district of Malabar into three tracts based on trees suited to those soils. They are as follows: the Littoral, within 10 miles of the sea, the Plains and the Wayanad.<sup>8</sup>

The altitude of Wayanad ranges from 50 m. to 1600 m. the highest peak being Brahmagiri in Tirunelli Reserve.<sup>9</sup> Wayanad District is situated in the eastern portion of Kerala. *Fundamentals of Soil Science* states that, the term 'Laterite' was originally used by Buchanan in 1807 for the highly ferruginous, vesicular and unstratified material observed in the Malabar Hills of South India.<sup>10</sup> In Wayanad the soils are of red ferruginous series with regur soils in the north of the taluk.<sup>11</sup> This kind of land helped to foster a particular type of plant in Wayanad.

---

<sup>5</sup> A *Soil Survey of the Malabar District*, A-215, Regional Archives, Kozhikode. (Hereafter RAK)

<sup>6</sup> P. Indira Devi, et. al., *Op. Cit.*, p. 34.

<sup>7</sup> *Ibid.*

<sup>8</sup> *Memorandum on the Planting and Maintenance of Avenues: Malabar District, 1906*, p.2, A/213, RAK.

<sup>9</sup> P. N. Adiyodi, *Seventh Working Plan for the Wayanad Forest Division (1974-75 to 1983-84)*, Government of Kerala, Government Press, Ernakulam, 1977, p. i., (Kerala Forest Headquarters Central Library, Thiruvananthapuram (Hereafter KFHT),

<sup>10</sup> J. L. Sehgal, 'Soil Classification', in N.N.Goswami (Ed.), *Fundamentals of Soil Science*, Indian Society of Soil Science, New Delhi, 2012, p. 56.

<sup>11</sup> *Census of India, Paper No.2, Population Zones, Natural Regions, Sub- Regions and Divisions*, 1952, p.111, C/145, Centre for Development Studies, Thiruvananthapuram (Hereafter CDS).

From the early times onwards Wayanad was having a rich and thick forest areas. The British Government identified the importance of the forests and implemented several schemes for its maintenance. The vast areas under the control of the Forest Department in India may be brought under the provisions of working-plans within a measurable distance of time, it is necessary that the agency of subordinate officers should be more largely utilised than has hitherto been the custom in the collection of the data on which these plans are based; and that this may be feasible, some such instructions as the present are required.<sup>12</sup> A working-plan sets forth the purpose with which a forest should be managed, so as to best meet the interests, and therefore the wishes, of the owner; and indicates the means by which this purpose may be accomplished.<sup>13</sup> In other words, it is a forest regulation prescribing the application of certain cultural rules, and the execution of certain works, in order to produce a given desired result.<sup>14</sup> As a result of these working plans and administrative reports the government classified the forest area of the country. Thus they formed Wayanad Forest Division including the forest areas of present Kannur district. Wayanad in general, and the eastern parts in particular remained as the unsettled condition and in consequence become over-run with jungle, but other parts of the Taluk are believed to have been once well peopled, and more extensively cultivated.<sup>15</sup> In order to understand this land, the forest, the government prepared the information regarding the topography of Wayanad. The Wayanad Forest Division is comprised of three readily distinct types of terrain. They are,

---

<sup>12</sup> W. E. D. Arcy, *Preparation of Forest Working Plans in India*, 2<sup>nd</sup> edn., World Public Library Edition, Classic Literature Collection, World Public Library org., Calcutta, 1895, p. i, ndl.iitkgp.ac.in, accessed on 18-07-2017, 10.30 pm.

<sup>13</sup> *Ibid.*, p. 1.

<sup>14</sup> *Ibid.*

<sup>15</sup> W. Robinson, *Report on the History, Condition and Prospects of the Taluk of Wayanad, 22 August 1857*, in Reprint, J.Rejikumar ( Ed.), Kerala State Archives, Government of Kerala, 2010, p. 85.

- (a) The foothills on the plains rising to 330 m. feet above the sea. These are laterite in origin; rounded and moderately steep.<sup>16</sup>
- (b) The spurs, peaks, and ravines from the western ghats, rising steeply from the foothills to the main ridge.<sup>17</sup> The country is difficult to access and contains a number of peaks the most notable of which are Brahmagiri 5,277 feet and Suryamudi 4,521 feet.<sup>18</sup> Drainage is into the Arabian Sea through the Valarpattana, Anjarakandi and Vania,puzha (Mahe river).<sup>19</sup>
- (c) The table-land of Wayanad to the east of the main ridge which gradually slopes down to the east and north to Mysore.<sup>20</sup> This is an undulating country dotted with rounded hills which are seldom steep.<sup>21</sup>

### **Main rivers and general direction of drainage**

All the major rivers in southern India originate in the Western Ghats.<sup>22</sup> In the tract dealt with, there are two systems of rivers; those that flow westwards and join the Arabian Sea, and those that flow eastwards and join the Kabini River, a tributary of the Cauvery which ultimately enters the Bay of Bengal.<sup>23</sup> Bavalihole river, draining the Begur, Kudrakode and Alathur Reserves, the Mannantoddy puzha draining portions of the eastern slopes of the Peria Reserve and the streams originating from the Wayanad plateau flow

---

<sup>16</sup> P. N. Adiyodi, *Op. Cit.*, p. 1.

<sup>17</sup> B. A. Cariapa, *Revised Working Plan for The Wynad Forest Division 1950-51 to 1959-60*, Government of Madras, Government Press, Madras, 1955, p. 1, KFHT.

<sup>18</sup> *Ibid.*

<sup>19</sup> *Ibid.*

<sup>20</sup> *Ibid.*

<sup>21</sup> *Ibid.*

<sup>22</sup> A. K. Enamul Haque, et. al., (Ed.), *Environmental Valuation in South Asia*, Cambridge University Press, Delhi, 2011, p. 146.

<sup>23</sup> I. Natarajan Chettiar, *The Working Plan for The Wynad Forest Division, 1962-63 to 1971-72*, Government Press, Trivandrum, 1965, p. 1, KFHT.

towards the east and join the Kabani river<sup>24</sup>. The rivers and streams that flow eastwards are:-

- (a) “Manantoddy puzha” a tributary of the Kabani river draining the Kuruva Reserve on all its sides as the reserve is an island in the river.<sup>25</sup>
- (b) “Kadaman thode” and “Narasipuzha” draining the eastern and western portions of the Padiri reserve and joining the Manantoddy puzha.<sup>26</sup>
- (c) The streams “Murmavu” and its important tributaries “Kurichiyat puzha”, “Doddapallam” and “waterfall” streams, draining the Kurichiyat<sup>27</sup> reserve.<sup>28</sup>
- (d) “Nulpuzha” draining the Nulpuzha, portions of Navanhalls and Rampur reserve.<sup>29</sup>
- (e) “Mavanhalla” streams draining the eastern portions of Mavanhalla and “Rampur reserve. It joins the Nulpuzha stream to form the ‘Nugu Hole’ stream, a tributary of the Cauvery.<sup>30</sup>
- (f) “Ammanvayal thodu” starting from and draining the Kurichiyat reserve. It joins Nugu Hole.<sup>31</sup>
- (g) “Manjathode” draining portions of Kurichiyat, Kuppadi and Rampur reserves and joining the Nulpuzha stream.<sup>32</sup>

---

<sup>24</sup> P. N. Adiyodi, *Op.Cit.*, p.1.

<sup>25</sup> R. Parameswar Iyer, *A Working Plan for Kozhikode Forest Division (1964-65 to 1973-74)*, p.2, R2L/30, KFHT.

<sup>26</sup> *Ibid.*

<sup>27</sup> Moist Deciduous Forest and Teak Plantation.

<sup>28</sup> R. Parameswar Iyer, *Op. Cit.*, p. 2.

<sup>29</sup> *Ibid.*

<sup>30</sup> *Ibid.*

<sup>31</sup> *Ibid.*

<sup>32</sup> *Ibid.*

- (h) “Katti Halla” originating from and draining the Rampur reserve and joining the Nugu Hole.<sup>33</sup>
- (i) “Ammankli thodu” draining the Mavanhalla reserve forest and joining the Nulpuzha stream and;
- (j) “Kallur thodu” draining the Kallur and Alathur Reserves and joining the Nulpuzha stream.<sup>34</sup>

Except for three tributaries of the Cauvery, viz, the Kabani and the Rampur rise in South Wayanad.<sup>35</sup> These streams and rivers provide ample wetness in this region.

The *Journey from Madras through the Countries of Mysore, Canara, and Malabar* by Francis Buchanan provides the map of South India and indicates Wayanad as ‘Bynadu’ or ‘Waynad’.<sup>36</sup> Regarding the texture and nature of the soil in Wayanad taluk, *A Statistical Atlas of the Madras Presidency* indicates the settlement of which preceded by some years that of the rest of the Malabar district, no classification of the soil of drylands was attempted, such lands being merely distributed under such description as forest, better scrub and inferior scrub.<sup>37</sup> Only the paddy flats have been classified in Wayanad taluk.<sup>38</sup> The soils of these flats belong mainly to the red ferruginous (containing iron oxides or rust) series with a sprinkling (4 percent) of regur soils in the north of the taluk.<sup>39</sup> The black soils of India, locally called ‘regurs’.<sup>40</sup> The red ferruginous soils are of various shades of

---

<sup>33</sup> *Ibid.*

<sup>34</sup> *Ibid.*

<sup>35</sup> *A Statistical Atlas of the Madras Presidency*, Revised, Govt. Press, Madras, 1924, p. 2.

<sup>36</sup> Francis Buchanan, *Journey from Madras Through the Countries of Mysore, Canara and Malabar*, Second Edition, Vol. I, Higginsbotham, Madras, 1870, RAK.

<sup>37</sup> *A Statistical Atlas...*, *Op. Cit.*, p. 8.

<sup>38</sup> *Ibid.*

<sup>39</sup> *Ibid.*

<sup>40</sup> T. D. Biswas & S. K. Mukherjee, *Textbook of Soil Science*, Tata Mc Graw-Hill Publishing Company Limited, New Delhi, 18<sup>th</sup> reprint, 2008, p. 315.

red and brown due to the presence of iron in the original rocks which they now represent.<sup>41</sup> They have different degrees of fertility varying with the quantity of carbonaceous matter (derived from the decomposition of organic substances) which they contain.<sup>42</sup> The regur soils are dark in colour, mostly black and blackish brown, and are of remarkable natural fertility, containing in addition to finely comminuted minerals much organic matter derived from the decay of the luxuriant vegetation of the tract.<sup>43</sup>

The fertility of the soil and the sufficient rainfall in Wayanad helped to form an agrarian tract. The state experiences heavy rain and flood during the southwest monsoon, with subsequent damage to life and property.<sup>44</sup> Climate includes rainfall, temperature humidity, aridity and wind.<sup>45</sup> Drought conditions have also become more frequent during the pre-monsoon period and at times with the failure of southwest monsoon and northeast monsoon.<sup>46</sup> The southwest monsoon bursts on the Travancore coast towards the end of May.<sup>47</sup> The arrival of southwest monsoon causes a substantial and welcome fall of temperature.<sup>48</sup> From June to September, when the southwest monsoon holds away, it is the main rainfall season.<sup>49</sup> During October and November the southwest monsoon retreats and northwest monsoon establishes.<sup>50</sup> With the withdrawal of the southwest monsoon, there is a slight increase in the

---

<sup>41</sup> *A Statistical Atlas... Op. Cit.*, p. 8.

<sup>42</sup> C. A. Innes, *Malabar Gazetteer*, Vol. I & II, F.B.Ivans (Ed.), (Reprint), The State Editor, Kerala Gazetteers, Thiruvananthapuram, 1997, p. 10.

<sup>43</sup> *A Statistical Atlas..., Op. Cit.*, p. 8.

<sup>44</sup> *Kerala State Disaster Management Policy 2010*, Department of Revenue & Disaster Management, Kerala State Disaster Management Authority, Government of Kerala, Thiruvananthapuram, 16-06-2010, <http://sdma.kerala.gov.in>, p. 1, accessed on 20-07-2017, 10.15 pm.

<sup>45</sup> Dilip Kumar Das, *Introductory Soil Science*, Kalyani Publishers, New Delhi, Reprinted 2008, p. 125.

<sup>46</sup> Kerala State Disaster Management..., *Op. Cit.*, p. 1.

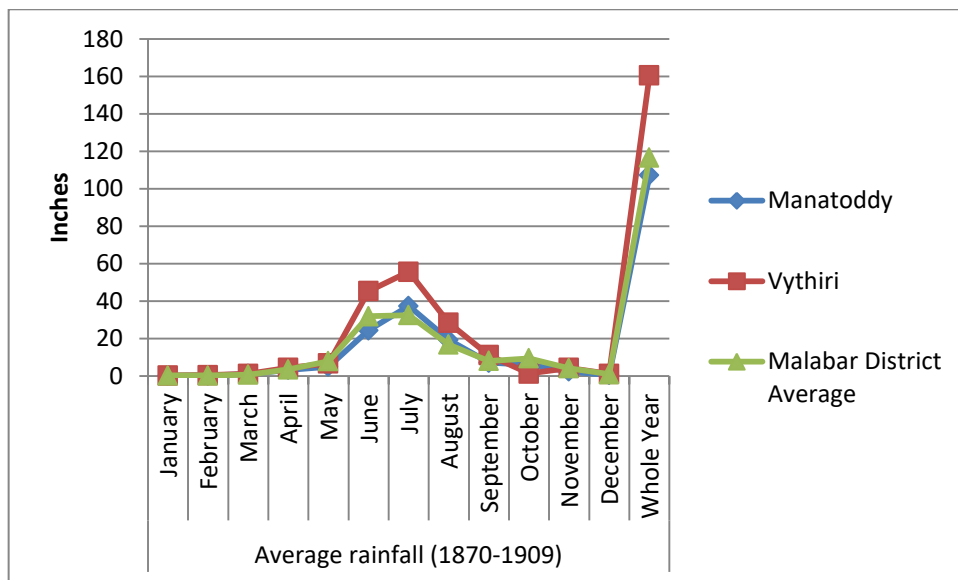
<sup>47</sup> *Census of India, Paper No.2, Population Zones, Natural Regions, Sub- Regions and Divisions*, 1952, p. 110, C/145, CDS.

<sup>48</sup> *Ibid.*

<sup>49</sup> *Ibid.*

<sup>50</sup> *Ibid.*

temperature of the air.<sup>51</sup> From March to May is a season of continuous growth in temperature.<sup>52</sup> The following chart provides the 12 months average rainfall data of Wayanad Taluk from 1870 to 1909 based on the table number 1 in the Appendix I. It shows that the average rainfall of the Vythiri region was far more than the Mananthavady region and Malabar District average. And the average rainfall of the Mananthavady region was less than the Malabar District average.



The above chart shows that, Wayanad had higher rainfall than that of other parts of the Malabar district. At the same time the nearby areas of Vythiri had massive rain when compared to northern Wayanad. The high rainfall brought a suitable climate and fertile soil in Wayanad. G.S.Puri says comparing the average annual rainfall or seasonal variations in rainfall over small parts of the country with the type of vegetation it seems that there is some relationship between the rainfall and vegetation.<sup>53</sup> The following is an abstract of the rainfall statistics for the past 51 years ending with 1920.

<sup>51</sup> *Ibid.*

<sup>52</sup> *Ibid.*

<sup>53</sup> G. S. Puri, *Indian Forest Ecology: A Comprehensive Survey of Vegetation and its Environment in the Indian Subcontinent*, Vol. II, Oxford, New Delhi, 1960, p. 343.

**Table No. 1.1**

<b>Section of district</b>	<b>Dry weather (January – March) Inches</b>	<b>Hot weather (April and May) Inches</b>	<b>South-west monsoon (June-September) Inches</b>	<b>North-east monsoon (October-December) Inches</b>	<b>Annual total Inches</b>
North Wayanad-Manantoddy	0.77	8.88	83.22	12.22	104.59
South Wayanad-Vayitteri	1.34	10.45	131.65	19.91	163.35
Malabar District average	1.15	9.11	88.69	17.57	116.52

Source: *Statistical Atlas: Malabar, A Statistical Atlas of the Madras Presidency*, Govt.Press, Madras, 1924, p.3, Regional Archives, Kozhikode (Hereafter RAK).

*Statistical Atlas: Malabar, A Statistical Atlas of the Madras Presidency* describes the rainfall of the region. The seasons are wonderfully regular.<sup>54</sup> Thunder-storms begin at the end of March, especially among the hills, and recur at frequent intervals throughout the hot weather.<sup>55</sup> Towards the end of May, greater violence heralds the approach of the south-west monsoon, on which the principal wet and dry crops of the district depend.<sup>56</sup> The southwest monsoon<sup>57</sup>, which has never been known to fail, ordinarily sets in about the first week of June, and with occasional breaks, the rains continue till the end of September.<sup>58</sup> Nearly four-fifths of the total rainfall of the district falls in these four months.<sup>59</sup> It is heaviest in the Wayanad, especially at those places

<sup>54</sup> *Statistical Atlas: Malabar, A Statistical Atlas of the Madras Presidency*, Revised of Fasli 1330, Govt.Press, Madras, 1924, p. 3.

<sup>55</sup> *Ibid.*

<sup>56</sup> *Ibid.*

<sup>57</sup> Edavappathi in Malayalam Language.

<sup>58</sup> *Statistical Atlas: Malabar..., Op. Cit.*, p. 3.

<sup>59</sup> *Ibid.*, p. 4.



which are near the western edge of the plateau.<sup>60</sup> In some years the rainfall at these places totals as much as 300 inches.<sup>61</sup> In October the retreating monsoon continues to give fairly general rain, but the effect of the north-east monsoon<sup>62</sup> is as a rule not much felt.<sup>63</sup> By the end of December the dry weather is firmly established and lasts till the end of March.<sup>64</sup> The following table shows the variations of the rainfall of Wayanad from 1870 to 1919.

**Table No. 1.2**

VARIATIONS OF THE RAINFALL IN INCHES - 1870 TO 1919												
Recording Station	Year or Period	January to March	April	May	June	July	August	September	October	November	December	Total
Vayitri (South-East Wayanad)	Maximum 1882	1.94	5.76	8.16	88.56	118.2	34.35	16.34	12.7	4.52	0.2	290.73
	Minimum 1893	2.08	1.35	7.94	38.33	15.9	20.15	12.57	9	4.52	–	111.84
	Average 1870-1919	1.81	4.23	6.8	45.73	53.74	27.67	11.36	10.82	4.72	1.13	168.01
Manatoddy (North Wayanad)	Maximum 1882	1.25	2.91	4.29	47.06	84.68	14.98	9.89	7.87	2.68	–	175.61
	Minimum 1918	0.03	2.47	17.74	11.07	7.4	18.48	4.14	3.84	8.2	0.24	73.61
	Average 1870-1919	1.49	3.28	5.18	24.66	35.94	78.98	7.33	6.48	2.64	0.55	106.53
Malabar District	Maximum 1882	6.61	0.96	18.67	37.79	41.98	16.59	11.7	17.05	7.63	2.75	161.59
	Minimum 1918	3.46	0.5	24.23	15.47	4.88	12.78	3.49	6.27	6.67	2.84	80.59
	Average 1870-1919	1.27	3.23	8.07	31.78	31.41	16.64	8.26	9.96	4.73	1.01	116.36

Source: *A Statistical Atlas of the Madras Presidency, Statistical Atlas: Malabar*, Govt. Press, Madras, 1924, pp. 24- 25, RAK.

There are different opinions prevalent about the origin of the name ‘Wayanad’. One of the opinions is that it is the land of forests (*vanam*) that

<sup>60</sup> *Ibid.*

<sup>61</sup> *Ibid.*

<sup>62</sup> Thulavarsham in Malayalam Language.

<sup>63</sup> *Statistical Atlas: Malabar...*, *Op.Cit.*, p. 4.

<sup>64</sup> *Ibid.*

has become Wayanad.<sup>65</sup> It is mentioned in the Madras Manual of Administration that the Sanskrit name of Wayanad has 'Mayakshethra'.<sup>66</sup> Another opinion is that the 'Vayal Nadu' (paddy land) has turned in to Wayanad. *Bayalu* means a place where sufficient quantity of water is available for the cultivation of paddy.<sup>67</sup> Presently there are many places in Wayanad, having the name related to '*Vayal*' ie, fields. Kakkavayal, Ambalavayal, Puthoorvayal, Manalvayal, Valavayal, Kolavayal etc. are few examples. However, among all the above-mentioned opinions, the upper hand is gained by the notion that the name Wayanad had been coined as per the peculiar geographical conditions of the region. While studying the names of different places in Wayanad it is clear that most of these are derived from the agricultural nature of those places.

Stone weapons and remains of urn burials which have been excavated from different places in Wayanad, tell us that people lived in those places even during Stone Age. The lifestyle of different groups of indigenous people and the lack of influence of other cultures on them, are pointing to the fact that they are the descendants of primitive man. Therefore, to reconstruct the history of Wayanad, one has to tap the information and hints intermingled in the disciplines like Archaeology, Oral traditions, the study of place names etc.<sup>68</sup> With the signs from early literary works, when we consider certain cultural remnants and stories from old folks, it is understood that Wayanad had a history of its own from very early times onwards.

Wayanad is a shelter of different indigenous communities who survived, with varied customs, traditions and rituals. The outer world came to

---

<sup>65</sup> 'Wayanad: Janangalum Parampariyavum', (Mal.), (Tr.), K. K. N. Kurup, *Wynad its People and Tradition*, Modern Books, Sulthan Bathery, 2006, p. 17.

<sup>66</sup> O. K. Johny, *Wayanad Rekhakal*, (Mal.), Mathrubhumi Books, Kozhikode, 2016, p. 21.

<sup>67</sup> C. Goplan Nair, *Op. Cit.*, p. 20.

<sup>68</sup> O. K. Johny, *Op. Cit.*, p. 19.

know about the history of Wayanad, to some extent, when a British Police Official Fred Fawcett published some stone carvings he found in Edakkal caves near Ambalavayal in 1894. Till then, Edakkal was considered as a place of worship, rituals and some traditional practices of some indigenous groups of that region. It also indicates *Vishnuvarman Kudumbiya Kulavardhanasya*<sup>69</sup> and *Palapulinthakari*.<sup>70</sup> Rajan Gurukkal observes that the Edakkal archive is the Neolithic- Iron Age engravings.<sup>71</sup> Another engraving at Towari consists mainly of geometrical figures.<sup>72</sup> Later on urn burials and hero stones of the Megalithic period also dug out from different parts of Wayanad. These are the relics of *adivasis* who began the settled life in Wayanad.<sup>73</sup>

The cultural landscape started evolving in peninsular India at least three thousand years ago. The Cultural landscapes in which the early Tamil societies evolved can be traced back to the period of the Sangam literature.<sup>74</sup> It portrays the diversity in both the ecosystem and the community.<sup>75</sup> According to the fivefold division of the physiographic nature of ancient Tamilakam - '*Ainthinai*', hilly areas are referred to in Sangam texts, as '*Kurinji*'. Therefore Wayanad would have been included in Tamilakam with its people having lifestyle and cultivation suited to this region. During the period of Cheras, Wayanad was known as a part of '*Purainkeezhanadu*'.<sup>76</sup>

---

<sup>69</sup> These names are the titles or adjectives of the rulers.

<sup>70</sup> M. R. Ragha Varrier, 'Wayanattile Charithravashishtangal', in *Vijaya High School Rajatha Jubilee Smaranika*, Pulpally, 1990, p. 46.

<sup>71</sup> Rajan Gurukkal, *Social Formations of Early South India*, Oxford University Press, New Delhi, 2010, p. 118.

<sup>72</sup> *Ibid.*

<sup>73</sup> M. R. Ragha Varrier, 'Wayanattile...', *Op.Cit.*, p. 46.

<sup>74</sup> P. J. Ranjit Daniel & Jayashree Vencates, *Western Ghats: Biodiversity, People, Conservation*, Rupa, New Delhi, 2008, p. 79.

<sup>75</sup> *Ibid.*, p. 80.

<sup>76</sup> O. K. Johny, *Op. Cit.*, p. 47.

The term Nadu is found to denote the various divisions of the kingdom.<sup>77</sup> This nadu lying to the south of Kolathunadu, must have been the same as the medieval Puranad or Kottayam principality.<sup>78</sup> There are literary evidence and archaeological remains for the export of forest produce and spices from forests of Malabar to different parts of the world from very early times. The Sangam texts refer to the arrival of Yavanas (Romans)<sup>79</sup> in Tamilakam for the trade of timber, ivory and pepper.<sup>80</sup>

With the expansion of the new relations of production and the spread of wet-rice agriculture that became characteristic to the period from the 6<sup>th</sup> -7<sup>th</sup> centuries.<sup>81</sup> Thirunelli Copperplate inscription is considered as crucial evidence in the history of Kerala. Many historians have explained this as evidence for civilized culture. According to M. R. Raghava Varrier, it reveals the evolution and growth of agriculture in Wayanad.<sup>82</sup> Besides this, we have sufficient references to the presence of a number of commercial centres in Wayanad during that period. The temple had a significant role in strengthening the extra-economic forces<sup>83</sup> which emerge in even remote areas

---

<sup>77</sup> M. G. S. Narayanan, 'Consolidation of Agrarian Society-Political Processes', in P.J.Chcrian (Ed.), *Perspectives on Kerala History, The Second Millennium*, Kerala State Gazetteer, Vol.II, Part 2, Government of Kerala, Thiruvananthapuram, 1999, p.56.

<sup>78</sup> *Ibid.*, p. 57.

<sup>79</sup> The Romans commonly known in South India as 'Yavanas'.

<sup>80</sup> M. Divakaran, *Dakshina Bharata Charithram*, (Mal.), (Tr. from K. A. Nilakanta Sastri, *A History of South India*), The State Institute of Languages, Thiruvananthapuram, 2000, p. 173.

<sup>81</sup> Rajan Gurukkal, 'Antecedents of the State Formation in South India', in R. Champakalakshmy, et. al., (Ed.), *State and Society in Pre-modern South India*, Cosmo Books, Thrissur, 2002, p. 58.

<sup>82</sup> M. R. Ragha Varrier, 'Wayanattile....', *Op. Cit.*, p. 46.

<sup>83</sup> Rajan Gurukkal, *The Kerala Temple and the Early Medieval Agrarian System*, Vallathol Vidyapeetham, Sukapuram, 1992, p. 81.

away from the wetland zones.<sup>84</sup> It can be assumed that Thirunelli temple must have been a notable centre like this in those days.

The different indigenous communities of Wayanad, have an entirely different historical background which is related to their origin and culture. Information about the *adivasis* in written form is not available as their languages do not have alphabets. But in their oral traditions, there is mention about their origin, growth, customs, rituals etc. They have their own reasons and logic for the differences in the lifestyle, custom and traditions among the different indigenous communities. This sort of oral tradition is closely related to myths. Studies, about the indigenous groups and *adivasi* languages, have explanations about the specialities of each group in detail. According to C. Gopalan Nair, the ten Hill Tribes, 3 Aborigines –(Pedial slaves) and 2 Aborigines- (Forest dwellers) also were settled in Wayanad.<sup>85</sup> The ten Hill tribes are, Kurichiayas, Mullukrumbas, Urali or Vettu Kurumbas, Kunduvatiyans, Karimpalans, Kaders, Pathiyans, Uridavans, Thachanad Muppens and Kanaladis. The Aborigines- Predial slaves are, Adiyans, Paniyas and Pulayas. The Aborigines- Forest dwellers are, *Jain* or then Kurumbers and Kattu Naykans. Every community was distinct from the other in their customs and manners, language and faith, dress and appearance.<sup>86</sup>

While examining the place names and Edakkal stone carvings simultaneously, we may come to a conclusion that, these indigenous groups had royal dynasties too. Many historians are of the notion that the Kudumbiyil dynasty gives hints to the predecessors of Kurumbas.<sup>87</sup> M. G. S. Narayanan state that, “from the spread of the Kurumbar group of people in the area, and

---

<sup>84</sup> K. N. Ganesh, *State Formation in Kerala: A Critical Overview*, Indian Council of Historical Research, Bangalore, New Delhi, 2010, p. 29.

<sup>85</sup> C. Gopalan Nair, *Wynad: Its People and Traditions*, First Edition 1911, Asian Educaional Service, New Delhi, 2000, pp. 49- 50.

<sup>86</sup> *Ibid.*, p. 50.

<sup>87</sup> O. K. Johny, *Op. Cit.*, p. 73.

the existence of a 5<sup>th</sup> century record of Vishnu Varma, of Kudumbiya kula, obviously the Kadamba dynasty, found in Edakal cave, it may be inferred that the dynasty as well as nadu derived their origin from the Kadamba kings and his people who penetrated into Kerala from Karnataka’’.<sup>88</sup> There is a mention of the period of ‘Veta Rajas’ who ruled thereafter. Infact, Wayanad became under the control of Kottayam Rajas after these *Veta* Rajas.

The nature of ecology coupled with the geographical peculiarities went a long way in determining the pattern of settlement in the agrarian villages of Kerala.<sup>89</sup> The significant development of the Medieval Kerala society was the consolidation of the Agrarian settlement. It became the basis for the establishment of various chiefdoms or Swaroopams.<sup>90</sup> The grain fields and garden fields were owned by temples, known as Dewaswam and Nambudiri Brahmans who held lands as Brahmaswam.<sup>91</sup> The ruling families also held lands of their own called Cerikkal.<sup>92</sup> The endowment of land as *attipru*, *panayam* (mortgage) etc. brought the temple different kinds of land rights.<sup>93</sup> The individual families came to acquire prominence and in the process started controlling all the properties of the temple.<sup>94</sup>

Political and financial supremacy of Nair families was the foremost factor that influenced Wayanad in total.<sup>95</sup> For the administrative convenience, the Kottayam Rajas divided Wayanad into ten *nadus*. They are, Moothor

---

<sup>88</sup> M. G. S. Narayanan, *Op. Cit.*, p. 58.

<sup>89</sup> M. R. Raghava Varier, ‘Further Expansion of Agrarian Society: Socio- Economic Structure’ in P. J. Cherian (Ed.), *Op. Cit.*, p.82.

<sup>90</sup> K. N. Ganesh, ‘Agrarian Society in Kerala (1500-1800)’, in P.J.Cherian (Ed.), *Op. Cit.*, p.123.

<sup>91</sup> *Ibid.*

<sup>92</sup> *Ibid.*

<sup>93</sup> Rajan Gurukkal, *The Kerala Temple...*, *Op.Cit.*, p. 38.

<sup>94</sup> Kesavan Veluthat, *Brahman Settlements in Kerala*, Cosmo Books, Thrissur, 2013, p. 126.

<sup>95</sup> K. T. Narayanan Nair, *Wayanadum Nair Kudumbangalum*, (Mal.), Modern Offset Printers, Sulthan Bathery, 2010, p. 54.

nadu, Elloor nadu, Wayanad, Porunnannoor, Nallornad, Kurumbalanadu, Edanadashakkoor, Thondernad, Pakkam Swaroopam and Veliyambam.<sup>96</sup> Each *nadus* were under the control of Deshavazhis, ie, Nairs. All *desoms* and headmen were centred on the Nair families of the respective places. The civil and criminal powers vested in their hands. At the same time the final dispenser of justice was the King himself. Nairs became landlords and controlled the temples of their localities. In this way, they could have a crucial interference in the field of agriculture and also in the lifestyle of people of other castes and communities. The natives or the *adivasis* were more or less submissive to them. Though during the Mysorean invasion, their influence was bit disturbed for a short interval, it is noticed that during the reign of Pazhassi Raja, this Nair dominance came back to Wayanad. Later, they did not lose the status of the landlords during British rule too.

Wayanad, which was a tribal republic, became under the complete control of Kottayam Raja towards the end of the 13<sup>th</sup> century.<sup>97</sup> During the reign of Kottayam Raja, the *adivasis* of Wayanad had to part with their farmlands, where they used to cultivate, the forests which were the source of forest produce and their traditional centres of worship.<sup>98</sup> The rights of *adivasis* on land were transferred to Nair landlords and these landlords became *Adhikari* of respective desams under British rule.<sup>99</sup>

Some of the monuments, built during the attack of Hyder Ali and Tipu Sultan, are prevalent in different parts of Wayanad even today. The Mysorean rulers established a state monopoly over gold, tobacco, sandalwood, precious

---

<sup>96</sup> Malayankeezhu Gopala Krishnan, 'Wayanad: Raj Bahadoor Sri Gopalan Nairude Drishtiyil', (Mal.) in *Vijaya High School Rajatha...*, *Op. Cit.*, pp. 27-29.

<sup>97</sup> O. K. Johny, *Op. Cit.*, p. 79.

<sup>98</sup> *Ibid.*, p. 82

<sup>99</sup> *Ibid.*

metals, elephants, coconuts and black pepper<sup>100</sup> in their conquered territory. In different fights between East India Company and Mysore army, Kerala Varma Pazhassi Raja of West *Kovilakam* of Kottayam royal family, hoping that the company would approve all his rights and demands. However after the defeat of Tipu Sultan in 1799, Pazhassi Raja was not given complete control over Wayanad. He fought with English East India Company many times and these fights are known as Pazhassi revolts. With the help of the *adivasi* community, including Kurichyas, the guerilla warfares conducted by the army of Pazhassi Raja in the forests of Wayanad are well explained in the official records of East India Company. Babur the Sub Collector of North Malabar records that on 30<sup>th</sup> November 1805, Pazhassi Raja and his followers were chased and killed by the British Army. In this way, Wayanad has been mentions frequently in the records of British India during the fights between the East Indian company and Tipu Sultan and later between East India company and Pazhassi Raja.

After Pazhassi revolt the Kurichyas and Kurumbas pursued their resistance.<sup>101</sup> But they were not successful in their attempt, as the East India Company spoiled their plan and defeated them by 1812. The main causal factors of these fights must have been the differences of opinions in paying land tax and favouring attitude towards the local Rajas. However, as we study the records, it is understood that these fights must have been a part of similar conflicts by *adivasis* and local Rajas against the British East India Company in various parts of India. Anyhow, these fights were the key incidents to project the political and economic significance of a hilly, forest region, ie, Wayanad, which was remaining without much human population. After these revolts the British took complete control over Wayanad, started new

---

<sup>100</sup> M. P. Mujeebu Rehiman, *Malabar in Transition: State, Society and Economy in Malabar 1750-1810*, Kalpaz Publications, New Delhi, 2020, p. 68.

<sup>101</sup> O. K. Johny, *Op. Cit.*, p. 96.



plantations in its peculiar environment and began to exploit the forest wealth and nature recklessly. In 1844 the British enquired about the *Janmam* records in Wayanad and occupied enormous land.<sup>102</sup>

Wayanad is a place close to Karnataka, which favoured the spread of Jainism to Kerala and it had a substantial impact on Wayanad. Jain temples in Sulthan Bathery and Panamaram are evidence of such a spread of Jainism to Wayanad. The influence of Jainism, which became strong since the medieval period, paved the way for several changes in the agriculture and culture of Wayanad. Names of many places in Wayanad have their origin from Kannada. It is believed that the Jains started cultivating paddy on drylands.<sup>103</sup> This led to the conversion of hill slopes into agricultural lands. This is taken as the first change in the utilization of land in Wayanad. Even today, the scattered presence of Jains in different parts of Wayanad, tells us that they had the controlling power over the economy of Wayanad during that period itself. Naturally, the life of *adivasis* also was influenced by Jains mode of living. In spite of all these it is a fact that, the Jains did not settle in all parts of Wayanad.

Chettis as a community in Wayanad has a tradition of more than five centuries. Migrated from certain parts of Tamilnadu, most of them were farmers. They once, converted the marshy lands into fields and started the cultivation of paddy in these fields. It is possible that the indigenous communities became more aware of the modes of farming due to their day-to-day contact with the Chettis. The indigenous people were the helpers to the Chettis in all their ventures. Therefore, with all these favourable factors, all the marshy lands in Wayanad had already become paddy fields, even before

---

<sup>102</sup> P. K. Prakash, *Anyadheenappedunna Bhoomi: Adivasi Bhoomi Prasnattinte Charithravum Rashtreeyavum* (Mal.), Jayachandran Suhrudsangham, Kozhikode, 2002, p. 21.

<sup>103</sup> O. K. Johny, *Op. Cit.*, pp. 66-67.

the growth of acres of plantation by the British. Thick forests canopy with green, stretched paddy fields in between, was the peculiarity of Wayanad from early times. C. Gopalan Nair classified the Chettis of Wayanad into three. They are, Edanadan Chettis, Waynadan Chettis and Mandalan Chettis.

The Muslim community in Wayanad has a tradition of more than four centuries.<sup>104</sup> The mosques in Varambatta and Pakramthaklam *Khabarsthan* (burial site) of early times and certain memorials are strong evidence for the presence in those days. They migrated to different parts of Wayanad for business purposes, but later they could develop a strong influence on the agriculture of the place. Some of them had very large areas of cultivation whereas; some cultivated comparatively less land for livelihood. There are myths prevalent, related to the flow of *Ravuthars* to Wayanad who are found in and around Kariyambadi, a place in Wayanad. It is noticed that they had a different tradition, from the other Muslim communities.

The above-mentioned information depict a vivid picture of various groups of people who came and settled in Wayanad at different periods and the changes that occurred therefore in socio-economic and political fields. Among these migrants some of them had a dominating nature over the indigenous communities of Wayanad. Whatever be this information, the presence of *adivasi* communities in Wayanad is very strong then and now. The migration of different sets of people to Wayanad and their settlement there, for a long time, caused drastic changes in the lifestyle and modes of cultivation of indigenous communities. Nevertheless, it is observed that they never had a give and take the policy with the migrants in their culture or habits and never tried to intrude upon their (migrants) matters. Anthropologists have conducted various studies and observations about these *adivasi* communities of Wayanad. While learning about Wayanad, it is

---

<sup>104</sup> *Ibid.*, p. 69.

essential to have a basic understanding of the history and sociology of indigenous groups of Wayanad, which is detailed in the third chapter.

A search for the changes due to many factors during the colonial period is included in the next chapter. How the different groups of natives or indigenous people of Wayanad imbibed nature and what was the attitude of the colonial set up towards this beautiful nature are discussed in this chapter.

## CHAPTER 2

### THE WAYANAD WOODS UNDER COLONIAL ADMINISTRATION

Wayanad is a region where the forest wealth is abundant and which is more than the national and state-level averages. It was during the colonial period that the natural forests on the hilly areas of Western Ghats got converted into present-day form. It had an immense impact on the ecological conditions and also on flora and fauna. Though the practice of exploiting the forest and forest resources was there before, the intensive exploitation on a commercial basis started during the Colonial period. This chapter mainly focuses on the ecological changes that occurred in Wayanad during the early twentieth century. An attempt is also made to examine the British endeavours to launch the experiments in forests. This chapter also surveys pre-colonial ways of the forest and colonial policies and how they altered the landscape.

Environmental policies of any period have far-reaching results in the future. In fact, British Colonialism made a significant impact on our land. Neena Ambre Rao, in her *Forest Ecology in India: Colonial Maharashtra 1850-1950*, observes that the real transformation of the use of resource base on an unprecedented scale and magnitude began with the advent of British modern times.<sup>1</sup> Indeed the Colonial Forest policies mostly satisfied the needs of the administration. Donald Hughes observes that the European explorers modified the ecosystems everywhere by introducing animals and plants, extracting resources, deforesting many areas, establishing plantations, and

---

<sup>1</sup> Neena Ambre Rao, *Forest Ecology in India: Colonial Maharashtra 1850-1950*, Foundation Books, New Delhi, 2008, p. 1.

subjugating or decimating indigenous populations that had formed their ways of interrelating with local environments.<sup>2</sup>

India is a land of biodiversity, and its total biodiversity ranked between 10 and 15 in the World.<sup>3</sup> The British administration had conducted a detailed study of the land and its use. They classified the entire area and planned various programmes, also set up the Geological Survey of India, and started the Great Trigonometric Survey in the nineteenth-century itself. Based on the information, they had prepared various maps in order to acquire basic knowledge of India's land and its resources. The different departments of the British Government maintained the necessary records intact for future reference. With this, the colonial power had a significant influence on the nook and corner of our land.

At the beginning of the 19<sup>th</sup> century itself, the East India Company had made the local Rajas a set of passive observers, thereby reducing their power in any policy making. Malabar, a region where Malayalam is spoken, was a District in Madras Presidency. Wayanad, a Taluk in Malabar district, had the least population density,<sup>4</sup> probably due to its forest areas and hilly terrains. The Taluk of Wayanad had three divisions known as North Wayanad, South Wayanad, and South-east Wayanad comprising of 7, 6, and 3 amsams, respectively.<sup>5</sup> Of these, the South-East Wayanad division (formed by Nambolakot, Moonnanaat, and Cherankot amsams) was transferred to Nilgiri district on 31<sup>st</sup> March 1877.<sup>6</sup> As per the Census records, the portions falling

---

<sup>2</sup> J. Donald Hughes, *An Environmental History of the World, Humankind's Changing Role in the Community of Life*, 2<sup>nd</sup> Edition, Routledge, London, 2001, p. 116.

<sup>3</sup> A. Achyuthan, *Paristhithipadanathinu Oru Aamukham*, (Mal.), Kerala Sastra Sahithya Parishath, Thrissur, 2013, p. 79.

<sup>4</sup> William Logan, *Malabar Manual* (Mal.), Tr. by T. V. Krishnan, Mathrubhumi Books, Kozhikode, 2014, p. 79.

<sup>5</sup> S. Jayashanker, 'Temples of Wayanad District', in *Census of India, Special Studies-Kerala*, Directorate of Census Operations, Kerala, Thiruvananthapuram, 2002, p. 3.

<sup>6</sup> *Ibid.*

within the present Kerala state was known as Malabar-Wayanad and the portions transferred to Nilgiri district as Nilgiri- Wayanad.<sup>7</sup>

Mountainous hilltops nearly 6000 to 8000 feet from the sea level are seen in Coorg and Wayanad regions of Western Ghats.<sup>8</sup> Due to the diversity in natural conditions like climate, soil, rainfall, etc. there is ample and varied vegetation in this region.<sup>9</sup> Alison Leadley Brown says a vegetation map should be made in order to show the main distribution of plants and their relative abundance within a particular area.<sup>10</sup> Such a map can also be of great significance as it has a direct association of the animal communities living in the specified vegetation.<sup>11</sup> William Logan's journey through Wayanad is mentioned in '*Malabar Manual*,' which gives a substantial opportunity to acquaint with the flora and fauna of the region.

A large variety of trees were grown in Wayanad.<sup>12</sup> One of the best trees recommended for general use is *Artocarpus hirsuta* (Malayalam-*Aaniplavu*, with a valuable timber) is also known as *Vediplavu* or *Chakkamullan*, and it is a native of Western Ghats.<sup>13</sup> Mango tree (*Mangifera indica*) is one of the best fruit trees in Wayanad. *Calophyllum* (Malayalam -*punna*) is a genus of tropical flowering plants in the family Calophyllaceae. *Pongamia glabra*, a medium-sized glabrous tree, popularly known as

---

<sup>7</sup> *Ibid.*

<sup>8</sup> William Logan, *Op. Cit.*, p. 22.

<sup>9</sup> *Ibid.*, p. 34.

<sup>10</sup> Alison Leadley Brown, *Ecology of Fresh Water*, Heinemann Educational Books Ltd., London, 1971, p. 58.

<sup>11</sup> *Ibid.*

<sup>12</sup> *Memorandum on the Planting and Maintenance of Venues: Malabar District, 1906*, p.4, A/213, Regional Archives, Kozhikode (Hereafter RAK).

<sup>13</sup> A. Achyuthan, *Op. Cit.*, p. 83.

*Karanja*, is an important shade tree of India.<sup>14</sup> It is noticed that various kinds of *Ficus*, a genus of about 850 species of woody trees, shrubs, vines epiphytes, and hemiphytes, collectively known as fig trees or figs,<sup>15</sup> are found in these areas.<sup>16</sup> At the same time they are commonly found and easy to grow.<sup>17</sup> *Memorandum on the Planting and maintenance of Venues: Malabar District, 1906* says, their edible fruits attract parrots and other birds, as well as flying foxes.<sup>18</sup> The Madras Government prepared a *Preliminary list of 1068 Vernacular Names of Trees, Shrubs, and Woody Climbers found in the Forests of Madras Presidency* in 1901.<sup>19</sup> Plenty of pure water fishes were there in Wayanad.<sup>20</sup> Alison Leadley Brown says under natural conditions, the growth of fish depends not only on the amount of available food but also on temperature.<sup>21</sup> The apt and suitable conditions in Wayanad pave the way for ample growth of varieties of fishes. The people practiced fishing in rivers and streams. William Logan, in his book *Malabar*, says that *Catla* fishes (Katla in Malayalam) used to be available in plenty in Kabani River.<sup>22</sup>

---

<sup>14</sup> B. S. Parmar, et. al., *Pongamia Glabra: Constituents & Uses*, Division of Agricultural Chemicals, Indian Agricultural Research Institute, New Delhi, <https://www.researchgate.net/publication>, accessed on 19-08-2017, 9.50 pm.

<sup>15</sup> <https://en.m.wikipedia.org/wiki/Ficus>.

<sup>16</sup> *Memorandum on the Planting...*, *Op. Cit.*, p. 4.

<sup>17</sup> *Ibid.*

<sup>18</sup> *Ibid.*

<sup>19</sup> W. B. Higgens, *Preliminary List of Vernacular Names of Trees, Shrubs and Woody Climbers found in the Forests of the Madras Presidency*, Government Press, Madras, 1901, L/218A, RAK.

<sup>20</sup> G. S. Unnikrishnan, 'Innu Njan Nale Nee: Matsyangalkkum Red Signal', in *Mathrubhumi* (Mal.), 27 November 2014, Kozhikode, p.15.

<sup>21</sup> Alison Leadley Brown, *Op. Cit.*, p. 110.

<sup>22</sup> William Logan, *Op. Cit.*, p. 52.

## Colonial Forest management

As per the Agricultural Statistics of India 1930-31, the forest area is classified as under.<sup>23</sup>

**Table No. 2.1**

	<b>Thousand acres</b>	<b>Percent</b>
Forests	17,238	12.1
Not available for cultivation	26,220	18.5
Cultivable waste other than fallow	17,338	12.2
Current fallows	11,017	7.8
Net area sown	70,117	49.4
Total	141,930	100

Source: *Agricultural Statistics of India, 1930-31, Vol. II*, Department of Commercial Intelligence and Statistics, India, 47<sup>th</sup> Issue, New Delhi, 1934, p.iv.

The above table underlines the fact that the area of forest is proportionally less in India during the Colonial period. Forest depletion was a reality in the pre-colonial period itself. One of the interesting observations made by G. Madhusudhanan is that the Brahmins, Kshatriyas, and Yadavas, who spread agriculture, considered forest dwellers as a threat since they were the food gatherers from the forest.<sup>24</sup> Similar incidents may have occurred in different parts of India. The folk songs of *adivasis* in Wayanad show their close affinity to nature. For example, the Kurichya tribes in Wayanad usually sang the song of *Pakshipattu* related to the sorrow of the birds after the

---

<sup>23</sup> From the total area of all seventy reporting States (259,648,000 acres) deduction must be made of 117,897,000 acres, comprising chiefly unsurveyed acres and lands held on *jagir*, *muafi*, and other privileged tenures, for which statistics are not available. The net area actually covered by these statistics is, therefore, only 141,751,000 acres according to the village papers.

<sup>24</sup> G. Madhusoodanan, *Kathayum Paristhithiyum* (Mal.), Current Books, Thrissur, 2000, p. 139.



destruction of its cage due to plough in paddy fields.<sup>25</sup> Therefore deforestation became inevitable for the high-class group mentioned above as the *adivasis* mainly depended on the forest produce.<sup>26</sup>

There are enough archaeological and folklore pieces of evidence regarding the nature of worship by *adivasis* in Wayanad. They had a belief that what they gained from the forest should be returned to it. They always gave importance to the judicious use of forest resources. Tree worship is an ancient and national phenomenon in India.<sup>27</sup> Mullukkurumbas in Wayanad had practiced '*kozhivettu*' (cock sacrifice) under a banyan tree in order to please the tree god. The folk songs of different *adivasis* also point out nature worship. The Adiyar tribe believed that one of their god *pookkarimagatheyyam* originated from seven different flowers.<sup>28</sup> The Kurichiyas named the song related to the incarnation of their god Malakkari<sup>29</sup> as *Maramaya pattu*.<sup>30</sup> K. J. Baby's Malayalam novel, *Mavelimanram* indicates some songs of *adivasis* related to nature.<sup>31</sup> Sacred groves are a part of local folklore and religion.<sup>32</sup> It is considered to be the asylum of god.<sup>33</sup> Very few are prevalent in present-day too, in different parts of Wayanad.

---

<sup>25</sup> M. R. Pankajakshan (Com.), *Vayanattile Adivasikalude Pattukal* (Mal.), Kerala Bhasha Ganangal Vol.III, Kerala Sahithya Academy, Trichur, 1989, p. 281.

<sup>26</sup> G. Madhusoodanan, *Op. Cit.*, p. 139.

<sup>27</sup> Nanditha Krishna, 'Culture Heritage and Environment', in Vinod T.R., et. al., (Ed.), *Proceedings of Kerala Environment Congress 2013*, Focal Theme Culture and Heritage for Environment Management, 2013, Thiruvananthapuram, 2013, p. 6.

<sup>28</sup> M. R. Pankajakshan, *Op. Cit.*, p. 313.

<sup>29</sup> *Ibid.*, p. 59.

<sup>30</sup> The word *maram* in Malayalam means tree.

<sup>31</sup> K. J. Baby, *Mavelimanram* (Novel in Mal.), Current Books, Thrissur, 2000, p. 31.

<sup>32</sup> Nanditha Krishna, *Op. Cit.*, p. 8.

<sup>33</sup> Claude A. Garcia & J.P. Pascal, 'Sacred Forests of Kodagu: Ecological Value and Social Role', in Gunnel Cederlof & K.Sivaramakrishnan, (Ed.), *Ecological Nationalism: Nature, Livelihoods, and Identities in South Asia*, Permanent Black, New Delhi, p. 1991.

On the contrary, the ruling class had a different attitude towards jungles. Thousands of acres of private forest land were under the control of local Janmis. As per their will and pleasure, they used to cut the trees and sell the timber. Large scale felling of trees occurred in the whole of the Malabar area, which included Wayanad also. Perhaps the earliest reference to the export of timber dates to the fourth century.<sup>34</sup> This situation did not change even during the British period. The River Kallayi had become a centre of business of timber, from the forest wealth of Western Ghats.

Before the arrival of the British, the Indian rulers treated forests as royal property. Teak had already been utilized for making ships during Hyder Ali's period. The collection of timber from Malabar forests was one of the main objectives of Tipu Sultan.<sup>35</sup> There is also a reference about the felling of wood by Tipu and who used to keep many elephants with him for the purpose.<sup>36</sup> Even before Hyder Ali, there are instances of transporting timber from India to foreign countries. Exploitation had been a monopoly of the state.<sup>37</sup> When East India Company came to India, the forest areas in Malabar were under the control of the respective landowners called *Janmis*.<sup>38</sup> *Janmis* were the sole authority to give permission to cut down the trees. The Joint Commissioners' Report on Malabar states "the Governor-General in Council wrote on the 8<sup>th</sup> of April and 31<sup>st</sup> of May 1790 to the Government of Bombay

---

<sup>34</sup> Himanshu Prabha Ray, *A Historical Survey of Seafaring and Maritime Networks of Peninsular India*, Indian Council of Historical Research, Bangalore, New Delhi, 2006, p. 5.

<sup>35</sup> M. P. Mujeebu Rehiman, *Malabar in Transition: State, Society and Economy in Malabar 1750-1810*, Karpaz Publications, Delhi, 2020, p. 68.

<sup>36</sup> M. P. Mujeebu Rehiman, 'The Mysore State and the Reform in the Eighteenth Century Kerala: Antecedents', in V.V.Haridas & Haskarali E.C. (Ed.), *Multi- Cultures of South India: New Perception on History and Society*, Karnataka State Open University, Mysore, 2015, p. 87.

<sup>37</sup> Marlene Buchy, *Teak and Arecanut: Colonial State, Forest and People in Western Ghats (South India) 1800-1947*, Institute Francais De Ponichery, Indira Gandhi National Centre For The Arts, 1996, p. 12.

<sup>38</sup> O. K. Johny, *Wayanad Rekhakal*, (Mal.), Mathrubhumi Books, Kozhikode, 2016, p. 103.

to encourage the Nairs and others in Malabar to shake off all dependence on Tipu, on condition that they will act heartily and submit to be directed by us, in carrying on the present war against Tipu, that we will do our utmost to render them in future entirely independent of him”.<sup>39</sup> Graeme’s report<sup>40</sup> also points out; “it seems little doubtful from written deeds, from the recorded sentiments of the first Commissioners of 1793 and other European authorities, and the general feeling of the inhabitants, that timber forests have always been the private property of *Janmakars*, and that even under Tipu’s Government their rights were so far respected, though the forests appear at one time to have been declared a royalty, that the *Kuttikkanam* (stump money) or the compensation for cutting a tree, which every proprietor was entitled to, in transactions between individuals, was paid by his agents”.<sup>41</sup> W. Robinson observes, “a number of influential Nair families became naturalized in, and Malabar tenures and customs became the law of the land”.<sup>42</sup> When T.H. Babur and East India Company’s troops invaded Wayanad, they had an eye on the teak forests of Wayanad near to Mysore.<sup>43</sup> And the Company troops

---

<sup>39</sup> *Report of a Joint Commission from Bengal and Bombay appointed to inspect into the State and Condition of the Province of Malabar*, in the years 1792 and 1793, Madras Reprinted by H.Smith, Fort Saint George Press, 1862, J. Rejikumar (Ed.), *The Joint Commissioners’ Report on Malabar:1792-93*, (Reprint), Kerala State Archives, Government of Kerala, Thiruvananthapuram, 2010, p. 76.

<sup>40</sup> The Government of Madras appointed H.S. Graeme, a Judge of Southern Court Circuit Special Commissioner to enquire into and report for improving the revenue Administration of the Province in 1818.

<sup>41</sup> H. S. Graeme, *Report of the Revenue Administration of Malabar*, dated 14<sup>th</sup> January 1822, J. Rejikumar, (Ed.), *Graeme’s Report on the Revenue Administration of Malabar 1822* (Reprint), Kerala State Archives, Government of Kerala, Thiruvananthapuram, 2010, p. 397.

<sup>42</sup> W. Robinson, *Report on the History, Conditions and Prospects of the Taluk of Wynad*, dated 22 August 1857, J. Rejikumar (Ed.), *Selected Reports on Malabar, Canara and Wynad*, (Reprint), Kerala State Archives, Government of Kerala, Thiruvananthapuram, 2010, p. 85.

<sup>43</sup> K. K. N. Kurup, ‘Pazhassiyude Anthima Samaram’(Mal.), from Pazhassi Samarangal, in M. G. S. Narayan (Ed.), *Malabar, Malabar Maholsav Souvenir*, Kozhikode, 1993, p. 396.

went to Pulpally to capture Pazhassi; they couldn't see a single person on their way; all of them, including the *Chettis*, were hiding in the jungle.<sup>44</sup>

With all the above speculations, the East India Company started exploring the possibilities of gaining control of the forest areas of Malabar. Initially, the British administration had no ideas of systematic forestry.<sup>45</sup> G.S. Puri says, "The need for conserving the forests of India was realized in the south because the southern forests had valuable trees, such as teak, sandal, satinwood, and ebony".<sup>46</sup> The British administrators treated Indian forests as ample supplies of teak and other timber for the Royal Navy.<sup>47</sup> Due to the shortage of first-class oak timber from different areas of the empire, the British used large quantities of teak from India.<sup>48</sup> At first, no distinction was made between Private and Government forest. And the write up about the conservation was the introduction in 1807 of a state royalty on teak and other valuable trees.<sup>49</sup> This measure, which soon assumed the form of a Government monopoly, led to such discontent among the landholders and inhabitants that Sir Thomas Munro decreed its abolition.<sup>50</sup> By the late eighteenth century, research on the environmental impacts of deforestation had become an established domain for scientific enquiry.<sup>51</sup> By the middle of the nineteenth century, forestry schools had been established and books and

---

<sup>44</sup> *Ibid.*

<sup>45</sup> V. P. Agarwala, *Forests in India: Environmental and Production Frontiers*, Oxford & IBH Publishing, New Delhi, 1985, p. 28.

<sup>46</sup> G. S. Puri, *Indian Forest Ecology: A Comprehensive Survey of Vegetation and its Environment in the Indian Subcontinent*, Vol. II, Oxford Books, New Delhi, 1960, p. 660.

<sup>47</sup> J. B. Lal, *India's Forest: Myth and Reality*, Natraj Publishers, Dehra Dun, 1989, p. 18.

<sup>48</sup> V. P. Agarwala, *Op. Cit.*, p.28.

<sup>49</sup> A. Sreedhara Menon, (Ed.), *Kerala Gazetteers*, Trivandrum, Kerala District Gazetteers, Government Press, Kozhikode, 1962, p. 314.

<sup>50</sup> *Ibid.*, p. 315.

<sup>51</sup> S. Ravi Rajan, *Modernizing Nature: Forestry and Imperial Eco-Development 1800-1950*, Oxford Scholarship Online, 2010, p. 3, accessed on 10-12-2018, 9.48 pm.

journals devoted to forestry began to be published in Europe.<sup>52</sup> A significant change took place in August 1815; the Bombay Government set forth the first “rules for the management and preservation of forests in the provinces of Malabar and Canara and to define the authority of the Conservator.<sup>53</sup> The public forests continued to be worked by the Collector on the stump fee system<sup>54</sup> till 1847 when the Executive Engineer brought to notice of Government that trees of value were rapidly disappearing.<sup>55</sup> A Special Officer was appointed to explore, work and conserve the forests, but work was limited to the extraction of timber required by the Engineering Department and Bombay Marine.<sup>56</sup> One of the greatest advocates for the protection of teak forests in South India was Mr. Conolly, the Collector of Malabar.<sup>57</sup> The importance of protection and production of forest growth was gradually recognized, and by 1860 both the Forest and Jungle Conservancy Departments had been organized, the former independent of the revenue authorities and the latter designed for the protection of village forests under their supervision.<sup>58</sup> The two Departments were merged in one as a branch of the Revenue Department in 1882.<sup>59</sup> The influence of forestry on the economy of the Malabar District is considerable since the forests give employment opportunities to the ordinary people to a reasonable extent.<sup>60</sup> A substantial number of *mazdoors* (an unskilled labourer) engaged by the Department as well as the contractors for the various operations earn their livelihood by working forests.<sup>61</sup> The new forestry was modern in that it sought to break ties

---

<sup>52</sup> *Ibid.*, p. 13.

<sup>53</sup> Marlene Buchy, *Op. Cit.*, p. 16.

<sup>54</sup> The practice then in vogue was that the purchasers would have to remit a certain amount according to the species required by them.

<sup>55</sup> A. Sreedhara Menon, *Op. Cit.*, p. 315.

<sup>56</sup> *Ibid.*

<sup>57</sup> G. S. Puri, *Op. Cit.*, p. 660.

<sup>58</sup> A. Sreedhara Menon, *Op. Cit.*, p. 315.

<sup>59</sup> *Ibid.*

<sup>60</sup> *Ibid.*

<sup>61</sup> *Ibid.*

between communities and forests at the 'local' levels, and created regimes of what is perhaps best described as 'nature at a distance'.<sup>62</sup> Therefore the colonial forest management mainly served the interests of industrialism and capitalism.

Marlene Buchy says, various provinces of British India started formulating their Forest Acts, and finally, it emerged as the Indian Forest Act of 1865.<sup>63</sup> Forest Act gave the forest department overall legal authority.<sup>64</sup> In 1858 English East India Company handed over the rule to the British Government in India. The British Government approved the power of the rulers of princely states over their territories. Hence, the forests of Kerala were under three different administrations, namely, British Rule for Malabar area, the rule of King of Cochin for erstwhile Cochin State, and the rule of King of Travancore for erstwhile Travancore State.<sup>65</sup> Madras Forest Act 1882, Cochin Forest Regulation 1905, and Travancore Forest Act 1887 were applicable in respective areas.<sup>66</sup> Governments throughout the empire began to set up forest departments staffed by personnel trained in forestry schools in Germany and France.<sup>67</sup>

The forest includes wide varieties of plants and animals which are of immense wealth. A wild plant may be used but is neither managed nor cultivated.<sup>68</sup> The government classified the forest produce. As per the Madras Forest Act of 1882, tree includes stumps, bamboos, and brushwood; timber

---

<sup>62</sup> S. Ravi Rajan, *Op. Cit.*, p. 24.

<sup>63</sup> Marlene Buchy, *Op. Cit.*, p. 23.

<sup>64</sup> S. Ravi Rajan, *Op. Cit.*, p. 96.

<sup>65</sup> *Administration Report 2013-14*, Kerala Forest and Wildlife Department, p. 1, Kerala Forest Headquarters Central Library, Thiruvananthapuram (Hereafter KFHT)

<sup>66</sup> *Ibid.*

<sup>67</sup> S. Ravi Rajan, *Op. Cit.*, p. 55.

<sup>68</sup> Hemal S. Kavinde, et. al., 'Wild Food Management in Wayanad, Kerala: An Explanatory Study', Unpublished Study Report, Community Agro-biodiversity Centre, Kalpetta, Wayanad, Uttara Devi Resource Centre for Gender and Development, M.S,Swaminathan Research Foundation, August 2001, Thrissur, p. 2, Kerala Agriculture University Central Library, Mannuthy.

includes trees when they have fallen or have been felled, and all wood, whether cut or fashioned or hollowed out any purpose or not,<sup>69</sup> and forest produce includes things found and brought from a forest-like minerals including limestone and laterite surface soil, trees, timber, plants, grass, peat, canes, creepers, reeds, fibres, leaves, moss, flowers, fruits, seeds, roots, galls, spices, juice, catechu, bark, caoutchouc, gum, wood-oil, resin, varnish, lac, charcoal, honey and wax, skin, tusks, bones, and horns.<sup>70</sup>

The table number 2 in the Appendix I provide the basic statistics of forests and other types of land in Wayanad. It states that during 1912-13, 525568 acres of the total area was surveyed in Wayanad Taluk. Among this land, 25.54 % (134214 acres) was the forest, whereas in the whole of Malabar district, only 9.73 % (360572 acres) of land. 1.41 % of the area (7397 acres) in Wayanad was not available for cultivation, whereas, in the whole of Malabar district, only 26.42 % (979750 acres) of the land was not available for cultivation. In Wayanad taluk, 50.37 % (264722 acres) of land was cultivable waste other than fallow, whereas, in Malabar district, its percentage was 26.29 % (974910 acres). In Wayanad taluk, 9.52 % (50019 acres) of land was current fallow, whereas in Malabar district, it was 1.88 % (69417 acres). 13.17 % (69216 acres) of land was net area cropped in Wayanad taluk, whereas in Malabar district, it was 35.70 % (1323761 acres) of the land.

As per the Indian Forest Act of 1878, the forest domain under State monopoly was divided into three categories: reserved, protected, and village forest.<sup>71</sup> Consequently, protected forests were gradually converted into reserves.<sup>72</sup> The unexploited forests were declared as State-owned 'reserved

---

<sup>69</sup> *The Madras Forest Manual*, Vol. I, Legal Enactments and Rules of General and Special Application Issued under the Madras Forest Act, 1940, Government Press, Madras, 1940, p. 234, M/65, RAK.

<sup>70</sup> *The Tamil Nadu Forest Act, 1882*, [www.lawsfindia.org>downloadfile>p.233](http://www.lawsfindia.org/downloadfile>p.233), accessed on 19-08-2017, 8.50 pm.

<sup>71</sup> Marlene Buchy, *Op. Cit.*, p. 24.

<sup>72</sup> Neena Ambre Rao, *Op. Cit.*, p. 82.

forests'.<sup>73</sup> All to the Madras Forest Act of 1882, the Provincial Government may constitute any land at the disposal of Govt. a reserved forest.<sup>74</sup> Whenever it is proposed to constitute any land a reserved forest, the Provincial Govt. shall publish a notification in the Official Gazette of the district, declaring that it is intended to represent such land a reserved forest.<sup>75</sup> The table below depicts the reserve forest and the area proposed for reservation on 30<sup>th</sup> June 1913.

**Table No. 2.2**

Reserved Forest and Area Proposed for Reservation (in Square Miles) on 30th June 1913									
(1)	Reserved Forest (2)		The area Proposed for Reservation (3)		Total of columns 2 and 3 (4)		Area of Taluk (5)		Percentage of column 4 to the Cultivated Area (6)
	Sq.M.	ACS	Sq.M	ACS	Sq.M	ACS	Sq.M	ACS	
Wayanad Taluk	230	83	1	5	231	88	821	128	46.8
Malabar District	504	262.7 or 263	56	28	560	290.7 or 291	5792	120	22.7

Source: *Madras District Gazetteers: Statistical Appendix for Malabar District*, Govt. Press, Madras, 1915, p.26, RAK.

For the administrative convenience, the British Govt. made necessary arrangements. The evergreen forests of Wayanad have been divided into three blocks; all at present are under reservation.<sup>76</sup> Of the reserved forests, three-Begur, Kurichiyat, and Rampur- have been demarcated. They are all under special fire protection.<sup>77</sup> As a result of the low timber demand made by making

<sup>73</sup> K. S. S. Nair, et. al., (Ed.), *Eco-Development of Western Ghats*, Kerala Forest Research Institute, Peechi, 1986, p. 7, Kerala Forest Research Institute Library Cataloging in Publication Data (Hereafter KFRIL).

<sup>74</sup> *The Madras Forest Manual*, Vol. I, *Op. Cit.*, p. 7.

<sup>75</sup> *Ibid.*

<sup>76</sup> Rhodes Morgan, 'Wayanad Forests', 1887, in O. K. Johny (Ed.), *Edakkal Caves and the History of Wayanad*, Mathrubhumi Books, Kozhikode, 2008, p. 141.

<sup>77</sup> *Ibid.*



the ship, the post of Conservator was abolished.<sup>78</sup> The British Govt. had constructed several roads to the forest for the transportation of forest produce. Apart from the buildings in forest headquarters, a large amount of money was allotted for the construction of roads. All the forests have been connected through road, and about 80 miles of such roads exist at present.<sup>79</sup>

The British prepared several reports about the working of forests of Wayanad. One of such report includes a letter dated 26-11-1910, written by Rao Bahadur C. Gopalan Nair, the Divisional Officer of Wayanad, to the Collector of Malabar about the proposals for the semi-reservation of well-wooded lands.<sup>80</sup> In that proposal, the areas for semi reservation are, the whole *amsams* of Kidanganad, Tondernad, Muttil, Kuppathode, Nenmeni and Nulpuzha, two out of four *desams* in Tavinjal and one *desam* in each *amsam* of Kalpetta, Kottappadi, Purakadi, Vemom, and Peria *desams*.<sup>81</sup> The other *desams* are not well wooded. There are no well-wooded Government lands in the nine *amsams* such as Edavga, Nallurnad, Porimnanore, Anjukunnu, Vellamunda, Kottathara, Kurumbala, Vayitiri, and Poothadi, hence no proposals regarding them were submitted.<sup>82</sup> As regards to Tirunelli, a large part of the *amsam* had been reserved, and there was no question of semi reservation.<sup>83</sup> The hill tribes had hardly any land for cultivation in the above-mentioned areas.<sup>84</sup> Muppainad *amsam* was a tea region, and fresh portions of it were planted up yearly.<sup>85</sup>

Either because of its wide variety of species or commercial value, they declared each zone of Wayanad as forest areas. Even the Government

---

<sup>78</sup> Marlene Buchy, *Op. Cit.*, p. 19.

<sup>79</sup> Rhodes Morgan, *Op. Cit.*, p. 142.

<sup>80</sup> *Forest Well-Wooded Lands in Wayanad*, 1913, R-Dis File, Sl.No.9, B.No.133, Revenue Department, RAK.

<sup>81</sup> *Ibid.*

<sup>82</sup> *Ibid.*

<sup>83</sup> *Ibid.*

<sup>84</sup> *Ibid.*

<sup>85</sup> *Ibid.*

purchased some areas and transformed them as forest. The table below provides the date of acquisition and the purchase value of reserve in Wayanad and nearby taluks.

**Table No. 2.3**

THE STATEMENT GIVEN BELOW EXHIBITS THE COST TO GOVERNMENT OF THE RESERVES PURCHASED EITHER BY TREATY OR IN PUBLIC AUCTION								
Name of Reserve	Date of Acquisition	Area Purchased in Acres	Price Paid			Cost of Price Per Acre		
			Rs.	A.	P.	Rs.	A.	P.
Begur Reserve Forest (Part)	1885	67.3	3100	0	0	46	1	0
Kambanmalai Reserved Forest	1904	1574.08	1400	0	0	0	14	3
Ladysmith Reserved Forest and addition III and IV	1913	511.71	1024	0	0	2	0	0
Chamattimalai Reserved Forest	1903	207.92	350	0	0	1	10	11
Kannoath Reserved Forest (Part)	1894	20870	13000	0	0	0	10	0
	1897							
	1899							
Kurichiat Reserved Forest (Part)	1885	175.02	4025	0	0	23	0	0
Kottiyur Rainfall Reserved Forest	1903	13715	45411	7	0	3	5	0
Perya Reserved Forest	1887	13649.66	18000	0	0	1	5	11
	1889							
Perya (Mangalad)	1911	82.4	113	0	0	1	5	11
Woodstock	1895	129	369	0	0	2	13	9
Total		50982.69	86792	7	0	1	11	3

Source: B.A.Cariapa, *Revised Working Plan for The Wynad Forest Division 1950-51 to 1959-60*, Government Press, Madras, 1955, p.69, Kerala Forest Headquarters Central Library, Thiruvananthapuram.

Though the government acquired forest areas in abundance, each tribal community had its natural settlement in the forests.<sup>86</sup> Documents show that they had practiced ‘slash and burn’ cultivation in the jungles of Wayanad by the end of the 18<sup>th</sup> century.<sup>87</sup> As a proof for this, K. K. N. Kurup, mentions one such document of 1820 from Varayal family in which the *adivasis* had cultivated the land and collected forest produce.<sup>88</sup> The aborigines of Wayanad also found the forest as their primary source of income.<sup>89</sup> For example, the *Kattunaikars* were well known for their honey gathering. Before

<sup>86</sup> K. K. N. Kurup, *The Process of Tribal Land Alienation and Disempowerment in Wayanad*, Kerala, Indian Council of Historical Research, New Delhi, 2006, p. 3.

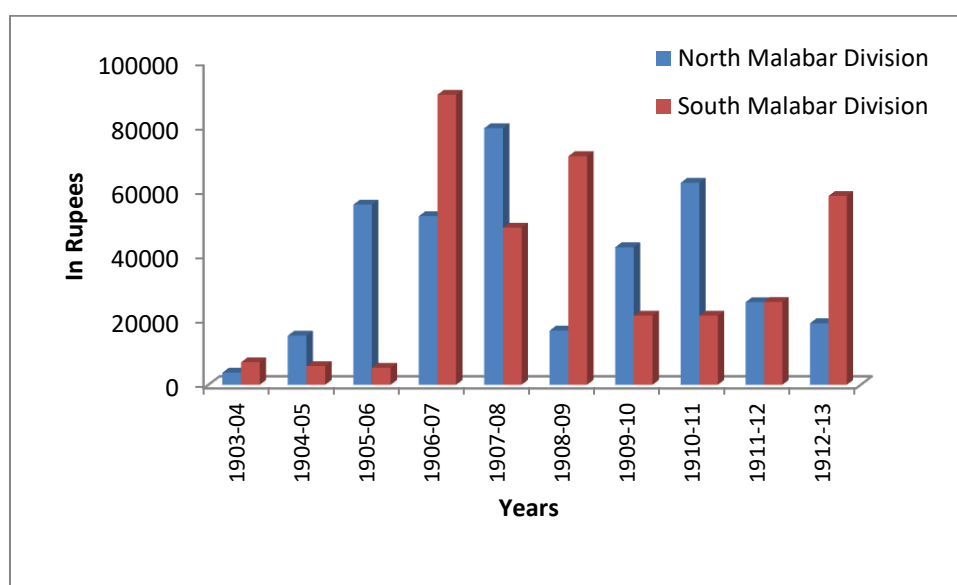
<sup>87</sup> *Ibid.*

<sup>88</sup> *Ibid.*

<sup>89</sup> A. Sreedhara Menon, *Op. Cit.* , p. 315.

collecting honey, they used to conduct certain rituals and sought permission from the goddess of the jungle.<sup>90</sup> The classification of forest approved by the British had a scientific and commercial approach towards the forest, whereas *adivasis* had considered forest as their mother's lap where they were comfortable by all means.

The graph below depicts the net revenue realized under forests from North Wayanad and South Wayanad Forests Divisions, during ten years, from 1903 to 1913 (in Rupees) based on table number 3 in the Appendix I.



The British aimed at the profit they could earn from the forest. Accordingly, they framed different policies. The government of India invited Dr. Voelcker to examine the conditions of agriculture in the country and sought his suggestion to improve further. Dr. Voelcker submitted his report on the *Improvement of Indian Agriculture* in 1893. Chapter VIII of this significant report discusses the conditions of forests and stresses the need for formulating forest policy with a definite bias for serving the agricultural interests directly. Based on his recommendations, the Government of India

<sup>90</sup> G. S. Unnikrishnan, 'Kadu Nammude Veedu'(Mal.), *Mathrubhumi*, Kozhikode, 8 January 2016, p. 15.

issued Resolution No.22F, dated 19<sup>th</sup> October 1894, declaring its first forest policy.<sup>91</sup> The policy made significant affirmations:

- 1) The claims of cultivation are stronger than the demands of forest preservation
- 2) The public (material) benefit was the sole object of forest administration.<sup>92</sup>

The policy also suggested a rough functional classification of forests into the following 4 categories:<sup>93</sup>

- a) Forest preservation which was essential on climatic or physical grounds
- b) The forest which offered a supply of valuable timber for commercial purposes
- c) Minor forests which produced only the inferior sorts of timber
- d) Pastures were forests once.

The following table shows another mode of classification of Forest Division of Wayanad developed in 1923.

**Table No. 2.4**

**Details of Classification of Forests for 1923-24**

Wayanad	Area of Reserved Forests in Square Miles	Details of Classification in Square Miles						Un classified
		I	II	II	IV	V	VI	
	263	226	37					

Source: *Administration Report of the Forest Department of the Madras Presidency for the Year Ending 31st March 1924, 1923-1924, Vol.I, Govt. Press, Madras, 1926, p.13.*

<sup>91</sup> V. P. Agarwala, *Op. Cit.*, p. 36.

<sup>92</sup> J. B. Lal, *Op. Cit.*, p. 20.

<sup>93</sup> *Ibid.*

Ratheesh Narayanan, in his work quotes, “The forest records of 1887 mentions, Wayanad had about 7801 acres of reserve forest and 111897 acres of reserve land”.<sup>94</sup>The table number 4 in the Appendix I gives information about the area of reserved forests and reserved lands during 1923-24. This source also has a mention of a Botanical Garden in Mananthavady.

There were attempts to demarcate the boundaries of the forest from 1916 itself. The proceedings of the Board of Revenue dated 27<sup>th</sup> April 1916 says some principles for the reconciliation of discrepancies between borders on the ground and boundaries as per notification of reserve forests.<sup>95</sup>

1. Petty discrepancies may be ignored
2. Significant discrepancies may be corrected by issuing a revised notification
3. In exceptional cases, where large areas of real forest growth are involved, the line may be rerouted to agree with the announcement.<sup>96</sup>

The National Forest Policy of India denotes, the private forests came to attract attention mainly for their role in the control of erosion, floods, and soil denudation.<sup>97</sup> The provisions of the Indian Forest Act (Act XVI of 1927, Sections 35 to 37) for the control of the management of private woodlands on physical grounds, however, have been a dead letter all these years.<sup>98</sup>There were large areas of private forest in Malabar. The District Forest Officer of

---

<sup>94</sup> Ratheesh Narayanan, ‘Floristic Study of Wayanad District Giving Special Emphasize to Rare and Threatened Plants’, Unpublished Ph.D. Thesis, Department of Botany, University of Calicut, 2009, p.13.

<sup>95</sup> *Proceedings of the Board of Revenue dated 27-4-1916*, R-Dis File, Sl.No181, B.No.13, RAK.

<sup>96</sup> *Ibid.*

<sup>97</sup> *The National Forest Policy of India*, Ministry of Food and Agriculture, p.6, 8050, KFHT.

<sup>98</sup> *Ibid.*

North Malabar sent an official note to the Collector of Malabar, Calicut on 1<sup>st</sup> November 1914 and he classified the total forest areas I and II.<sup>99</sup> The table below was prepared by the District Forest Officer of North Malabar.<sup>100</sup>

**Table No. 2.5**

CLASSIFICATION OF FORESTS IN THE NORTH MALABAR DISTRICT					
Ist Class			IInd Class		
Sl. No.	Name of the Forest	Area in Acres	Sl. No.	Name of the Forest	Area in Acres
1	Kurichiat	18053.86	1	Aduvankunnu and Extension	60.36
2	Begur	15366	2	Alathur	868.28
3	Kudrakote	3608	3	Oliot	628.27
4	Begur Addition	13.74	4	Kartikulam	841.38
5	Tirunelli	4890.29	5	Edakode	155.18
6	Hilldale	7114.18	6	Shanamangalam	624.41
7	Trichileri A.	131.76	7	Ontangadi	400
8	Trichileri B.	260.72	8	Kuruva	367
9	Harihara shoal	478.5	9	Padri and Extension	13016.83
10	Wood stock	129.03	10	Ladysmith	2294.13
11	Kambamalai	1574.68	11	Ladysmith Addition I,II,III & IV	1097.31
12	Huntley	717.69	12	Kuppady	7337.44
13	Chammattimalai	207.92	13	Rampur	18854.67
14	Kanoth	19013.63	14	Mavanhalla	12576.64
15	Kanoth Extension	1064	15	Nulpoya	3458.28
16	Kottiyur	13715	16	Muthanga	323
17	Peria, and Extension	13712	17	Alathur	1250
			18	Edathorai	602
			19	Kallur	2096
			20	Nemminad	900.14
			21	Mangalad	82.64

W. E. D. Arcy writes, the only means by which Local Governments have hitherto, as a rule, attempted to secure a supply of forest produce for the use of the agricultural population, has been by burdening forest lands with rights under settlements.<sup>101</sup> The Encroachment Act cannot be applied as new areas have been classified and assessed and are intruded on for the assignment

<sup>99</sup> *Classification of Forest*, p. 8, R-Dis File, Sl.No.7., B.No.162, Revenue Department, RAK.

<sup>100</sup> *Ibid.*

<sup>101</sup> W. E .D. Arcy, *Preparation of Forest Working Plans in India*, 2<sup>nd</sup> Edition, World Public Library Edition, World Public Library org., Calcutta, 1895, p. i, ndl.iitkqp.ac.in, accessed on 18-09-2017, 7.30 pm.

for cultivation.<sup>102</sup> Occupants causing damage to the forest produce may, however, be punished under forest rules.<sup>103</sup>

The British Forest Policy can be put in a nutshell as follows.

On 7<sup>th</sup> November 1929, the new Forest Research Institute was opened by the Viceroy of India at Dehra Dun<sup>104</sup>. In the words of Viceroy, “.....  
*And now remembering that the Indian Forest Department has to deal with nearly one-quarter of the area of British India, that it makes an annual profit of nearly three crores of rupees, and that it has such wide opportunities of increasing the prosperity of the people not only in the villages and remote tracts but also in the development of trade in commercial centres, I feel that those who planned and those who have found the money for this Institute have been inspired by no unworthy conception of its potential value to the life of India. .... I suppose the first question which anyone in this utilitarian age will ask is what use is all this research? What can the Institute actually show in the way of a dividend on all the money spent upon it*”.<sup>105</sup> It was underlying the fact that the British commercial interest behind the execution of forest policy. Forest management and research were the byproducts of industrial capitalism.

### **Forest Plantations**

The Conolly plantation is generally regarded as the beginning of teak plantations in India.<sup>106</sup> The Forest management of the British became more conspicuous with the onset of planting commercially valuable trees like teak,

---

<sup>102</sup> *Forest Act*, dated 9-4-1907, p. 32, File No.345, Sl.No.16, B.No.51, Public Department, RAK.

<sup>103</sup> *Ibid.*

<sup>104</sup> *Progress Report of Forest Research Work in India For the Year 1929-30*, Calcutta, Government of India, 1931, p. 1.

<sup>105</sup> *Ibid.*, p. 5.

<sup>106</sup> K. V. Kunhi Krishnan, ‘Forest Policy and Administration in British Malabar: 1800-1947’, Unpublished Ph.D.Thesis, Department of History, University of Calicut, 1995, p. 118.

mahogany, etc. As a part of this project to generate more revenue, they started large scale Teak plantations in Wayanad in 1876 itself. For this purpose, they had to destroy vast areas of natural forests.<sup>107</sup> The cultivated plant is protected by humans, is liberated from the competition with other species.<sup>108</sup> There are four small experimental Teak plantations made in 1876-78. Teak is, however, indigenous and promises yet to be a success.<sup>109</sup> Teak plantations replacing the so-called natural forests have predominance at enhancing the economic productivity of the forests from early British times.<sup>110</sup> Between 1876 and 1879, teak was planted over about 45 acres. Later from 1895 to 1902, teak, *Artocarpus hirsula* (wild jack) and *Artocarpus integrifolia* (jack fruit) were raised over nearly 100 acres along with field crops in *punam* (shifting cultivation) areas.<sup>111</sup> Planting of Mahogany was attempted in 1886 in a small space, and that was raised in 1905 considerably.<sup>112</sup> The table number 5 in the Appendix I shows that the year and extent of each plantation under different regions of Wayanad Forest division. It states that during 1892-94, 12 acres of Teak plantation was started. The period from 1922-29 is characterized by the experiments on planting teak (and other species to a small extent) on a large scale up to a hundred acres at a time. In Wayanad Forest Division, a rotation of 100 years was fixed under Conversion Working Circle in 1929.<sup>113</sup> Sri. Venkateswara Iyer had set rotation for teak at 80 years, but the same was reduced to 70 years under orders of Chief Conservator of

---

<sup>107</sup> T. P. Kunchikkannan, 'Kadu Kanathaya Katha', (Mal.), in *Mathrubhumi Weekly*, Kozhikode, 29 November 2015, p. 52.

<sup>108</sup> Hemal S. Kavinde, *Op. Cit.*, p. 2.

<sup>109</sup> Rhodes Morgan, *Op. Cit.*, p. 144.

<sup>110</sup> Madhav Gadgil, et. al., 'Forests, Forest Management and Forest Policy: A Critical Review', in Walter Fernandes (Ed.), *Environment and People, Ecological Values and Social Costs*, Indian Social Institute, New Delhi, 1983, p. 24.

<sup>111</sup> B. A. Cariapa, *Revised Working Plan for The Wynad Forest Division 1950-51 to 1959-60*, Government Press, Madras, 1955, p. 6, KFHT.

<sup>112</sup> *Ibid.*

<sup>113</sup> D. N. Tewari, *A Monograph on Teak (Tectona Grandis Linnif)*, International Book Distributors, Dehra Dun, 1992, p. 63.



Forests, Madras in 1945.<sup>114</sup> Over 626 hectares were planted with teak in Begur.<sup>115</sup>

The planting of teak continued even after independence. A great deal of effort is involved in the process of planting any sapling on a large scale. The clearing of lantana<sup>116</sup>, weeding, mulching, and soil working involved massive expenditure, protection, and formation cost running up sometimes from an average of Rs. 75 to Rs. 125 per acre of the plantation.<sup>117</sup> Wild pigs heavily damaged the regeneration areas at Boothakal (Begur range).<sup>118</sup> The Working Plans of Forest Department describe the maintenance of forest plantations at Begur and Chedleth ranges in Wayanad Forest Division.

In Begur range, 21 acres were planted with teak (miscellaneous species over 4 acres and over 7 acres teak seeds were dibbled in pits of 6 feet diameter and 9 inches deep at 36 feet at the rate of 200 seeds per hole) and other species in Kudrakote in 1921-22, 21 acres with teak at Boothakal in 1922, and 15 acres in 1923 at the same place.<sup>119</sup> In the same year, 17 acres at Naduthana and 9 acres at Kuvarhadi were *Punam* regenerated with teak.<sup>120</sup> At Kuvarhadi, another 9 acres were raised similarly in the next year.<sup>121</sup> F.A. Lodge, says Kurichiyat reserve has trees like Teak, Vengai, Blackwood, and Venteak.<sup>122</sup> In 1924 and 1925, 36 and 35 acres, respectively, were planted in Boothakal and enhanced to 90 acres of which 69 acres were planted with teak

---

<sup>114</sup> P. N. Adiyodi, *Seventh Working Plan for The Wayanad Forest Division (1974-75 to 1983-84)*, Government Press, Ernakulam, 1977, p. 27.

<sup>115</sup> *Ibid.*

<sup>116</sup> A Tropical Evergreen shrub of the verbena family.

<sup>117</sup> B. A. Cariapa, *Op. Cit.*, p. 29.

<sup>118</sup> *Ibid.*

<sup>119</sup> *Ibid.*

<sup>120</sup> *Ibid.*

<sup>121</sup> *Ibid.*, p. 30.

<sup>122</sup> *Forest Inspection made by F. A. Lodge 1907*, p.13, R-Dis, Sl.No. 13, B.No. 54, Revenue Department, RAK.

seedlings, 7 acres with Vengai and 11 acres with rosewood; there were heavy casualties, and ultimately, in 1928, 62 acres had to be reformed entirely with teak stumps.<sup>123</sup> An area of 10 acres at Chamundipara and 9 acres at Naduthana were *Punam* regenerated with teak, in 1926.<sup>124</sup> In 1927 an area of 29 acres was planted with diverse species; Rosewood was the only promising species, and teak replaced the failures, over 15 acres of which being with *Punam*.<sup>125</sup> In 1928, an area of 86 acres was taken up for regeneration at Boothakal, 27 of which was under *Punam*; teak stumps were used, but pigs uprooted them to such an extent that almost the whole area had to be reformed in 1929.<sup>126</sup> And lastly, in 1929, 35 acres were planted at Boothakal, of which rosewood was put in over 5 acres and teak over the rest of the area.<sup>127</sup>

The teak plantation of 1896 in Chedleth has practically disappeared under lantana.<sup>128</sup> The plantation of 1901 has been cleared of lantana, and a large number of teak plants were rescued.<sup>129</sup> In the 1901 plantation, the cost of uprooting lantana was Rs. 9-0-0 per acre.<sup>130</sup> Though the 1902 plantation was a failure,<sup>131</sup> the 1904 farm improved a lot.<sup>132</sup> The adjoining forest is well stocked with teak, rosewood, and *vengai*.<sup>133</sup> The magnificent natural forest has been cut down to establish teak plantations at the cost of Rs. 30/- per acre.<sup>134</sup> At Nilambur, where the growth was so rapid that weedings are only required for four years and even small poles to be sold at a profit; therefore,

---

<sup>123</sup> B. A. Cariapa, *Op. Cit.*, p. 30.

<sup>124</sup> *Ibid.*

<sup>125</sup> *Ibid.*

<sup>126</sup> *Ibid.*

<sup>127</sup> *Ibid.*

<sup>128</sup> *Forest Inspection made by F. A. Lodge 1907, Op. Cit.*, p. 4.

<sup>129</sup> *Ibid.*

<sup>130</sup> *Ibid.*, p. 5.

<sup>131</sup> *Ibid.*, p. 4.

<sup>132</sup> *Ibid.*

<sup>133</sup> *Ibid.*

<sup>134</sup> *Ibid.*, p. 5.

expenditure on teak plantations is justified. On the contrary, in Wayanad, the growth was comparatively slow, and heavy weedings were required for at least eight years.<sup>135</sup> But such farms were maintained, and the shade of the teak trees prevented the dense growth of grass and lantana.<sup>136</sup>

In the Chedelesh range, 50 acres of teak were raised at Chikkanji in 1922, 38 acres at Doddapallam in 1924, and the same area in the next year at the same place.<sup>137</sup> Teak was planted over 30 acres at Doddapallam in 1926 and over 55 acres in Chikkanji.<sup>138</sup> In 1927 an area of 24 acres was regenerated with the same miscellaneous species as were used at Boothakal in that year; the result was poor except in the case of *Artocarpus hirsula* and rosewood, and the failure was replaced with teak.<sup>139</sup> In the same year, 12 acres were *Punam* regenerated with teak at Chikkanji.<sup>140</sup> In 1928 an area of 77.5 acres was stump planted with teak at Chikkanji, and 93 acres at the same place were similarly regenerated during the year 1929.<sup>141</sup> Teak was the most important species used for the work as it was both a valuable and reliable species for raising plantations.<sup>142</sup>

The table number 6 in the Appendix I shows the abstract history of Plantations in the Wayanad Forest Division until 1930. It mentions the year of the plantation, extent in acres, formation up to thinning, the volume of cubic feet, the net value realized, etc. The thinning continued after 1947. During the period from 1892 to 1929, the total yield of timber in the number from the

---

<sup>135</sup> *Ibid.*

<sup>136</sup> *Ibid.*

<sup>137</sup> B. A. Cariapa, *Op. Cit.*, p. 30.

<sup>138</sup> *Ibid.*

<sup>139</sup> *Ibid.*

<sup>140</sup> *Ibid.*

<sup>141</sup> *Ibid.*

<sup>142</sup> Mamman Chundamannil, *History of Forest Management in Kerala*, Kerala Forest Research Institute, Peechi, 1993, p.38, KFRIL.

plantations in the Wayanad Forest Division was 120920. The total return of wood in volume from 1929 to 1953 was 239278.22 cubic feet. From 1892 to 1929, the Forest Department started 32 Teak Plantations in Wayanad Forest Division, and the net value realized from the yield was Rs. 134203.94. If we compare this value with the current rate, it will be much more. However, we notice that there was a continuous process of exploitation and extraction of materials from the forest plantations by the British.

The above data shows the British Government's systematic and commercial approach towards Wayanad Forest. It realized that the period concerned was primarily an era of large scale experiments to find out the cheapest and the best technique of raising extensive teak plantations under conditions peculiar to Wayanad.<sup>143</sup> The formation of vast plantations of teak in a fever-stricken plateau with crudely developed means of transport and with an insufficient, unorganized local labour supply of poor efficiency was new to the division and a difficult task too.<sup>144</sup> The Working Plan of Wayanad Forest Division gives the following conclusions (Mr. Goode's Working Plan) emerged from the results of forest management during the period:-<sup>145</sup>

- a. Teak can be established artificially in Wayanad.
- b. Teak can be established best by good quality one-year-old stumps planted sufficiently early (in the monsoon); the sowing of seeds was disappointing, and nursery seedlings were not as good as stumps.
- c. The spacing of 6 to 6 feet is the best.

---

<sup>143</sup> B. A. Cariapa, *Op. Cit.*, p. 30.

<sup>144</sup> *Ibid.*

<sup>145</sup> *Ibid.*

- d. With good material, the reliable performance of operations, and careful attention, especially from June to October, inclusive, a plantation can be at least 95 percent stocked at the end of the first growing season.
- e. By the end of the second year, the majority of the teak in the crop can be considered established.
- f. With all the previous operations properly performed, little or no attention is necessary for the third year.
- g. The cost of such an established plantation in the third year may be from Rs. 55 to Rs.75 per acre.<sup>146</sup>

From the above details, we learn that the woodland of Wayanad during the second half of the nineteenth century is transformed into cash yielding plantations by proper scientific and planned ways and means. The damages and destruction of the livestock of the forest, by destroying the thicket is far-reaching and more severe than the positive outcome gained by extensive areas of plantations. It is inexplicable the destruction caused to the natural forest, wild animals, and their dwelling places by the introduction of monoculture.

### **Exploitation of Forest**

The colonial forestry proved to be of strategic importance for the colonial economy, yielding profitable returns that furthered empire, the 'environmental imperialism'.<sup>147</sup> Though it was a costly and strenuous task, the transformation of the jungle into plantation areas had only one aim. i.e., to convert the forest land, which is of no use as far British is concerned, into a source of revenue for the empire. The plantation industry was a typical

---

<sup>146</sup> *Ibid.*

<sup>147</sup> S. Ravi Rajan, *Op. Cit.*, p. 106.

colonial legacy.<sup>148</sup> It was nothing but the outlook of the modern world, to exploit the nature maximum by all possible means, guided them.

According to the Madras Forest Department and Account Code, Section 239, ‘‘Exploitation is concerned with the felling, extraction, and sale of saleable timber and other forest produce and not with further clearing or replacing, which is dealt with under Regeneration’’.<sup>149</sup> G.R. Kohli observes, ‘‘the history of the exploitation of forests is as old as man himself, but during earlier times it was balanced through a natural growth process because at that time forest cutting was done for personal or community use only.<sup>150</sup> But with the expansion of agriculture, forest land has been cleared’’.<sup>151</sup> Centuries before the arrival of the British in India, ships built of teak were carrying ebony, rosewood, cardamoms, and pepper from the West Coast of India to Persia and Arabia from where they found their way to Europe.<sup>152</sup> Some of these timbers and spices probably came from Malabar and Wayanad.<sup>153</sup> Great Britain, with the lowest proportion (5 percent) of forest areas in Europe, was awakened by the stress of war conditions from its placid reliance on imported timber to the need to have forests of its own.<sup>154</sup> Exporting timber from India to London was there.<sup>155</sup> In 1923, Messrs. Howard Brothers & Co., London,

---

<sup>148</sup> Sebastian Joseph, *Cochin Forests and the British Techno-Ecological Imperialism in India*, Primus Books, Delhi, 2016, p. 120.

<sup>149</sup> *The Madras Forest Department and Account Code*, Vol. II, Forms and Appendices First Edition, Government Press, Madras, 1927, p.26, C/112, RAK.

<sup>150</sup> G. R. Kohli, *History of Science, Technology and Environmental Movements in India*, Surjeet Publications, New Delhi, 2012, p. 321.

<sup>151</sup> *Ibid.*

<sup>152</sup> B. A. Cariapa, *Op. Cit.*, p. 22.

<sup>153</sup> *Ibid.*

<sup>154</sup> *The National Forest Policy of India, Op. Cit.*, p. 6.

<sup>155</sup> *Report on the Administration of the Madras Presidency for the Year 1923-24*, Weather and Crops, Fasli 1333 July 1923 to 30 June 1924, Government Press, Madras, 1925, p.58.

exported 10857 cubic feet timber for the British Empire Exhibition and sale.<sup>156</sup>

On 27<sup>th</sup> November 1806, the Conservator's remarks to the President of the Forest Committee that by co-operating with the jungle merchants, the company can bring the timber resources of the province entirely into their hands.<sup>157</sup> A proclamation is issued prohibiting people from felling trees in the forest and removing those that have already been felled.<sup>158</sup> The Conservator reported about the quantity and quality of timber available in Malabar, and different proprietors of the woods.<sup>159</sup>

On 19<sup>th</sup> January 1807, the Conservator reported that the felling and removal of timber were prohibited with effect from the 31<sup>st</sup> January 1807.<sup>160</sup> The Conservator toured through Ernad, Valluvanad, and Nednganad and arrived at Kolangod "assuming charge of all the forests." "The inhabitants without a murmur resigned their claims to the Company."<sup>161</sup> On 13<sup>th</sup> February 1807, the Conservator reported to the Bombay Government that the forests are considered by the Court of Directors to be the property of the Circar.<sup>162</sup>

The table number 7 in the Appendix I shows that the Timber and other produce were removed from the forests by Government Agency, and Timber and other produce were removed from the forests by consumers or purchasers for the year 1923-24. The Government agency purchased timber worth Rs. 101466, Bamboo worth Rs. 2086, Grass, and other minor produce worth Rs. 114 from the Wayanad Forest Division during this period. The consumers and

---

<sup>156</sup> *Ibid.*

<sup>157</sup> *Guide to the Records of the Malabar District, 1714 to 1835 in 9 Volumes, Vol. IX, Government Press, Madras, 1936, p.12, G-94, B-311, RAK.*

<sup>158</sup> *Ibid.*

<sup>159</sup> *Ibid.*

<sup>160</sup> *Ibid.*

<sup>161</sup> *Ibid.*

<sup>162</sup> *Ibid.*

purchasers bought timber worth Rs. 7432, Firewood, and Charcol worth Rs. 389, Bamboo worth Rs. 925, Grazing, and fodder grass worth Rs. 4728 and other produce worth Rs. 2997, from Wayanad Forest Division. The Forest department received Rs.1307 as fines and forfeitures from Wayanad Forest Division during this period. Therefore the Government maintained accounts of extraction of revenue from the forest. Besides these, there may have unaccountable extraction too.

F. A. Lodge gave an interesting information when he visited Wayanad he saw a rosewood log<sup>163</sup> 213 cubic feet<sup>164</sup> in the forest; in order to export it, it had to be cut into three pieces, each of which used a durable cart to carry it to the market; three parts were sold separately would not command nearly the same price that the unsown log would fetch if it could be moved to the market.<sup>165</sup> He said, “during the past year 19 carts have moved 29000 cubic feet of timber over varying distances.<sup>166</sup> Each cart should carry a day an average log of 40 cubic feet, for a distance of 12 miles over a metal road, allowing for only 300 working days during the year.<sup>167</sup> Experiments with new forms of timber carts are now carried out in Coimbatore, and if successful, the modified form of the cart may be introduced in the Wayanad”.<sup>168</sup> In 1923-24, seven hundred and ten tons of sandalwood was sold for Rs. 786118/-. The average price realized was Rs.1108 per ton as against Rs. 1182 in the previous year.<sup>169</sup>

The table below shows the value of timber and other produce.

---

<sup>163</sup> A part of the trunk or a large branch of tree that has fallen or been cut off.

<sup>164</sup> Unit of volume

<sup>165</sup> *Forest Inspection made by F.A.Lodge 1907, Op. Cit., p. 3.*

<sup>166</sup> *Ibid.*

<sup>167</sup> *Ibid.*

<sup>168</sup> *Ibid.*

<sup>169</sup> *Report on the Administration of the Madras Presidency for the Year 1923-24, Op .Cit., p.59.*



**Table No. 2.6**

Statement Showing the Value of Timber and other Produce at Sale Depots for the Year 1923-24 in Wayanad Division								
Description of Timber or Produce	On hand at the Commencement of the Year			On hand at the close of the Year			Differences in Values	
	Number	Cubic feet	Value	Number	Cubic feet	Value	In favour of the Year	Assignment the Year
			RS.			Rs.		
Timber	-	23201	24364	-	(b) 17750	55511	31147	-

Source: *Report on the Administration of the Madras Presidency for the Year 1923-24*, Weather and Crops, Fasli 1333-1, July 1923 to 30 June 1924, Govt. Press, Madras, 1925, p.58, RAK.

Earlier, the wood from the forest is used to be cut into the pieces by using a saw manually. Later a sawmill powered by two Ruston Hornsby engines was put up in 1926 at Chikanji in the Chedleth Range.<sup>170</sup> The extraction and working of timbers from the forest were undertaken by the “Sawmill and Extraction Division” organized in 1926.<sup>171</sup> The following is an extract from B.A.Cariapa’s *Revised Working Plan of Wayanad Forest Division*. “From its inception, the working of the mill was unsatisfactory mainly due to ill health of the staff and the imported labourers in a fever-ridden area to which they were not accustomed.<sup>172</sup> A second factor was that only 40,000 cubic feet of timber were supplied to the mill in the year while the mill capacity was 70,000 cubic feet. The price realized for sown pieces other than teak was also low, the cost of production is just over Rs. 5/- per cubic foot, including overheads against the average sale price of Rs. 3/-. By

<sup>170</sup> B. A. Cariapa, *Op. Cit.*, p. 31.

<sup>171</sup> *Ibid.*

<sup>172</sup> *Ibid.*

the 31<sup>st</sup> March 1929, the loss suffered by the mill was Rs. 74,552/-. The mill was, therefore, finally closed down on the 31<sup>st</sup> March 1930.”<sup>173</sup>

*Census India, 1931, Volume XIV, Madras, Part I*, says on pulp industry that, a plant producing 10000 tons of pulp is the smallest that would be economically feasible and an annual supply of 22500 tons of air dry bamboos is the minimum required to work a pulp mill at a profit.<sup>174</sup> The total value of bamboos removed from the forests of Madras Presidency by all agencies during 1923-24 was Rs. 4.03 lakhs against 4.08 lakhs in 1922-23.<sup>175</sup>

The felling working circle comprises all the reserves of Sulthan’s Bathery, extending over an area of 40,221 acres.<sup>176</sup> The growth varies significantly between that of good deciduous forest of a mixed type, with a fair proportion of teak and that of a very open forest devoid of teak, with small badly shaped trees of diverse species dotted above in the sea of tall grass.<sup>177</sup>

Ramachandra Guha observes, “The early years of railway expansion witnessed a savage assault on the forests of India. Great chunks of these were destroyed to meet the demand for railway sleepers, over 1,000,000 of which were required annually”.<sup>178</sup> In 1900 sleepers were supplied to the railways from Wayanad,<sup>179</sup> though not even a single railway line was allotted to this place. The original offer of 15,000 broad gauge sleepers at Rs. 2-8-0 each, passed and delivered at Calicut, was finally reduced to 4,000 at much higher

---

<sup>173</sup> *Ibid.*

<sup>174</sup> M. W. M. Yeatts, *Census of India, 1931, Volume XIV, Madras, Part I*, Report, Madras, Government of India, Central Publication Branch, Calcutta, p. 207.

<sup>175</sup> *Report on the Administration of the Madras Presidency for the Year 1923-24, Op. Cit.*, p. 51.

<sup>176</sup> B. A. Cariapa, *Op. Cit.*, p. 35.

<sup>177</sup> *Ibid.*, p. 31.

<sup>178</sup> Ramachandra Guha, *How Much Should a Person Consume? Thinking through the Environment*, Permanent Black, Ranikherth, 2008, p. 92.

<sup>179</sup> B. A. Cariapa, *Op. Cit.*, p. 26.

rates, owing to the failure of contractor's miscalculation.<sup>180</sup> Both teak and *Terminalia tomentosa*<sup>181</sup> sleepers were supplied.<sup>182</sup> The wastage was high- the percentage of sleepers to logs was 38 and much timber was left unconverted in the forest.<sup>183</sup> Much plantation produce from Western ghats found an outlet in the railway.<sup>184</sup>

Meanwhile, there was an attempt to extract gold from the shiny sandy soil of Wayanad. Hoping to find gold in the rocky layers of the earth, the geological survey was conducted.<sup>185</sup> In 1831 the Collector reported that gold might be obtained by washing the soil in streambeds, paddy flats, and hillsides.<sup>186</sup> Mines on a large scale began in the 1860s.<sup>187</sup> Some of the Englishmen invested a huge amount of money for this endeavour, but in vain. So they suspended all these operations. In 1901, the Government of India deputed Mr. Haydon of Geological Survey of India and Dr. Hatch, the Survey mining specialist, to examine the mines<sup>188</sup>. They reached a conclusion that "there is no hope of gold mining in Wayanad".<sup>189</sup>

The ecosystem is not complete without the existence of animals. The thick forests in Wayanad used to be a peaceful dwelling place for varieties of wild animals to roam around freely and peacefully. Elephants, wild boar, deer, tiger, leopard, fox, bison, monkeys, pheasant, wild sheep, stag, etc. coexisted in this land. William Logan gives a detailed picture of wildlife in

---

<sup>180</sup> *Ibid.*

<sup>181</sup> Karimaruthu in Malayalam

<sup>182</sup> B. A. Cariapa, *Op. Cit.*, p. 26.

<sup>183</sup> *Ibid.*

<sup>184</sup> M. W. M. Yeatts, *Op. Cit.*, p. 30.

<sup>185</sup> William Logan, *Op. Cit.*, p. 27.

<sup>186</sup> C. A. Innes, *Malabar Gazetteer*, Volume I & II, F. B. Ivans (Ed.), State Editor, Kerala Gazetteers, (Reprint), Thiruvananthapuram, 1997, p. 15.

<sup>187</sup> *Ibid.*

<sup>188</sup> *Ibid.*, p. 17.

<sup>189</sup> *Ibid.*, p. 18.

the forests of Wayanad.<sup>190</sup> Elephants are very abundant all along the chain of Western Ghats and the teak forests of Beni, Chedleth, and Koodrakote, but here they are partially migratory, leaving Wayanad in the massive bursts of monsoon for the drier climate of Mysore.<sup>191</sup>

The peaceful wildlife sometimes was disturbed by the locals. As a part of entertainment and religious functions, the leopards and wild boars were hunted by the people of Wayanad. The elephants were caught in deep pits to tame and keep in temples and traditional *taravadus*. There was a place called Yaga in Pulpally, where elephants were used to be maintained. As C. Gopalan Nair recollects, Chettis, Mullukkurumbas, and Pathiyars were used to participate in Leopard hunting.<sup>192</sup> After hunting wild boars, the flesh of the animal is cooked and consumed.<sup>193</sup> C. A. Innes says, The Wayanadan Chettis were bold *shikars*, and tiger spearing was a favorite past time closely associated with their religion.<sup>194</sup> The tiger was encircled by a wall of netting six feet high which is gradually closed up, and then speared; the carcass is not skinned, but stretched on a pole and hung up as a sacrifice to their deity.<sup>195</sup> The various folk songs of different *adivasis* also mention their hunting operations. The Kurichya song named *Elamalakannan*<sup>196</sup> and Kusavan song called *Mariamamma Sthuthi* explains the hunting of pig.<sup>197</sup> Though hunting the wild animals was a part of the entertainment and ritual of the natives of Wayanad, it did not affect the numerical strength of wild animals considerably in the jungles. They had no commercial interest in hunting.

---

<sup>190</sup> William Logan, *Op. Cit.*, pp. 49- 51.

<sup>191</sup> Rhodes Morgan, *Op. Cit.*, p. 183.

<sup>192</sup> C. Gopalan Nair, *Wayanad: Janangalum Paramparayavum*, (Mal.), (Tr.) K. K. N. Kurup, *Wynad its People and Tradition*, Modern Books, Sulthan Bathery, 2006, p. 124.

<sup>193</sup> *Ibid.*, p. 126.

<sup>194</sup> C. A. Innes, *Op. Cit.*, p. 123.

<sup>195</sup> *Ibid.*, p. 124.

<sup>196</sup> M. R. Pankajakshan, *Op. Cit.*, p. 244.

<sup>197</sup> *Ibid.*, p. 429.

The British had a different approach to wildlife. According to Surajit Sinha, the British also tightened governmental control over the resources of land and forest, which were the mainstay of tribal existence.<sup>198</sup> On 27<sup>th</sup> October 1906, the Conservator of Forests, F.A.Lodge, started his visit at various parts of Wayanad and noticed a *Serambi* at Nulpuzha, which was situated in reserved forests.<sup>199</sup> A *Serambi*, is a sturdy structure made of teak wood in the forest, to provide comfortable accommodation for the servants to keep them free from the fear of wild animals. Nearly four or five *Serambis* were there in different parts of the forest in Wayanad. He also mentions that Muthanga was the most important elephant nursery in Malabar district. The following are the 14 elephants in Muthanga with their ages.<sup>200</sup> Except one, all of them are European named. They are Bessie aged 7, Jessie old 3, Borneo aged 1, Henry aged 3, Herbert aged 2, Charlie aged 2, Morris aged 3, Dosti-Jehan aged 5, Hector aged 6, Helen aged 20, Harry aged 5 ½ months, King aged 25, Agnes old 25 and Isabella aged 50.<sup>201</sup>

He says the camp was very primitive, and considerable improvements are required.<sup>202</sup> Kattunaika tribe has experience in wild elephant training.<sup>203</sup> Books on wildlife published during those periods have many pictures showing the training of the captured elephants.<sup>204</sup> The captured elephants were either sold or transferred to other areas (For more details, see table number 8 in the

---

<sup>198</sup> *The Encyclopedia of Dravidian Tribes*, Vol.I, The International School of Dravidian Linguistics, St.Xavier's College, Thiruvananthapuram, 1<sup>st</sup> Edition, 1996, p. 77.

<sup>199</sup> *Forest Inspection made by F.A.Lodge 1907, Op. Cit.*, p. 1.

<sup>200</sup> *Ibid.*

<sup>201</sup> *Ibid.*

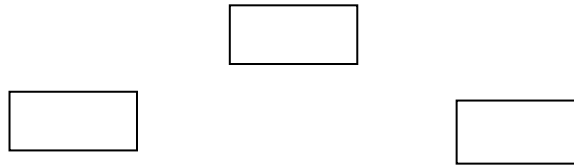
<sup>202</sup> *Ibid.* p. 2.

<sup>203</sup> G. S. Unnikrishnan, *Op. Cit.*, p. 15.

<sup>204</sup> *Administration Report of the Forest Department of the Madras Presidency for the year Ending 31 March 1924, 1923-1924*, Vol.I, Government Press, Madras, 1926, Plate No.1, KFHT.

Appendix I). Rhodes Morgan<sup>205</sup> describes that the elephants are forced to drag timber brutally and irrationally.

The Forest Manual of 1928 provides rules for capturing Elephants. The G.O. No. 793, Rev. dated 10<sup>th</sup> November 1894, B.P.F.No. 408, dated 5<sup>th</sup> July 1895, recorded in G.O. Mis No. 2963, Rev. dated 25<sup>th</sup> July 1895 made it clear that Elephants have a habit of wandering in herds from place to place, and they generally keep to the same runs in moving to and fro.<sup>206</sup> These runs must be discovered, and the pits are dug on them in groups of three, as given below.<sup>207</sup>



The pits should be 12 x 12 at top and 9 x 9 at the bottom and 10 x 12 feet deep.<sup>208</sup>

For a long time, many elephants are captured in Wayanad Forest. The elephant hunting, known as *Khedha*, continued in this region,<sup>209</sup> especially in Mysore forests.<sup>210</sup> By making loud noise and beating drums, the elephants are trapped and cornered in a particular place, and they are tamed with the help of domestic elephants. The *adivasis*, especially Kattunaikars, were well trained for capturing and taming the Wild elephants. Bella, a village situated in

---

<sup>205</sup> Member of the British Ornithologists Union, District Forest Officer, Malabar, 1887.

<sup>206</sup> *The Forest Manual*, Corrected up to the end of December 1928, Government Press, Madras, 1931, p.426, M/64, RAK.

<sup>207</sup> *Ibid.*

<sup>208</sup> *Ibid.*

<sup>209</sup> S. Satheesh Chandran, 'A Athirthi Kaduvarachathalla' in Manila C. Mohan (Ed.), *Madhav Gadgilum Paschimaghatta Samrakshanavum* (Mal.), Mathrubhumi Books, Kozhikode, 2014, p. 114.

<sup>210</sup> *Report on the administration of the Madras Presidency for the Year 1923-24, Op.Cit.*, p. 59.

Karnataka near to Wayanad, was one of the training centres for elephants during the reign of the Mysore dynasty and British period.<sup>211</sup> Fifty families of Kattunaikars still live there even after the prohibition of elephant capturing. As per the administration report of Forest Department of the Madras Presidency for the year ending 31<sup>st</sup> March 1924, says, three elephants were captured in Wayanad in that year.<sup>212</sup> It also mentions *Khedha* operations.

Animal hunting was an entertainment having commercial significance. As a proof for individual hunting by Englishmen, there are weapons and other accessories available in estate bungalows. They kept photographs with their guns on their shoulders, giving an idea of how proud they were in choosing hunting as entertainment. Though they charged fines and gave imprisonment to the locals who curtailed forest law, they did not have any restrictions for hunting or any such activities. The enormous quantities of ivory and fur were exported to other countries. It naturally led to the extinction of several species in Wayanad jungles.

## **Conclusion**

The chapter actually tries to understand how the forests in Wayanad, of the pre-modern period, were subjected to drastic changes and converted into another form during the British period. The capitalist spirit of the ruling class was the motive force behind all these developments. The tendencies of capitalism have generated a series of critical investigations debating the nature of imperialism.<sup>213</sup> Within a short period, all possible attempts were made to extract the forest wealth for their advantage. It was a hegemonic influence in the form of ecological imperialism. Deterioration of the flora and

---

<sup>211</sup> 'Bella Pappanmarude Swantham Gramam' (Mal.), in *Mathrubhumi Daily*, Kozhikode, 20 November 2013, p. 12.

<sup>212</sup> *Administration Report of the Forest Department...*, *Op.Cit.*, p. 2.

<sup>213</sup> S. A. Shah, *Imperialism: Notes Towards a Contemporary Perspective*, Azad Reading Room, Document No. 8, Hyderabad, 2006, p. 12.

fauna was the total outcome of the unseasoned forest policies and management. The colonial modernity was the motive behind the conservation activities. Plantation yield, instead, turned out to be the technical resources. It was an unprecedented economic drain to distant lands, denying the benefits to Wayanad. These new developments did not bring any desirable effects in the living conditions of the *adivasis*, who were enjoying a peaceful life in the forest. The medicinal plants they depended upon for their illnesses and fruits and wild roots they gathered from jungles, for their food became a distant dream for them. The disturbance in the ecosystem was more harmful to plants and animals than humans. Forest was no more a safe zone for the animals. Wayanad, mostly an unattended interior region, was made an inexhaustible bowl for unscrupulous exploitation by the imperial powers.

Wayanad witnessed immense ecological changes even before the mass migration of 1930's. The shifting over of woodlands of Wayanad, during the nineteenth century, to significant plantation crops was another blow to the existing environmental structure. The following chapter will discuss the involvement of natives, their modes of agriculture, and the growth of large scale estates.



### CHAPTER 3

## PEOPLE AND AGRICULTURE IN THE MOUNTAINOUS LANDSCAPE

The change in the use of land adversely affects the environment. It should reflect nature that also leads to the difference in the day to day life of the people. In more than 90 percent of human history, people subsisted by gathering their food. Its impact on the environment was minimal. The invention of fire made a significant impact on the landscape. The crucial point of all changes is the creation of the artificial ecosystem. Agriculture was a fundamental invention in human history. It restricted the mobility of men, and people produced food in surplus. It was the stepping stone of human civilization.

After the Industrial Revolution in Europe, policies were framed on the needs of industrial society. Agrarian Revolution of the 18<sup>th</sup> century in Europe also satisfied this demand. Each programme was justified for the sake of the growing demand of the industry. This attitude spread not only in Europe but also in India. *Census India, 1931, Volume XIV, Madras, Part I*, underlies the fact that the most noticeable changes affected during this period were occupation and industry.<sup>1</sup> This chapter discusses the life of inhabitants of Wayanad, both tribes and non-tribes, and their way of subsistence. From that, we get an understanding of the agrarian society of Wayanad. Apart from these agricultural policies of British colonialism, which led to alteration of the pre-colonial landscape of Wayanad also to be discussed. The rise of plantations and the shift from food crops to plantation crops in this terrain began to affect

---

<sup>1</sup> M. W. M. Yeatts, *Census of India, 1931*, Vol. XIV, Madras, Part 1, Report, Government Press, Madras, Government of India Central Publication Branch, Calcutta, p. 2.

the life of the people. It helps us to understand the past environmental changes<sup>2</sup> in this region.

If we look into ancient Tamilakam, the Sangam texts give references on curry, which was obtained from Kurinji *thinai*.<sup>3</sup> It is believed that pepper was available in Wayanad when it became a part of Kurinji *thinai*.<sup>4</sup> It was forest produce rather than a cultivable crop. Later paddy cultivation became widespread in Wayanad. P. U. Das, the Soil Conservation Officer of Wayanad, says, for 1200 years ago, the Jains who migrated to the Wayand cultivated hill paddy (*Malanellu*) in this region. It was a significant change in the agrarian history of Wayanad. After 600 years, the Chettis migrated to Wayanad and started paddy cultivation in the marshy land of Wayanad. The swampy area was converted into a paddy field, which also reflected climate change in Wayanad, i.e., the snow (*kodamanju*) began to disappear.<sup>5</sup> It shows that whenever the new arrivals took place in Wayanad, that changed the agriculture and crop pattern of Wayand, which ultimately altered the landscape of Wayanad. A. J. Mc Michael says early agricultural practices sometimes caused the ecological disaster and social collapse.<sup>6</sup>

## People

Population growth in colonial India generated a high demand for land.<sup>7</sup> As per the Census Handbook of 1931, the lowest density of population in

---

<sup>2</sup> Olav Slyaymaker & Tom Spencer, *Physical Geography and Global Environmental Change*, Longman, Essex, U.K., 1998, British Library Cataloguing in Publication data, p. 61, State Central Library, Thiruvananthapuram.

<sup>3</sup> Mundakayam Gopi, *Ariyappedatha Wayanad* (Mal.), Sahya Publications, Kalpetta, 2002, p. 149.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Interview*, P. U. Das, Soil Conservation Officer of Wayanad at District Office, Civil Station, Kalpetta, 29 December 2018.

<sup>6</sup> A. J. Mc Michael, *Planetary Overload: Global Environmental Change and the Health of the Human Species*, Cambridge University Press, Cambridge, 1995, p. 87.

<sup>7</sup> Vasant Kaiwar, 'Property Structures, Demography and the Crisis of Agrarian Economy of Colonial Bombay Presidency', David Ludden, (Ed.), *Agricultural Production and Indian History*, Oxford University Press, New Delhi, 1994, p. 77.

Malabar District came from Wayanad, an inland area of hills, forests, and plantations.<sup>8</sup> During 1921-31 Malabar district belongs to a scale of 60 to 80 persons per square miles.<sup>9</sup> As per the census book, the only area that belonged to the next category (above 80) was Madras city.<sup>10</sup> The next lowest was Ernad and Walluvanad, both were in the south of the district, and both were having thick forests.<sup>11</sup>

At the time of the 1921 Census, the population of the Malabar district, including that of the Laccadive Islands, had turned as 3,098,871.<sup>12</sup> The population has risen steadily and now nearly three times more than it was 50 years ago.<sup>13</sup> The pressure of the people on the land is extraordinarily dense, every cultivated acre having to support two and a half persons.<sup>14</sup> The decrease in population of Wayanad taluk was the direct result partly of the transfer of three *amsams* to the Nilgiris and somewhat of the planting industry.<sup>15</sup> After that Wayanad taluk had of 13 *amsams*.<sup>16</sup> *Amsam* was the primary revenue unit of the British period. Each had its *amsam adhikaris*, who collected revenue and control the revenue administration in that unit. The name of the *amsams* in Wayanad<sup>17</sup> are 1. Periya, 2. Edavaka, 3. Nallornadu, 4. Ellornadu, 5. Kuppathodu, 6. Puthadi, 7. Kurumbala, 8. Porunнанur, 9.

---

<sup>8</sup> M. W. M. Yeatts, *Op. Cit.*, p. 31.

<sup>9</sup> *Ibid.*, p. 32.

<sup>10</sup> *Ibid.*

<sup>11</sup> *Ibid.*, p. 31

<sup>12</sup> *A Statistical Atlas of the Madras Presidency, Statistical Atlas: Malabar*, Revised of Fasli 1330, Govt. Press, Madras, 1924, p. 9.

<sup>13</sup> *Ibid.*

<sup>14</sup> *Ibid.*

<sup>15</sup> *Ibid.*

<sup>16</sup> William Logan, *Malabar Manual* (Mal.), Tr. by T. V. Krishnan, Mathrubhumi Books, Kozhikode, 2014, p. 414.

<sup>17</sup> *Vythiri Division and Manathavady Division, Area and Population, 1886*, Sl.No.3, B.No.32, Revenue Department, RAK.

Thondarnadu, 10. Vythiri, 11. Edannadashakkur, 12. Mupainadu, and 13. Ganapathivattam.

William Logan, in his Malabar Manual, provides the population of each taluk in Malabar District. The following table shows the population of Wayanad taluk.

**Table No. 3.1**

	<b>Number of Amsams</b>	<b>Area (ACS)</b>	<b>Total Number of Population</b>	<b>Average Area of Amsams (ACS)</b>	<b>Average number of Population</b>
Wayanad Taluk	13	612240	88091	47095	6776
Malabar District	429	5553548	2350035	12945	5477

Source: William Logan, *Malabar*, Vol. I, Govt. Press, Madras, 1951, p.87.

The 13 amsams consist of 58 *desams*.<sup>18</sup> They are Periya, Vararyal, Irimanathur, Alattil, Kunnom, Tondar, Thindummam, Thavinhal, Valat, Porur, Edavaka, Olakkodi, Payingattiri, Edachana, Kunnamangalam, Pulikkad, Kanmana, Vemom, Arattuthara, Thirunelli, Thrissaleri, Mangallasseri, Vellamunda, Changadam, Kommayad, Karingari, Cherukara, Anchkunnu, Vilambukandam, Echchom, Kuppathod, Pakkam, Pulpalli, Veliyambam, Pudadi, Pulpadi, Ponginichikkallur, Purakkadi, Padinnnarattara, Kuppaddittara, Kottattara, Thekkuntara, Tariyod, Vengapalli, Kalpetta, Pinangod, Achchuranom, Kunnattidvaga, Kottappadi, Triikkaipatta, Muppaiyinad, Muttil, Chingeri, Nenmeni, Kidanganad, Vadakkanad, Chenad and Nulpuzha.

The table number 9 in the Appendix I provides the information about the Population of each *desam* in Wayanad based on the Resurvey settlement

<sup>18</sup> *Forest well-wooded lands in Wayanad, 1913*, R.Dis File, Sl.No.9,B.No.133, Revenue Department, RAK.

Register of 58 *Desams*. The larger *Desams* based on population was Muppainad (3403), and Vemom (4469), and the lower were Irimanathur (100) and Alattil (157). It states that 16134 occupied houses in the 58 *Desams* of Wayanad taluk. Among these, Muppainad (1097) and Nenmeni (1043) *Desams* had the most significant number of occupied dwellings, whereas the lowest was in Irimanthur (12) and Alattil (20). The density of the population per 100 acres of cultivable land was very less in Varayal (7), Irimanathur (9), Pulpalli (9) and Tariyod *Desams* (9), whereas it was very high in Payingatiri *Desam* (88). The occupied land of the population per 100 acres was less in Thindummal *Desam* (20), whereas it was very high in Mangalasseri *Desam* (187).

The various groups of people in Wayanad led their life intermingling with one another irrespective of their caste and religion. The Hindus include different castes like Brahmins, Nairs, Chettis, and various kinds of indigenous population; the Mohammadans include the Mappilas and Ravuthars. The others include the Jains and Europeans (For more details, see Table number 9 in the Appendix I). All these sections were migrated to Wayanad. The Chettis had a prominent role in Agrarian Wayanad. The *adivasis* were the agricultural labourers in the fields of Nairs and Chettis.<sup>19</sup> The *Janmakar* never cultivated the land.<sup>20</sup> It was always leased out to a group of people called canumkars.<sup>21</sup> Some Chettis cultivated the land of Devaswam and paid rent (*pattam*).<sup>22</sup> C. Gopalan Nair says they were landlords and cultivators who have consisted of three groups.<sup>23</sup> C.A.Innes says the Wayanadan Chettis are a small caste of

---

<sup>19</sup> New Eyeman, 'Manikkolly Subramanyante Jeevacharithram, Interview,' in *Madhyamam Weekly*, (Mal.), Kozhikode, 4 March 2005, p. 16.

<sup>20</sup> Ashin Das Gupta, *Malabar in Asian Trade 1740-1800*, Cambridge University Press, 1967, Cambridge, p. 23.

<sup>21</sup> *Ibid.*

<sup>22</sup> New Eyeman, *Op. Cit.*, p.16.

<sup>23</sup> C. Gopalan Nair, *Wynad: Its People and Traditions*, First Edition 1911, Asian Educaional Service, New Delhi, 2000, p. 49.

cultivators in the Wayanad, who claim to be Sudras, and are in appearance and customs very similar to the Nayars.<sup>24</sup> According to William Logan, the number of slaves or cheruma class (Adiyala) in Wayanad Taluk as per the 1857 census was 16561.<sup>25</sup>

Earlier, the Adivasis used to collect the hill products, spices, and herbals, which were naturally grown.<sup>26</sup> This agricultural pattern was entirely different from the lowland.<sup>27</sup> Gradually it has been changed. The Kurichiyas was the jungle tribe of *Punam* cultivators and hunters.<sup>28</sup> The Mullukurumbas were cultivators and hunters.<sup>29</sup> Naykans were woodcutters and collectors of honey.<sup>30</sup> Urali make baskets and implements of agriculture.<sup>31</sup> Cultivation in the forest areas was the main occupation of Uralais.<sup>32</sup> Kunduvatiyans are cultivators and do not generally serve as coolies and found only in Puthadi and Purakadi amsams.<sup>33</sup> Karimbalans were *Punam* cultivators and often wood and collectors of wild pepper.<sup>34</sup> The term Kadar has been derived from the word *kadu*, meaning forest.<sup>35</sup> Earlier the Kadars were hunters and gatherers.<sup>36</sup> Pathiyans are a small community of agriculturists, exists in the

---

<sup>24</sup> C. A. Innes, *Malabar Gazetteer*, Volume I and II, F. B. Ivens (Ed.), Reprinted, The State Editor, Kerala Gazetteers, Thiruvananthapuram, 1997, p.123.

<sup>25</sup> William Logan, *Op. Cit.*, p. 117.

<sup>26</sup> M. G. S. Narayanan, 'Wayanadan Charithram' in *Vijaya High School Rajatha Jubilee Smaranika*, Pulpally, 1990, p. 14.

<sup>27</sup> *Ibid.*

<sup>28</sup> C. A. Innes, *Op. Cit.*, p. 136.

<sup>29</sup> *Ibid.*, pp. 135-136.

<sup>30</sup> *Ibid.*, p. 136.

<sup>31</sup> *Ibid.*

<sup>32</sup> Madasseri Madhava Warriar, *Keralathile Adhima Nivasikal*, (Mal.), Manorama Publishing House, Kottayam, 1961, p. 35.

<sup>33</sup> C. Gopalan Nair, *Op. Cit.*, pp. 74-76.

<sup>34</sup> C. A. Innes, *Op. Cit.*, p. 136.

<sup>35</sup> K. S. Singh, *People of India: National Series Vol. III, The Scheduled Tribes*, Anthropological Survey of India, Oxford University Press, New Delhi, 1994, p. 450.

<sup>36</sup> *Ibid.*, p. 451.

easternmost village (Nulpuzha) of Wayanad, bordering Mysore.<sup>37</sup> Uridavans claim to be of Vedar caste, the same as that to which Arippen and Vedan, the Vetar rulers, belonged.<sup>38</sup> They are agriculturists and reside in houses called Ooru (village).<sup>39</sup> C. Gopalan Nair says Kanaladis earn their living by acting as ‘oracles,’ ‘fire-walkers,’ and ‘devil dancers’ during *Thera* festivals at shrines.<sup>40</sup> Kaniyambetta in Kottappadi Amsam and Thoriyambath and Kakkavayal in Muttill Amsam of South Wayanad is the main seat of Thachanad Muppens.<sup>41</sup> Edgar Thurston states that the principal occupation of the Kuruman or Kurumban is wood cutting and collection of forest produce.<sup>42</sup> The term Kattunaikan has been derived from the words kadu, meaning forest and naykan, meaning leader or headman.<sup>43</sup> Thurston says the Paniyans worship animistic deities of which the chief is *Kuli*, whom they worship on a raised platform called *Kulithara*.<sup>44</sup> They further worship *Kattu Bhagavati* or *Bhagavati* of the woods.<sup>45</sup>

However, all are related to agriculture either as cultivators or agricultural labourers. According to the Census of 1857 of the slave population in Malabar, the number of slaves in Wayanad Taluk was 16561, whereas in Malabar District appeared to be 187812.<sup>46</sup> Francis Buchanan, who had visited Malabar in 1800, state that  $\frac{1}{5}$ <sup>th</sup> of the total population of

---

<sup>37</sup> C. Gopalan Nair, *Op. Cit.*, p. 82.

<sup>38</sup> *Ibid.*, p. 86

<sup>39</sup> *Ibid.*

<sup>40</sup> *Ibid.*, p. 96.

<sup>41</sup> Nettur P. Damodharan, *Adhivasikalude Keralam*, (Mal.), National Book Stall, Kottayam, 1974, p. 99.

<sup>42</sup> K. S. Singh, *Op. Cit.*, p. 662.

<sup>43</sup> *Ibid.*, p. 481.

<sup>44</sup> Edgar Thurston, *Castes and Tribes of Southern India* (in seven Vols.), Vol. VI, Low Price Publications, New Delhi, 2010, p. 69.

<sup>45</sup> *Ibid.*

<sup>46</sup> Adoor K. K. Ramachandran Nair, *Slavery in Kerala*, Mittal Publications, New Delhi, 1986, p. 42.

Wayanad as slaves.<sup>47</sup> In the extract from Malabar Commission Report-Correspondence on the subject of slavery in Malabar from May 1819 to August 1822, the questions addressed to obtain information related to the slaves of the soil in Eddanaddapakoor, Kodoombala, Oroonator and Parkamtil, in the Wayanad says there are five species of slaves, and they are called, Paniar, Adiyar, Poolean, Moopan, and Naikan.<sup>48</sup> All the five sects descend<sup>49</sup> *makkattay*.<sup>50</sup> The word Adiyar also connoted a slave or a vassal attached to a person of social standing.<sup>51</sup>

Regarding the food habits, they are non-vegetarians, and their staple diet is rice supplemented with pulses like gram, peas, and beans.<sup>52</sup> The Paniars or slaves are sold or transferred on Kanam<sup>53</sup>. The leader of Paniars was known as Kuttan.<sup>54</sup> *Otti*, *Panayam*, and *Verumpattam* both along and separate from the fields to which they may be attached.<sup>55</sup> The proprietor will enjoy no benefit of the transfers of his slave on any other tenure, but *Pattam*, when he will receive annually the rent that may be stipulated.<sup>56</sup> The slaves were commonly known as Cherumar.<sup>57</sup> “When a slave of either of Paniar and Adiyar or Poolean takes a female slave belonging to another master (person), as his wife, the proprietor of the Cheruman should send two Silver *fanam*<sup>58</sup> to her.<sup>59</sup> But this practice does not exist in the Wayanad”. The exchange of

---

<sup>47</sup> S. Achutha Warriar, *Kerala Samskaram* (Mal.), Kerala Bhasha Institute, Thiruvananthapuram, 2010, p. 143.

<sup>48</sup> Adoor K. K. Ramachandran Nair, *Op. Cit.*, p. 83.

<sup>49</sup> *Ibid.*

<sup>50</sup> Makkathay or Makkattay means patrilineal lineage

<sup>51</sup> K. S. Singh, *Op. Cit.*, pp.50-51.

<sup>52</sup> *Ibid.*, p. 51.

<sup>53</sup> Adoor K. K. Ramachandran Nair, *Op. Cit.*, p.83.

<sup>54</sup> Nettur P. Damodharan, *Op. Cit.*, p. 55.

<sup>55</sup> Adoor K. K. Ramachandran Nair, *Op. Cit.*, p. 83.

<sup>56</sup> *Ibid.*, p. 84.

<sup>57</sup> S. Achutha Warriar, *Op. Cit.*, p. 143.

<sup>58</sup> Coins were part of the traditional coinage of Kerala.

<sup>59</sup> Adoor K. K. Ramachandran Nair, *Op. Cit.*, p.84.



slave rights was based on three categories, i.e., *Janmam*, *Kanam*, and *Pattam*.<sup>60</sup> The *Janmam* value of a good Panian is Thirty Rupees, *Otti* value was Twenty Seven, and half Rupees and *Kanam* value were Sixteen Rupees. K. J. Baby wrote his novel *Mavelimanram* based on the real incident related to the judgement of Wayanad Muncif Court on 24<sup>th</sup> February 1834 in which a Paniyan named Kaippadan was mortgaged for Eight Rupees only.<sup>61</sup> The *Janmam* value of a good slave of Moopans and Naikan tribe sixty-four silver *fanams*- *Otti* value was fifty-two *fanams*, *Kanam* was thirty-nine *fanams*, and *Verumpattam* was four *fanams*, but the females of these tribes are not given on *Pattam* or by sale.<sup>62</sup> The *Janmam* value of good Poolean slave is Twelve Rupees, *Otti* is Ten Rupees, and *Kanam* is four Rupees and *Verumpattam* and paddy.<sup>63</sup> The value of a good Paniyan and Adiyar might be said to have increased now by six Rupees, above the old price- but that of the Naikan, Moopan, and Poolean continues till the same.<sup>64</sup> The slaves were treated like cattle or exchange commodities.<sup>65</sup> It is hardly heard that any slave had possessed any property from which he could derive his means of maintenance, whatever little property they might own, was the right of their master for whom they, under any circumstances, work.<sup>66</sup> The slaves utilized their entire physical strength for the well being of his lord.<sup>67</sup> The master demands the hard work of the slave. Such kind of inhuman practice was the socially accepted practice in those days. It also reveals the fact that social hierarchy was very rigid in Wayanad. The Proprietor will not receive a tender and free the slaves.<sup>68</sup> The practice of selling and purchasing slaves has been

---

<sup>60</sup> S. Achutha Warriar, *Op. Cit.*, p.143.

<sup>61</sup> K. J. Baby, *Mavelimanram* (Novel in Mal.), Current Books, Thrissur, 2000, p. 197.

<sup>62</sup> Adoor K. K. Ramachandran Nair, *Op. Cit.*, p. 84.

<sup>63</sup> *Ibid.*

<sup>64</sup> *Ibid.*

<sup>65</sup> K. J. Baby, *Nadugadhika* (Play in Mal.), Gadhika Publications, Nadavayal, Wayanad, 1993, p. 98.

<sup>66</sup> Adoor K. K. Ramachandran Nair, *Op. Cit.*, p. 85.

<sup>67</sup> K. J. Baby, *Mavelimanram...*, *Op. Cit.*, p. 63.

<sup>68</sup> Adoor K. K. Ramachandran Nair, *Op. Cit.*, p. 85.

in existence from time immemorial.<sup>69</sup> The questions addressed to Ellonaad and Nalloornad in Wayanad, the two groups of slaves, are Paniar and Adiyar.<sup>70</sup> Both of them were the slaves of Janmis.<sup>71</sup> The Paniya language has more affinity to the Adiya language.<sup>72</sup> The slaves are employed in all agricultural works.<sup>73</sup> Their works transformed Wayanad into an agrarian tract.

*The National Forest Policy of India* 1988, says in the *adivasi* areas, notably in Assam, Madhya Pradesh, and Orissa, shifting of cultivation resorted to by the aborigines is responsible for extensive destruction of forests.<sup>74</sup> The indigenous people eked out a precarious existence from freshly cut clearances in the forest, burning valuable timber to get ash for its manorial value.<sup>75</sup> The fertility built into the soil by forest trees over decades is, in consequence, soon exhausted.<sup>76</sup> They moved into another area, leaving denuded lands in their wake.<sup>77</sup> Biswamoy Pati, in the introduction of his work *Adivasis in Colonial India: Survival, resistance, and Negotiation*, says that caught between myths and legends, the world of the *adivasis* remains mostly invisible.<sup>78</sup> The case of Pandavas, led by Krishna and Arjuna (and supported

---

<sup>69</sup> *Ibid.*

<sup>70</sup> *Ibid.*

<sup>71</sup> Nettur P. Damodharan, *Op. Cit.*, p. 61.

<sup>72</sup> P. Somashekharan Nair, *Paniya Bhasha*, (Mal.), National Book Stall, Kottayam, 1977, p. 20.

<sup>73</sup> Adoor K. K. Ramachandran Nair, *Op. Cit.*, p. 85.

<sup>74</sup> *The National Forest Policy of India*, Ministry of Food and Agriculture, 1988, p.7, Sl.No. 8050, Kerala Forest Headquarters Central Library, Trivandrum (Hereafter KFHT).

<sup>75</sup> *Ibid.*

<sup>76</sup> *Ibid.*

<sup>77</sup> *Ibid.*

<sup>78</sup> Biswamoy Pati, 'Introduction: Situating the Adivasis in Colonial India', in Biswamoy Pati, (Ed.), *Adivasis in Colonial India: Survival, Resistance and Negotiation*, Indian Council for Historical Research, Orient BlackSwan, New Delhi, 2011, p. 1.

by *Agni*, the ‘god of fire’) who burnt the Khandava forests for seven days to build a beautiful palace, Mayasabha, can be cited as an example here.<sup>79</sup>

The Colonial government treated some *Adivasis* as Criminal tribes in different parts of the country. The Criminal Tribes Act XXVII of 1871(CTA) was introduced, and the revised version was applied to the whole of India, which included the Bombay and Madras Presidency.<sup>80</sup> The Criminal Tribes were enumerated as a separate social group from the 1911 census and were further modified once again in 1924.<sup>81</sup> They faced brutal oppression from the government and the landlords.<sup>82</sup> Though they had community feeling, they had no collective effort to possess the resources. Like the Red Indians in the American continent, most of the *adivasis* in Wayanad did not believe in the ownership of landed property. They considered jungles as part of their life. Except for the Kurichyas and some Kurumbas in Wayanad, the *adivasis* did not possess any landed property. On 23<sup>rd</sup> November 1881, G. Mc Watters, the Acting Collector of Malabar, had informed the Secretary to the Board of Revenue that, the Kurumbar who lived in the Government reserved forests in Wayanad are permitted by the Forest Officer to make clearings and raise *kumeri*<sup>83</sup> cultivation in tracts, and such farming has hitherto been assessed to revenue. The Deputy Conservator has brought to notice that this system of taxing their cultivation has forced many of the hillmen to leave Wayanad for Coorg and Mysore, where they are said to be more liberally treated as no tax

---

<sup>79</sup> *Ibid.*

<sup>80</sup> Subir Rana, ‘Salvaging a Common Descent and Lineage Between an Ex-‘Criminal Tribe’ of India and the Present-Day Gypsies of Europe: Weaving History and Spinning Tales on the Boundaries of ‘Civilisation’, in Bidhan Kant Das & Rajat Kanti Das (Ed.), *Rethinking Tribe in Indian Context: Realities, Issues and Challenges*, Rawat Publications, New Delhi, 2017, p. 197.

<sup>81</sup> *Ibid.*

<sup>82</sup> Interview, K. J. Baby, Environmental Activist and Writer, at Nadavayal, 27 October 2019.

<sup>83</sup> The shifting cultivation in the hilly region of the Western Ghats of Kerala known as *Kumeri* or *Kumari*.

is levied in either of those provinces on such cultivation.<sup>84</sup> His advice to the Government was that for the working of Wayanad Forests, the services of these Kurumbas are indispensable, and the continuance of the levy of the *kumeri* tax would be in the long run suicidal to the interests of the Forest Department.<sup>85</sup>

On 28<sup>th</sup> September 1880, the Deputy Conservator of Wayanad Forest sent a letter to Deputy Collector of Wayanad. He informed that Kurumbas living in the Government reserved forests, some sixty in number, in Coodracote (also known as kudrakote) near Thirunelli, came and complained to him that the *Adhikari* made them pay a tax of some 4 to 5 Rupees per acre if this tax was not immediately paid, the *Adhikari* and his Peons gave them great trouble, beating them and taking away anything they could lay hands.<sup>86</sup> Due to the lack of awareness of modern property rights and the constant oppression and alienation from others, the material condition of *adivasis* began to decay. In 1934 when Gandhiji visited Wayanad, he pointed out the miserable state of *adivasis*. He convicted the upper class of Wayanad for their inhuman treatment towards the *adivasis*.<sup>87</sup> On 26<sup>th</sup> November 1910, the Divisional Officer of Wayanad Rao Bahadur C. Gopalan Nair, informed the Collector of Malabar, that the hill tribes in Tirunelli amsam had hardly any land for cultivation.<sup>88</sup> Most of them belong to the category of landless agricultural labourers who were marginalized.

The houses of the *adivasis* were mainly built out of mud and bamboo. The tribes like Kurichias, Mullukkurumbas, Adiyars, Paniyars, Kattunaikars,

---

<sup>84</sup> *Wayanad Land Assessment and Cultivation*, Proceedings of the Board of Revenue, dated 9 December 1881, Enclosure No.1, Correspondence File, B.No.556, No.3164, RAK.

<sup>85</sup> *Ibid.*

<sup>86</sup> *Ibid.*

<sup>87</sup> M. Divakaran, *Gandhijiyum Keralavum*, D.C. Books, Kottayam, 1978, p. 79.

<sup>88</sup> *Forest well-wooded lands in Wayand, 1913*, R-Dis File, Sl.No.9, B.No.133, Revenue Department, RAK.

Uralikurumbas, etc. constructed these types of houses according to their style.<sup>89</sup> The construction materials were available in the nearby areas, and they have the skill to build it.<sup>90</sup> Some people had separate storehouses to keep rice and seeds. Kurumbas *Ooru* (settlements) were known as *Kudis*.<sup>91</sup> The *Ooru* of Adiyars were known as *Chemmam*.<sup>92</sup> Kurichyas followed a joint family style.<sup>93</sup> The groups of Paniya huts are called padis.<sup>94</sup> However, the eco-friendly residential areas mainly served the purpose of their livelihood.

Vinita Damodaran argued that the discourse of ‘tribal protection’ was to come to a full term in the debates around the statutory commission in the 1920s.<sup>95</sup> Surajit Sinha says, the British tried to integrate the tribal into broader society by establishing a uniform network of law and order.<sup>96</sup> The Government had considered the measures to be adopted for keeping them informed of the material consideration and progress of the aboriginals or very backward communities living in the various parts of the Presidency.<sup>97</sup>

To ascertain the needs of these indigenous communities and the measures necessary for their welfare, the Government was pleased to direct the Collectors of the following districts to submit an annual report to

---

<sup>89</sup> C. S. Chandrika & P. K. Sreenivasa, ‘Manveedukalude Thirichuvaravu’, in *Mathrubhumi Daily*, Kozhikode, 24 September 2014, p. 4.

<sup>90</sup> *Ibid.*

<sup>91</sup> G. S. Unnikrishnan, ‘Kadu Nammude Veedu’, in *Mathrubhumi Daily*, Kozhikode, 8 January 2016, p. 15.

<sup>92</sup> *Ibid.*

<sup>93</sup> *Ibid.*

<sup>94</sup> C. A. Innes, *Op. Cit.*, p. 135.

<sup>95</sup> Vinita Damodaran, ‘Colonial Constructions of the Tribe in India’, in Biswamoy Pati (Ed.), *Op. Cit.*, p. 87.

<sup>96</sup> *The Encyclopedia of Dravidian Tribes, Vol.I*, The International school of Dravidian Linguistics, St.Xavier’s College, Thiruvananthapuram, 1996, p. 77.

<sup>97</sup> G. T. Boag, *Report of Material Condition and Progress of Aboriginal Tribes and Very Backward Communities*, Prescribed, G.O. No.51, Office of the Collectorate of Malabar, 8 January 1937, Government of Madras, Sl.No.8, B. No.468, Revenue Department, RAK.

Government in respect of the aboriginal and backward communities specified against each region.

- (1) Malabar - Kurichian  
Kuruman
- (2) The Nilgiris - Badaga  
Kota  
Toda.<sup>98</sup>

The report should refer in particular to the economic and social conditions of the people in question, their progress in education, whether they associate with more advanced people, whether they are exploited by other communities, whether their interests are adequately looked after by the Government officials concerned and whether they have any special needs which ought to be met.<sup>99</sup> The report should also contain information on all points which may be of interest from an administrative point of view.<sup>100</sup> As per the 1881 Census, the number of educated in Wayanad taluk and Malabar District is given below.

**Table No. 3.2**  
**Number of Instructed in Wayanad taluk and Malabar District**

	<b>Under Instruction</b>	<b>Instructed</b>	<b>Illiterate, including not stated</b>	<b>Total</b>
Wayanad Taluk	1370	3853	82868	88091
Malabar District	68814	167176	2129045	2365035

Source: William Logan, *Malabar*, Vol. I, Govt. Press, Madras, 1951, p. 106.

<sup>98</sup> *Ibid.*

<sup>99</sup> *Ibid.*

<sup>100</sup> *Ibid.*

Agriculture was the principal occupation of the people in this region. Sanjay Subramanyam, in his *The Political Economy of Commerce Southern India 1500-1650*, says the Eastern and Western Ghats were and are of crucial importance for the agrarian economy.<sup>101</sup> Agriculture is the primary source of wealth in the State during those days, the pressure of population on the means of subsistence is determined by the condition of agriculture and the possibilities of its further development, both extensively and intensively.<sup>102</sup>

**Table No. 3.3**  
**Population and and their Occupation**

	Population in 1921			Loss or Gain of Population percent between					
	Per Square Mile of Total Area	Per 1000 acres		1871 and 1881	1881 and 1891	1891 and 1901	1901 and 1911	1911 and 1921	1871 and 1921
		Arable	Cultivated						
Wayanad Taluk	103	219	1189	-30	-12.9	-2.1	9.8	2.7	-32.6
Malabar District	535	1281	2446	4.6	12.1	5.6	7.8	2.8	37.7

Source: *A Statistical Atlas of the Madras Presidency, Statistical Atlas: Malabar, Revised of Fasli 1330*, Govt. Press, 1924, Madras, p.9, Regional Archives, Kozhikode, (Hereafter RAK).

Wayanad witnessed natural calamities and its effects, which had its impact on the agriculture sector. India, China, and Brazil witnessed famine due to the El Nino drought during 1876-79 and 1896-1902.<sup>103</sup> The great flood of 1924 had affected Malabar, in which Wayanad has no exception. The excessive rainfall caused massive floods in rivers, which damaged crops of paddy and sugarcane on low-lying lands.<sup>104</sup> The rainfall had not favoured the

<sup>101</sup> Sanjay Subramanyam, *The Political Economy of Commerce Southern India 1500-1650*, Cambridge University Press, New Delhi, 2004, p. 10.

<sup>102</sup> *Report of the Census of Travancore 1931*, Census of India 1931, p. 507, 49623, Centre for Development Studies Library, Thiruvananthapuram (Hereafter CDS).

<sup>103</sup> Anand, *Sthanam Thettiya Vasthu* (Mal.), Mathrubhumi Books, Kozhikode, 2014, p. 71.

<sup>104</sup> *Report on the Administration of the Madras Presidency for the Year 1923-24*, Weather and Crops, Fasli 1333, 1 July 1923 to 30 June 1924, Government Press, Madras, 1925, p. 51.

crops like pepper and coconut on high lying lands.<sup>105</sup> Compared to the other parts of Kerala, fewer casualties were there in Wayanad, due to its low density of population. The Joint secretaries of Madras Government G.T.J.Thaddaeus and M.S. Madhava Rau stated on 30<sup>th</sup> June 1925. The given table provides some information in this regard.

**Table No. 3.4**

**Malabar Floods Relief Committee**

Statement Showing Receipts, Expenditure, Distribution of Reliefs in the Distressed Areas, Bank Balance, etc., on 30-6-1925			
Taluk	No. of Destitute families Relieved	Amount (in Rs., A. & P.)	Total
Wayanad	66	750-0-0	750-0-0

Source: *The Malabar Flood Relief Committee*, Norman Printing Bureau, Calicut, R.Dis File, B.No.275, Revenue Department, RAK.

More casualty due to natural calamity affects the people who have small holdings and which is their subsistence. So we need to investigate the possession of holdings in Wayanad District in those days.

**Distribution of Holdings**

For that, we understand the various Laws related to the land which prevail in Malabar District. In Madras, the disintegrating effect of Hindu Law whereby all male members of a family are entitled to an equal share in the family property, and not infrequently take their shares by the actual division of the fields, fosters its continuance.<sup>106</sup> This general principle of the open field, combined with the scattered character of the holdings, is on the whole not only wasteful in land supervision and labour but speaking generally imposes one general agricultural practice in a village or tract.<sup>107</sup> When the

<sup>105</sup> *Ibid.*

<sup>106</sup> *Madras Agriculture- A Brief Survey*, 9 May 1917, p.3, A/206, RAK

<sup>107</sup> *Ibid.*



English started to study the tenurial land system in India, they initially tried to find who “owned” the land, so that a person could be made responsible for payment of revenue.<sup>108</sup> T.C. Varghese says the conversion of a large area of Wayanad Taluk into a new form of holding, namely *Government Janmam*, in contrast to *private janmam*.<sup>109</sup> The given table indicates the average size of holdings and classification of pattas of Wayanad taluk and Malabar district.

**Table No. 3.5**

**The table shows the average size of holdings of Wayanad taluk and Malabar district and classification of pattas according to the assessment payable**

	Total number of holdings	Average size of holdings				Percentage and revenue paid on pattas of				Percentage of the total number of pattas on which assessment is			
		Area (ACS.)	Assessment			Rs.10 and under	Rs. 30 and less but over Rs. 10	Rs. 100 and less but over 30	Over Rs. 100	Rs. 10 and under	Rs. 30 and less but over Rs. 10	Rs. 100 and less but over 30	Over Rs. 100
			Rs.	A.	P.								
Wayanad Taluk	5704	20.51	22	14	6	9	18	26	47	62	23	12	3
Malabar District	220650	6	15	1	9	13	13	20	54	76	14	7	3

Source: *A Statistical Atlas of the Madras Presidency, Statistical Atlas: Malabar*, Govt. Press, Madras, 1924, p.11, RAK.

The revenue taken from each land is based on the income and cultivation of that particular field. Before the advent of commercial crops like Coffee and Tea, the primary source of income of the agrarian society in

<sup>108</sup> M. P. Mujeebu Rehiman, ‘Formation of Society and Economy in Malabar 1750-1810’, Ph.D.Thesis, Department of History, University of Calicut, 2009, p. 148.

<sup>109</sup> T. C. Varghese, *Agrarian Change and Economic Consequences : Land Tenures in Kerala 1850-1960*, Allied Publishers, New Delhi, 1970, p. 26.

Wayanad was paddy cultivation. Nair *Taravadus* occupied most of the paddy fields. Chettis also owned land and cultivated paddy and coconuts. The indigenous people associated with the *Taravadus* are the primary agricultural labourers. After the spread of plantations, the majority remained labourers of the *Janmis*, and some of them became agricultural labourers in these plantations. Tribes like Kurichyas and Kurumbas cultivated paddy based on *pattas*.

The table number 10 in the Appendix I provides the abstract of the Resurvey Settlement Register of the 58 *Desams* in Wayanad taluk. The following are the situations of land in each *Desams* in Wayanad. The largest *Desam* in terms of the wetland area was Nenmeni *Desam* (5288.66 acres), whereas the lowest was Irimanathur *Desam* (112.43 acres). The largest area of dryland was in Muppainad *Desam* (34019.64 acres), whereas the lowest was in Veliyambam *Desam* (201.68 acres). The largest area of the total of both wet and dryland was in the Muppainad *Desam* (36439.74 acres), whereas the lowest was in Payingattiri *Desam* (589.35 acres). The largest area of *Poramboke* was in Thirunelli *Desam* (29188.67 acres), whereas the lowest was in Irimanathur, Pinangode, Thrikkaippatta and Kunnamangalam *Desams*. The given table indicates the average size of holdings and classification of *pattas* of Wayanad taluk and Malabar district. The smallest region in terms of the total of wet and dryland, Unassessed and *Poramboke* land was in Payingattiri *Desam* (610.22 acres), whereas the largest was in Muppainad *Desam* (37171.94 acres). Each *Desam* had its own geographical and economic features. Each *Desam* varied on its wet and dry land. Based on its measurement, we will get the picture of agrarian Wayanad. The Unassessed and *Poramboke* area was different in each *Desam*. The smallest region in terms of the total of wet and dryland, Unassessed and *Poramboke* land was in Payingattiri *Desam* (610.22 acres), whereas the largest was in Muppainad *Desam* (37171.94 acres). Each *Desam* had its own geographical and economic

features. Each *Desam* varied on its wet and dry land. Based on its measurement, we will get the picture of agrarian Wayanad. The Unassessed and *Poramboke* area was different in each *Desam*.

### **Land Tenures**

Landlordism was not eradicated in British India. Each region had its type of Land tenure. *Madras Agriculture- A Brief Survey*, says in Madras Presidency, two great divisions of Land Tenure can be seen. From two-thirds to three-quarters of the cultivated area of the Presidency is found in villages described in the accounts as *Ryotwari*, i.e., the holders of the land pay direct to the Government the revenue which is imposed on that land and which forms a first charge thereon; they possess full security of tenure so long as this revenue is paid; this revenue is proportioned as far as possible to the natural fertility and advantages possessed by the field; it is fixed for thirty years, and at the end of that period will, as a rule, only be charged in accordance with the main tendencies of prices of food grains.<sup>110</sup> In these tracts, unoccupied lands can be obtained by application to the Revenue authorities, but neighbouring landholders usually have preferential claims.<sup>111</sup> In the rest of the area, known as *Zamindari*, the holders of the land pay rent to a superior landlord who pays annually a fixed sum to the State.<sup>112</sup> The legislation has given to such holders of the land in *Ryotwari* tracts, but rates are revisable at shorter intervals, and either party can apply to the Revenue Courts for revision rent.<sup>113</sup> The table number 11 in the Appendix I, provides the total holding in Wayanad taluk and Malabar District during 1912-13. It states that the average rate of assessment of land in Wayanad taluk was Rs. 0.69/- per acre, whereas in Malabar district, it was Rs.1.98/- per acre. It clearly states that the assessment rate of land in

---

<sup>110</sup> *Madras Agriculture- A Brief Survey, Op. Cit.*, p. 4.

<sup>111</sup> *Ibid.*

<sup>112</sup> *Ibid.*

<sup>113</sup> *Ibid.*

Wayanad taluk was less than half of the rest of Malabar. But the average rate of assessment of the wetland in Wayanad taluk was Rs. 1.72/- per acre, whereas in Malabar district, it was Rs. 3.41/- per acre. The wetland was more valuable than the dry land in those periods. The average rate of assessment, including the total dry and wetland, was Rs. 1.08 per acre in Wayanad taluk, whereas in Malabar district, it was Rs. 2.59/- per acre. The above details underlie the fact that plenty of lands available for cultivation in these regions.

The monopoly of landlordism existed and put the peasantry under abject subjugation.<sup>114</sup> The landlords of Wayanad began to organize themselves due to the reform measures and succeeding changes on land and its use. *Wayanad Janmi Mahajana Sangham* was the collective effort of the landlords. They raised several demands in front of the Government. Concerning the accompanying letter from the Secretaries of the *Wayanad Janmi Mahajana Sangham* dated 2<sup>nd</sup> August 1918, the Collector of Malabar is requested to ascertain and report the Composition and status of the association and the objects for which it has been started.<sup>115</sup> All the Janmis of this Gudalur taluk, as well as of the Nilagiri Wayanad, are eligible for membership.<sup>116</sup> There are at present 185 members of which 5 are patrons who have subscribed Rs.100/- each and 32 are first-class members, 50-second class, and the rest are third-class members paying an annual subscription of Rs.12, 6 and 3 respectively.<sup>117</sup> All persons having an assessment in their names; however, a small amount may be, are eligible for membership.<sup>118</sup> At

---

<sup>114</sup> K. K. N. Kurup, *Agrarian Struggles in Kerala*, CBH Publications, Trivandrum, 1989, p. 39.

<sup>115</sup> *Memorandum*, No.1015 E/18-1, dated 17 August 1918, Government of Madras, By order G. H. Jackson, Under Secretary to Government, R-Dis File, No.4153/18 dated 30-09-18, Sl.No.38, B.No.210, Revenue Department, RAK.

<sup>116</sup> *Letter from Revenue Divisional Officer*, Manathavady to The Collector of Malabar, dated 20-09-1918, R-Dis File, Sl.No.38, B.No.210, Revenue Department, RAK.

<sup>117</sup> *Ibid.*

<sup>118</sup> *Ibid.*

present only, *Janmis* of Nilagiri and Wayanad are members of the Sabha.<sup>119</sup> The object of the Sabha is said to be to safeguard the interest of the Wayanad *Janmis* and to promote their welfare.<sup>120</sup> But the main task with which it is started seems to be to agitate against the introduction of the resettlement into the Wayanad.<sup>121</sup> The table number 12 in the Appendix I shows the Demand, collection, and Balance of current land revenue and cesses (in thousands of Rupees) in Wayanad taluk and Malabar District from 1903 to 1912. It indicates that during 1903 the demand in Wayanad was Rs. 160000 /- whereas in Malabar district, it was Rs. 3086000 /-. But in 1912, it was Rs. 37,37,000/- in Malabar district, whereas in Wayanad taluk, it remained as Rs. 1,60,000/-. It underlines the fact that there was no increase in the revenue demand in Wayanad district during these periods, whereas in Malabar district, it increased up to 21.1 %.

The District Gazette Supplement published the form of Register of Loans under the Agricultural Loans Act for the relief of distress.<sup>122</sup> It also mentions the landed property and names of Plaintiff and name of the defendant in Wayanad Taluk.<sup>123</sup>

### **Manorial Problem**

The actual farmers also faced many challenges in their cultivation. The Director of Agriculture, Madras Rudolph D. Anstead, wrote an article 'The Manorial Problem in South India and its Solution' printed in the 'Madras Mail.' The soil exhaustion in India is not merely a question of limited plant

---

<sup>119</sup> *Ibid.*

<sup>120</sup> *Ibid.*

<sup>121</sup> *Ibid.*

<sup>122</sup> *The Malabar Gazette*, 1 April 1895, Calicut, p. 11, RAK.

<sup>123</sup> *Ibid.*, p. 1.

food; it is the position of plant food in the soil.<sup>124</sup> Most of the cultivators preferred organic farming. It also sustains the fertility of the soil. The constant farming in the same area and the subsequent developments created soil exhaustion. The causes of the soil exhaustion are twofold; the habits of the people and their objection to the use of human excreta as manure and the export of commodities like seeds, oil-seeds, oil-cakes, and bones.<sup>125</sup> The first can only be remedied by years of preaching, owing to the sentimental objections of the people.<sup>126</sup> Their agrarian practice mainly based on hereditary knowledge and experience. It is, however, bound to come in time as the stress of the population on the food resources increases.<sup>127</sup> The population increased day by day. The second cause is one for which, sooner or later, a remedy will have to be found.<sup>128</sup> The population pressure motivated the Government to implement the policies on agriculture. The Government did not show any interest in the traditional knowledge of the farmers. The authorities demanded more and more production.

Agricultural customs need not be considered as the plantations do not serve rural areas.<sup>129</sup> The main agrarian indigenous community in Wayanad, the Kurichyas cultivated ragi, pepper, coffee, and areca nut.<sup>130</sup> In Wayanad, the only dry cereal crop of value is ragi, but valuable, exclusive products such

---

<sup>124</sup> Rudolph D. Anstead, *The Manorial Problem in South India and its Solution*, (Reprinted from the 'Madras Mail'), Agriculture Department, Madras, Bulletin No.90, Government Press, Madras, 1928, p. 3, A/207, RAK.

<sup>125</sup> *Ibid.*

<sup>126</sup> *Ibid.*

<sup>127</sup> *Ibid.*

<sup>128</sup> *Ibid.*

<sup>129</sup> W. G. Dyson, *Proceedings of the Chief Conservator of Forests, No.235, Press, Dated 29<sup>th</sup> April 1930, Revised Working Plan for the Nilgiri Plantations, 1928*, Government Press, Madras, 1930, p. 4.

<sup>130</sup> G. S. Unnikrishnan, *Op. Cit.*, p. 15.

as pepper, coffee, and tea are grown on the numerous estates of the taluk.<sup>131</sup> The unoccupied land all belongs to private *janmis*, and Government has no voice in their disposal.<sup>132</sup> Many of them are unoccupied only in the sense that they are cultivated not continuously but occasionally, and are therefore not liable to regular assessment.<sup>133</sup> In the Wayanad taluk, a considerable area of Government wasteland or barren land was available for assignment, but demand for land is less owing to the scarcity of labour, and the would-be cultivator has his choice of large areas of private land which he frequently occupies even without permission.<sup>134</sup>

The table number 13 in the Appendix I shows the average size of holdings of Wayanad taluk and Malabar district and classification of *pattas* according to the assessment payable. It states that the average size of holdings in Wayanad taluk was 20.51 acre, whereas in Malabar district was 6 acre. But the average rate of assessment in Wayanad taluk was far more than the Malabar district. More than three-fourths of the total number of holdings in the district pay an assessment of not more than Rs.10, whereas, in Wayanad taluk, it is below one-third.<sup>135</sup> Only 3 percent pay more than Rs.100 both in Wayanad taluk and Malabar District.<sup>136</sup> This fact would seem to suggest that Malabar teems with pauper *ryots*.<sup>137</sup> The figures in the table include thousands of non-agricultural *pattas* issued to persons who own no other land than their house-sites.<sup>138</sup> There is no other *gramanattam* (village house

---

<sup>131</sup> *A Statistical Atlas of the Madras Presidency*, Revised of Fasli 1330, Madras, Govt. Press, 1924, p. 5, 65731, CDS.

<sup>132</sup> *Statistical Atlas: Malabar*, in *A Statistical Atlas of the Madras Presidency*, Revised of Fasli 1330, Govt. Press, Madras, 1924, p. 7.

<sup>133</sup> *Ibid.*

<sup>134</sup> *Ibid.*

<sup>135</sup> *Ibid.*, p. 11.

<sup>136</sup> *Ibid.*

<sup>137</sup> *Ibid.*

<sup>138</sup> *Ibid.*

site<sup>139</sup>-Grama Natham land can only be used for residential purposes and not commercial) in Malabar, and except in the Wayanad, house sites are not exempted from the assessment.<sup>140</sup> Further, the unit for revenue purposes in Malabar- the *desam* – is very much smaller in area than the village of other districts. More than one-sixth of the total land revenue of the plains is paid by 40 *janmis*.<sup>141</sup>

### **Paddy Cultivation**

Paddy was the principal cultivation of the farmers in Wayanad. Around 600 years back, several marshy lands in Wayanad transformed into paddy fields. The waterlogged paddy fields helped a lot to maintain the human agro-system of Wayanad. A cultivated plant is protected in human agroecosystems and is nurtured in a prepared seedbed.<sup>142</sup> Rice can be cultivated under a variety of climatic and social conditions.<sup>143</sup> Over 10 ½ million acres of land within the Madras Presidency is cultivated with rice annually.<sup>144</sup> In its gross value, the total area under it, and its position as the local food grain, it is easily the most important crop in the Madras Presidency.<sup>145</sup> It may be said that it is cultivated wherever there is a cheap and assured supply of water.<sup>146</sup>

---

<sup>139</sup> <http://www.sreenidhi.net>>2016/10/24, accessed on 20-10-2017, 10.15 pm.

<sup>140</sup> *Statistical Atlas: Malabar* in A Statistical Atlas of the Madras Presidency, *Op. Cit.*, p. 11.

<sup>141</sup> *Ibid.*

<sup>142</sup> Hemal S. Kavinde, et. al., 'Wild Food Management in Wayanad, Kerala : An Explanatory Study', (Unpublished Study Report) Community Agro-biodiversity Centre, Kalpetta, Wayanad and Uttara Devi Resource Centre for Gender and Development, M. S. Swaminathan Research Foundation, Wayanad, 2001, p. 2.

<sup>143</sup> M. K. Sheela, (Ed.), *Package of Practices Recommendations: Crops*, Directorate of Extension, Kerala Agricultural University, Thrissur, 13<sup>th</sup> Edition, 2007, p. 1.

<sup>144</sup> *Madras Agriculture- A Brief Survey, Op. Cit.*, p.14.

<sup>145</sup> *Ibid.*

<sup>146</sup> *Ibid.*



Paddy is the chief wet crop and ragi the only dry crop of importance in Wayanad.<sup>147</sup> The traditional way of paddy cultivation in Wayanad started with *Chalidal* (make furrows), *Vithirakkal* (sow seeds), *Njaruparikkal* (uproot seedling), *Vilanatty* (ripeness), *Panikkodal* (go to work), *Kathiruoaja* (shoot into a spike), *Kathirukettal* (tying unbraided palm leaf), *Puthirikettal* (ceremony connected with the beginning of the first harvest), *Koythupidikkal* (reap) and in its end *Koythutheerkkal* (end of harvest).<sup>148</sup> Many places where the paddy fields were more, are known by the name 'Vayal' which means paddy land. Valavayal, Koolivayal, Punchavayal, Angadivayal, Ambalavayal, Kakkavayal, Pattavayal, Arivayal, Malavayal, Manalvayal, Manuvayal, Onivayal, Nadavayal, Kalluvayal, Cheeravayal, Vilambukandam, Arincher mala, Kurumani, Athinilam, etc. are some of the places. It shows the close connection between paddy cultivation and Wayanad.

Few crops exhibit such adaptability to circumstances, which enjoy such immunity from disease and are cultivated in such diverse manners.<sup>149</sup> As a rule, rice does best on massive land rich in organic matter, but provided the latter is present; certain varieties also flourish on very sandy soils.<sup>150</sup> It is a semi-aquatic plant and can stand a certain amount of salinity, which would be fatal to other cereals.<sup>151</sup> Usually, the seed is first sown in very carefully prepared seed-beds where the seedlings remain for about one-fifth of the total growing period.<sup>152</sup> These seedlings are then transplanted into the fields which have been thoroughly ploughed, flooded, and puddle so that the upper

---

<sup>147</sup> C. A. Innes, *Op. Cit.*, p. 501.

<sup>148</sup> M. P. Sukumaran, 'Nellachan', in *Malayala Manorama, Sunday Njazarazhcha*, Kozhikode, 14 August 2016, p. 7.

<sup>149</sup> *Madras Agriculture- A Brief Survey, Op. Cit.*, p. 14

<sup>150</sup> *Ibid.*

<sup>151</sup> *Ibid.*

<sup>152</sup> *Ibid.*

portions are of the consistency of fine mud.<sup>153</sup> The varieties of rice are legion in number and are not fully known.<sup>154</sup> They vary in duration of growth, colour of grain both husked and unhusked, the strength of straw, in size and shape of grain and shades of flavor.<sup>155</sup> The total area of paddy cultivation in Madras is 10,943,700 acres.<sup>156</sup> The number of varieties is vast, even if allowances are made for the same array receiving different names in different localities.<sup>157</sup> These varieties differ in colour either of the seed-coat or glume; their duration of growth, from three and a half to nine months; and their quality, i.e., the delicacy and flavor of their rice.<sup>158</sup> Wayanad is known for speciality rice varieties like Jeerakasala and Gandhakasala, which are scented varieties.<sup>159</sup>

Cheruvayal Raman, a traditional farmer in Wayanad, says there should have been no chemical content in the streams and rivers of Wayanad before 1960.<sup>160</sup> The cultivation mainly depended on monsoons. He had kept 50 varieties of paddy seeds, which are the traditional variety seeds used in Wayanad and other parts of Kerala in those days. The seeds were kept in a special type of cage made out of bamboo.<sup>161</sup> The name and harvest period of each variety are, *Veliyan* (6 months), *Chettuveliyan* (6 months), *Okkaveliyan* (6 months), *Mannu Veliyan* (6 months), *Chenthadi* (6 months), *Mundakan* (6

---

<sup>153</sup> *Ibid.*

<sup>154</sup> *Ibid.*

<sup>155</sup> *Ibid.*

<sup>156</sup> R. Cecil Wood (Com.), *A Note-Book of Agricultural Facts and Figures*, Madras Agricultural Department, 3<sup>rd</sup> Edition 1920, Government Press, Madras, p.58, A/209, RAK.

<sup>157</sup> *Ibid.*

<sup>158</sup> *Ibid.*

<sup>159</sup> P. Indira Devi, et. al., *National Agricultural Innovation Project: Base-line Survey Report of 'Multi Enterprise Farming Models to Address the Agrarian Crisis of Wayanad District of Kerala': Socio-Economic Status of Wayanad District*, Kerala Agricultural University, Poorna Publications, Kozhikode, 2012, p. 67.

<sup>160</sup> Interview, Cheruvayal Raman at his residence in Kammana, 20-05-2018.

<sup>161</sup> M. P. Sukumaran, *Op. Cit.*, p. 7.

months), *Chembakam* (6 months), *Chennellu* (5 months), *Kannichennellu* (5 months), *Marathondi* (5 months), *Chennalthondi* (5 months), *Chomala* (5 months), *Palveliyan* (5 months), *Adukkam* (5 months), *Thondan* (5 months), *Velumbaya* (5 months), *Karimbayan* (5 months), *Vellimuthu* (5 months), *Kanakam* (5 months), *Koduveliyan* (5 months), *Kuttiveiliyan* (5 months), *Kanali* (5 months), *Kuruva* (5 months), *Thavalakkannan* (5 months), *Gandhakashala*, *Jeerakashala*, *Mullankayama* (4 months), *Urunikayama* (4 months), *Onamottan* (4 months), *Onachanna* (4 months), *Palthondi* – white bran (4 months), *Palthondi* – red bran (4 months), *Kalladiyaran* (4 months), *Okkanpuncha* (4 months), *Vasumathi* (4 months), *Rakthashali* (4 months), *Kumkumashali* (4 months), *Chembavu* (4 months), *Vethandam* (4 months), *Kunnumkulamban* (4 months), *Peruvaka* (4 months), *Palkayama* (4 months), *Kunhicheera* (4 months), *Kunhunhi* (4 months), *Punnadanthondi* (3 months), *Thonnooramthondi* (3 months), *Karathan* (3 months), *Thonnoorampuncha* (3 months), *Njavara* (3 months) and *Njavara Chuvannathondu* (3 months).

The standard yield of paddy is placed at 1,800 lb.<sup>162</sup> per acre per crop.<sup>163</sup> Under the poorer land under poorer sources, yields will fall to 1,000 lb.(453.59237 kilograms) per acre but yet an average figure of 1,800 lb. is, if anything, a conservative estimate.<sup>164</sup> Being an agrarian tract, other crops also cultivated in Wayanad apart from Paddy. As per the Resurvey Settlement Register of 1928, the main crops grown in each *Desam* are shown below.

The table number 14 in the Appendix I mentions the total acreage and cents of Cultivation of major Cereals and pulses in Wayanad taluk. It shows that Nenmeni, Muttil, Kuppathode, and Nulpuzha Desams are the largest area of cultivation of paddy. The place-name Nenmeni in Malayalam indicates the

---

<sup>162</sup> lb is a written abbreviation for pound, when it refers to weight, 1 pound = 0.45359237 kg.

<sup>163</sup> *Madras Agriculture- A Brief Survey, Op. Cit.*, p. 14.

<sup>164</sup> *Ibid.*

plentifulness of rice. Kunnattidavaga, Thindummal, Varayal, and Alattil Desams were the least area of cultivation of Paddy. However, paddy was cultivated all 58 Desams in Wayanad. Ragi was another cereal cultivated in all Desams next after paddy except Kunnattidavaga Desam.

Pepper was the vital spice in Wayanad, and its name was famous from early times. Mundakayam Gopi says till the second half of the 19<sup>th</sup>-century pepper was neither cultivated nor collected from forests in Wayanad.<sup>165</sup> After the failure of Coffee cultivation, a European named Powel planted extensive spread Pepper in Kottanadu Estate near Kalpetta.<sup>166</sup> It was in the second decades of the 20<sup>th</sup> century that once again, the pepper cultivation extended in some parts of Wayanad.<sup>167</sup> But many years ago, the so-called “Wayandan pepper” was prevalent in Wayanad.<sup>168</sup> The table number 14 in the Appendix I shows that the extensive area of pepper cultivation in Wayanad. It shows that Thidummal, Veliyambam, Vadakkanad, Chenad, and Nulpuzha Desams are the least area of pepper cultivation. The extension of Pepper cultivation was very high in Kalpetta and Thariyode Desams. Vadakkanad, Chenad, Nulpuzha and Varayal are comparatively less area of pepper cultivation. One of the interesting facts is that pepper cultivated in all Desams in Wayanad next after paddy.

The table number 14 in the Appendix I shows the other crops cultivated in 58 Desams, which include Sugarcane, Various Fibres, Drugs, and narcotics such as Coffee, Tea, Tobacco, Cinchona, fruits, and vegetables including fruit crop such as Plantains and Coconuts. Wayanad was very familiar with its Coffee and Tea from the British period. Muttil, Thirunelli, and Chingeri are the most significant areas of cultivation of Coffee. It shows that 19 Desams had no Coffee cultivation. Tea, another plantation product

---

<sup>165</sup> Mundakayam Gopi, *Op. Cit.*, p. 149

<sup>166</sup> *Ibid.*

<sup>167</sup> *Ibid.*

<sup>168</sup> *Ibid.*

widely cultivated in Kottappadi, Muppainad, Kunntidavaga, and Achooranam Desams. Coffee was grown in more Desams than Tea. 43 Desams had no tea plantations. As per this register, Coconut was not a main crop of cultivation. But coconut cultivation in the surrounding field of the houses was frequent.<sup>169</sup>

There were different non-food crops also cultivated in Wayanad taluk (For more details, see table number 14 in the Appendix I). Kalpetta and Chingeri had 50 acres of rubber cultivation, but the area was not more extensive in other regions of Wayanad. The resurvey settlement register provides a picture of agrarian Wayanad and the spread of each crop in the specific locality before 1930.

The *Madras District Gazetteers: Statistical Appendix for Malabar District*<sup>170</sup> provides the classification of the area and principal crops of Wayanad Taluk between 1912 and 13. It states that 39081 acres of rice has been cultivated in Wayanad whereas Ragi was 3931 acres. The cultivation of other cereals was 262 acres, and the total cereals and pulses, including rice, were 43277 acres. The condiments and spices have been cultivated in 7632 acres, whereas tobacco was in 11 acres. The total cropped area of Wayanad taluk during 1912-13 was 69216 acres of land.

Besides the domestic consumption of agriculture products, especially spices of large quantities, were exported to other regions. The existence of a pepper trade was well established by at least the first century A.D.; pepper cultivation seems to have been rare until about the sixteenth century.<sup>171</sup>

---

<sup>169</sup> Interview, A. M. Bhaskaran (62), Farmer from Pulpally, at his residence, 5 December 2015.

<sup>170</sup> *Madras District Gazetteers: Statistical Appendix for Malabar District*, Government Press, Madras, 1915, pp. 24-25.

<sup>171</sup> Kathleen D. Morrison, 'Environmental History, the Spice Trade, and the State in South India', in Gunnell Cederlof & K. Sivaramakrishnan (Ed.), *Ecological Nationalism: Nature, Livelihoods, and Identities in South Asia*, Permanent Black, New Delhi, p. 58.

Wayanad above the ghats noted for production of pepper.<sup>172</sup> All the food which are eaten, whether flesh or vegetables is flavoured with so much of pepper.<sup>173</sup> The cargoes for the European market must be always procured through the medium of responsible merchants. These persons will necessarily expect some profit.<sup>174</sup> Pepper and Cardamom are two of the essential products of Ghat forests. It prospers in partly shaded locations from sea level to 1200 meters (4000 feet), and areas with 152 cms (60 inches) or more of rain a year.<sup>175</sup> Vinod Kottayil Kalidasan says the large scale cultivation of spices brought changes around the *adivasi* people.<sup>176</sup> The following table provides information about Malabar district's trade through important ports.

**Table No. 3.6**

Trade of Important Ports of Malabar District in Madras Presidency									
Port	1921-22			1928-29			1930-31		
	Foreign Trade	Coasting Trade	Total Trade	Foreign Trade	Coasting Trade	Total Trade	Foreign Trade	Coasting Trade	Total Trade
	Rs.Lakhs	Rs.Lakhs	Rs.Lakhs	Rs.Lakhs	Rs.Lakhs	Rs.Lakhs	Rs.Lakhs	Rs.Lakhs	Rs.Lakhs
Cochin	312.74	658.52	971.26	598.99	600.21	1199.2	452.81	586.65	1039.46
Calicut	119	234.42	353.42	383.5	409.61	793.11	333.23	458.97	792.2
Tellicherry	55.49	35.86	91.35	54.85	38.49	93.34	46.82	34.58	81.4
Badagara	4.22	56.71	60.93	0.64	72.08	72.72	2.43	82.85	85.28
Cannanore	1.98	74.81	76.79	5.24	92.39	97.63	7.8	68.04	75.84

<sup>172</sup> H. Smith, *Report of a Joint Commission from Bengal and Bombay Appointed to Inspect into the State and Condition of the Province of Malabar, in the years 1792 and 1793*, Fort Saint George Gazette Press, Madras, 1862, Reprint, J.Rejikumar (Ed.) (Reprint), Kerala State Archives, 2010, p. 28.

<sup>173</sup> M. Gangadharan (Ed.), *The Book of Duarte Barbosa, Vol.II., Making of Modern Keralam: The Land of Malabar*, Mahatma Gandhi University, Kottayam, 2000, p. 32.

<sup>174</sup> J. Strachey, *Report on the Northern Division of Malabar*, 7 March 1801, J.Rejikumar (Ed.) (Reprint), Kerala State Archives, Government of Kerala, 2011, p. 28.

<sup>175</sup> Kathleen D.Morrison, *Op .Cit.*, p. 59.

<sup>176</sup> Vinod Kottayil Kalidasan, 'The Routes of Pepper', in Sathese Chandra Bose & Shiju Sam Varghese (Ed.), *Kerala Modernity: Ideas, Spaces and Practices in Transition*, Orient Black Swan, New Delhi, 2015, p. 28.

Source: M. W. M. Yeatts, *Census of India, 1931, Volume XIV, Part 1, Report*, Govt. Press, Madras, 1932, p. 31, 26232, Centre for Development Studies, Thiruvananthapuram.

The above table shows the stability of the export of agriculture products from Malabar, especially in the Ghat regions to foreign countries. The industry was not so much developed in these regions except the small scale sector. So agriculture products were the principal item of export. Another significant development was the rise of these port cities. From the ancient period itself, due to the flow of agriculture products from the interior parts, many port towns emerged as an important centre of human activity. Because of the flow of goods from the peripheral regions, these cities developed.

### **Agriculture Implements**

The comparative self-sufficiency of the Indian villages supplied the necessary implements for the agriculture sector. Mechanization in agriculture was a mirage to Indian farmers during the Colonial period. A conventional wooden plough, a *kaikot* or *mammatte*, a rake, and a leveling instrument of the usual South Indian pattern are the most important.<sup>177</sup> Deep-ploughing is not in fashion and neither iron ploughs nor seed-drills are used.<sup>178</sup> After reaping, the grain is beaten out with sticks or trodden out by labourers. A *Statistical Atlas of the Madras Presidency* says bullocks are not used for the purpose save in Wayanad.<sup>179</sup> It is true that a very considerable number of the cultivators of the Madras Presidency could not raise even 25 rupees to buy a plough.<sup>180</sup> For general use, a wooden roller suffices; and any village carpenter can readily make such a roller.<sup>181</sup> The roller is intended to crush or

---

<sup>177</sup> *A Statistical Atlas of the Madras Presidency, Op. Cit.*, p. 4.

<sup>178</sup> *Ibid.*

<sup>179</sup> *Ibid.*

<sup>180</sup> William R. Robertson, *An Agricultural Class Book for the Use of Schools in South India*, E Keys, Govt. Press, Madras, 1880, Madras, p. 48, RAK.

<sup>181</sup> *Ibid.*, p. 49.

pulverize clods and to consolidate the soil. It is also used to smooth the surface of the land for seed.<sup>182</sup> The demand for Agriculture implements fostered a group of craftsmen in this region. The small scale industries mainly served this purpose.

The animals associated with the agrarian economy need to be mention. They are the indispensable part of the rural folk. Before the introduction of mechanization in agriculture, its number decided the wealth of a farmer. Some of them are used to serve the food of the people. The given tables show the picture of animals used in domestic purposes in Wayanad taluk and Malabar.

**Table No. 3.7 A**

**AGRICULTURAL STOCK IN 1920-21**

	Working Cattle		Breeding Stock				
	Bullocks	He Baffaloes	Cows	Bulls and Heifers under Four Years	She Baffaloes	Young Baffaloes	Sheep and Goats
Wayanad Taluk	14298	12208	17787	14522	10501	6289	1504
Malabar District	254360	137529	306872	276049	33892	21176	159312

**Table No. 3.7 B**

**AGRICULTURAL STOCK IN 1920-21**

	Horses and Ponies	Mules and Donkeys	Carts	Ploughs (iron and Wooden)	Boats	Indigo Vats	Sugar Mills	Oil Mills	Looms
Wayanad Taluk	54	5	467	10991	–	–	–	–	–
Malabar District	1099	52	13720	189738	7123	–	6	4937	10596

Source: *A Statistical Atlas of the Madras Presidency, Statistical Atlas:Malabar*, Govt. Press, Madras, 1924, pp.16-17.

<sup>182</sup> *Ibid.*



We have the details of the agricultural stock of 58 *Desams*, which was based on the Resurvey Settlement Register. It states that Nenmeni *Desam* had the most extensive number stock of Bullocks, and he Baffaloes (2809), cows (1627), and She buffaloes (1170) whereas the least number stocks of Bullocks and he Buffaloes (24) and she Buffaloes (9) was in Payingattiri *Desam*. The least number of cows (21) and young stock (21) was in Irimanathur *Desam*. The most significant number of young stock (1102) was in Muttill *Desam*. 17 *Desams* had no sheep and goats, whereas the largest number (188) was in Vemom *Desam*. 21 *Desams* had no carts, whereas the most significant number (60) was in Muppainad *Desam*. The largest number in terms of Ploughs were in Nenmeni *Desam* (1031), whereas it was very less in Kunnathidavaga *Desam* (6). Based on these statistics, we can conclude that Nenmeni was very famous for paddy cultivation (For more details, see table number 15 in the Appendix I).

Another table in the following part shows stocks maintained per 100 acres in Wayanad taluk.

**Table No. 3.8**  
**Agricultural Stock**

Taluk	Area Cultivated by a Pair of Tilling Cattle (ACS.)	Stock Maintained per 100 acres						Area Available for Grasing (ACS.)
		Occupied		Cultivated		Area Available for Grasing		
		Cattle of all Sorts	Sheep and Goats	Cattle of all Sorts	Sheep and Goats	Cattle of all Sorts	Sheep and Goats	
Wayanad	6.03	60	1	95	2	87	2	86623

Source: *A Statistical Atlas of the Madras Presidency, Statistical Atlas: Malabar*, Govt. Press, Madras, 1924, p.6, RAK.

The above table made it clear that the agrarian society in Wayanad had enough supply of agricultural stocks. These were contributed the richness of the agrarian village economy in Wayanad. Another significant fact is that the efforts of animals were not so less in agricultural production. During the

second quarter of the 20<sup>th</sup> century, the British Govt. slowly introduced machines in agricultural use. For this purpose, the Govt. conducted training programmes for the cultivators to some extent.

Men and cattle had a fair supply of food grains and fodder.<sup>183</sup> The continued fall in the prices of all articles, especially paddy, groundnut, and cotton have rendered the money market tight.<sup>184</sup> Besides, the *sowcars* (a Hindu banker<sup>185</sup>) have stopped lending and also have been calling in their past loans.<sup>186</sup> Thus the finance of the cultivators was crippled, and they had less money to spend on the land and to meet the cost of the necessaries of life.<sup>187</sup> Table No. XVII of Madras District Gazetteers: Statistical Appendix for Malabar District shows that from 1903 to 1912, the Land Improvement and Agricultural Loans total amount advanced under the Land Improvement and Agriculturists Loans Act in Wayanad Taluk is Rupees 500 only in the 1912.<sup>188</sup> The total outstanding balance at the beginning of 1903 in Wayanad taluk was the same amount.<sup>189</sup> But in the Malabar District, the total of the same period was Rupees 15160 only.<sup>190</sup> The total recovered amount in Malabar District was Rupees 5739 only during these periods, while in Wayanad taluk, its amount was nil.<sup>191</sup>

---

<sup>183</sup> *Season and Crop Report of the Madras Presidency for the Agricultural Year 1929-30*, Fasli 1339, Department of Agriculture, Government Press, Madras, 1930, p.5, RAK.

<sup>184</sup> *Ibid.*

<sup>185</sup> For example- Meanwhile his brother was the bondsman of the *sowcars*, and cultivating his land in return for simple food- in Edgar Thurston's *Caste and Tribes of Southern India*, [http://www.dictionary.com>browse>](http://www.dictionary.com/browse), accessed on 21-10-2017, 7.20 pm.

<sup>186</sup> *Season and Crop Report of the Madras Presidency for the Agricultural Year 1929-30*, *Op. Cit.*, p. 5.

<sup>187</sup> *Ibid.*

<sup>188</sup> *Madras District Gazetteers: Statistical Appendix for Malabar District*, Government Press, Madras, 1915, p. 39.

<sup>189</sup> *Ibid.*

<sup>190</sup> *Ibid.*

<sup>191</sup> *Ibid.*

Thus Government did not give encouragement to agricultural loans, especially in very remote areas. This was a usual practice of colonial India. The commercialization of agriculture led to the impoverishment of peasantry in different parts of the country. Crops could not therefore be stocked in expectation of better prices and this fact was also responsible for the steady fall in the prices of all articles and also of land.<sup>192</sup> The bad luck of the cultivator of the West coast was aggravated by the low yield and price of the pepper, the large fall in the price of coconut and the scarcity of fish and the continued absence of sardines.<sup>193</sup> The fall in the price of the coconut has affected badly the *ryots* in deltaic areas also where the crop is much depended upon.<sup>194</sup> The position of the labourer paid in money was however better.<sup>195</sup> He was in keen demand, earned the same money as before, and had to pay the less for the necessaries of life.<sup>196</sup> The assignment of lands on a fairly large scale to members of the depressed classes has raised them in some places to the status of *pattadars* (lease-holder or tenants).<sup>197</sup> The following table indicates the area occupied and available in Malabar district.

**Table No. 3.9**

**Area occupied and available**

<b>The Statement below Shows, in Hundreds of Acres, the Distribution of the Total area of the District Excluding the Islands, into Arable, Occupied and Cultivated</b>						
<b>Total (Ryotwari)</b>		<b>Arable</b>		<b>Occupied</b>		<b>Cultivated area</b>
Areas (ACS.)	Percentage arable	Areas (ACS.)	Percentage arable	Areas (ACS.)	Percentage arable	
5256	74	3870	33	1260	63	800

<sup>192</sup> *Season and Crop Report of the Madras Presidency for the Agricultural Year 1929-30, Op. Cit., p. 5.*

<sup>193</sup> *Ibid.*

<sup>194</sup> *Ibid.*

<sup>195</sup> *Ibid.*

<sup>196</sup> *Ibid.*

<sup>197</sup> *Ibid.*

Source: *A Statistical Atlas of the Madras Presidency, Statistical Atlas: Malabar*, Govt. Press, Madras, 1924, p.7.

The Encroachment Act cannot be applied as new lands have been classified and assessed and are intruded on for the assignment for cultivation.<sup>198</sup> Occupants causing damage to forest produce may be punished under the forest rules.<sup>199</sup> We have the data on various types of land in Malabar district and Wayanad taluk. It clearly states the comparison of the total forest and cultivated area and the land revenue per head in Malabar district and Wayanad taluk. The percentage of arable area occupied in Wayanad taluk compared to the rest of the regions in Malabar district was very low. (For more details, see table number 16 in the Appendix I)

The total holdings and various types of rent extracted from each holding in Malabar district and Wayanad taluk also throw light to the possession of the landed property in Wayanad and Malabar district. We can clearly understand the condition of the people who practiced agriculture in Malabar district and Wayanad taluk. Each table reflects the fact that the number of occupants was very less in Wayanad taluk compared with the rest of the Malabar district. The area under the landlords was high in Wayanad taluk than the small peasants. The small peasants either received land from landlords or government, and the owners of extensive holdings controlled the agriculture sector of Wayanad. (For more details, see table number 17 in the Appendix I)

*Madras Agriculture- A Brief Survey* of 1917 states that as a result of the peace and order which has been maintained now for more than hundred years this last century has been a very considerable increase in all that is generally summed up in the word “development” when referring to the plains of Madras one must remember that it possesses a most ancient social system, that its method and practice of Agriculture is no more growth.<sup>200</sup>

---

<sup>198</sup> *Forest Act*, dated 09-04-1907, Sl.No.16, B.No.51, p.9, RAK.

<sup>199</sup> *Ibid.*

<sup>200</sup> *Madras Agriculture- A Brief Survey, Op. Cit.*, p. 1.

## Plantations

Besides the land of indigenous farmers and landlords, a sizable part of the cultivated area in Wayanad was large estates owned either by the Europeans or natives. In the Madras Presidency, two very distinct types of cultivation are to be found- the old established cultivation of the plains by a vast number of tiny holders and the more recent cultivation of tea, coffee, and rubber in the mountains and hill slopes of the West Coast.<sup>201</sup> This last partakes more of small capitalistic agriculture and has been mostly developed by European enterprises.<sup>202</sup> For convenience sake, it will be referred to in this note as “Planters’ products”.<sup>203</sup> Here we classify the forest plantations and estates owned by private entrepreneurs. The ‘low castes’ in the tea, coffee and spice estates of Malabar as in the farms of Ceylon, were virtually leading a life not often distinguishable from that of beasts.<sup>204</sup>

The Europeans owned a number of large scale plantations in Wayanad. The Jains also had estates.<sup>205</sup> Later the people from other parts of Kerala purchased and occupied estates. The large scale estates and the estate *padis* associated with it were a separate socio-economic region in Wayanad in those days. A number of people had worked in these estates both from Kerala and outside. The labour contractors or labour recruiting agents<sup>206</sup> called *Kankanis* brought the labourers from outside. The life in this estate *padis* was very severe. They were severely exploited both by *Kankanis* and Estate managements. Though some of the estates had dispensaries, several labourers

---

<sup>201</sup> *Ibid.*

<sup>202</sup> *Ibid.*

<sup>203</sup> *Ibid.*

<sup>204</sup> Vinod Kottayil Kalidasan, *Op. Cit.*, p. 32.

<sup>205</sup> *Mathrubhumi*, 16 January 1934, p. 1.

<sup>206</sup> P. K. Michael Tharakan, *Coffee, Tea or Pepper? Factors Affecting Choice of Crops by Agro- Entrepreneurs in the 19<sup>th</sup> Century South West India*, Working Paper No.291, Centre for Development Studies, Thiruvananthapuram, 1998, p. 13.

lost their life due to malaria and other diseases. It was a nightmare for labourers who came to Wayanad in those days. Even though the government had taken some efforts to eradicate these diseases, so many people lost their life. The following table indicates the number of people vaccinated in Wayanad taluk from 1910-11 to 1912-13.

**Table No. 3.10**  
**Vaccination**

	Number of Persons Successfully Vaccinated			Registered Birth Rate Per 1000 of Population in			Average Number of Successful Cases of Vaccination on Children under one year during the three years ending 1912-13
	1910-11	1911-12	1912-13	1910	1911	1912	
Wayanad Taluk	3464	3341	3022	28	7	27	237
Malabar District total	126145	150067	124307	38	37	33	38265

Source: *Madras District Gazetteers: Statistical Appendix for Malabar District*, Govt. Press, Madras, 1915, p.39.

The healing technique of the native Adivasis and others lost its importance due to the introduction of modern medicine and the spread of diseases. The native drugs made out of the medicinal plants available in the jungles of Wayanad could not get immediate results compared to modern medicine. Thus they were forced to become the consumers of contemporary medicine though the modern medical facilities were not affordable to the majority of the people. The writers like Satadru Sen coined it as ‘Medical Colonialism’.<sup>207</sup> It created the notion that native techniques are primitive. It ultimately led to the negligence of much indigenous knowledge and its application.

<sup>207</sup> Satadru Sen, ‘Medical Colonialism in Andamanese’, in Biswamoy Pati (Ed.), *Adivasis in Colonial India: Survival and Negotiation*, Indian Council of Historical Resesarch, Orient BlackSwan, New Delhi, 2011, p. 269.

In the hill slopes and table lands of the ghats, a very different system of agriculture is in vogue.<sup>208</sup> The cultivated tracts there in consist of the most of large compact blocks of land planted as a rule with only one or two crops, which are almost invariably perennials, e.g., tea, coffee, cinchona, rubber, cardamoms and to a small degree in the Wayanad pepper.<sup>209</sup> These have nearly all been opened up from virgin forest or jungle land within the last 50 years as the result of capitalist enterprise, whether European or Indian, but chiefly the former.<sup>210</sup> In the early days, it was the result mostly of individual effort, but later the capital management and development have usually been found by Joint Stock Companies<sup>211</sup>, which in the course of time absorbed many estates that were formerly privately owned.<sup>212</sup> The land of these ventures is usually held on payment of an annual acreage rate directly under the Government from whom it was initially obtained.<sup>213</sup> The application should be made to the Local Government concerned to ascertain the terms on which such land can be acquired.<sup>214</sup> The extensive area was available for the cultivation of plantation crops. Similar to the enclosure movement in Great Britain during the late medieval period, the entrepreneurs alarmingly occupied the arable land in Wayanad. They followed the logic of capitalist farming. The Government took necessary steps for the granting of the land. (For more details, see table number 18 in the Appendix I).

The availability of land attracted entrepreneurs to occupy Wayanad. Labour is recruited from the plains mainly on a system of advances and is

---

<sup>208</sup> *Madras Agriculture- A Brief Survey, Op. Cit., p.7.*

<sup>209</sup> *Ibid.*

<sup>210</sup> *Ibid.*

<sup>211</sup> A company whose stocks is owned jointly by the shareholders.

<sup>212</sup> *Madras Agriculture- A Brief Survey, Op. Cit., p. 7.*

<sup>213</sup> *Ibid.*

<sup>214</sup> *Ibid.*

usually housed on the estate at the expense of the estate.<sup>215</sup> In the various local districts, the planters have formed themselves into district associations to further their local interest, while all these district associations combine to support the general body of the United Planters' Association of Southern India with head-quarters at Bangalore.<sup>216</sup> According to C. A. Innes, in response to representations from the Wayanad planters, an agricultural experimental station was opened in 1905 at Taliparamba to study pepper in all its aspects and to control pests on that crop.<sup>217</sup>

The consumption of planters' products in different parts of the world accelerated investment in a particular sector. Markman Ellis says in late eighteenth century London, gentlemen continued to make frequent use of the coffee-houses, to read the newspapers, eavesdrop on conversations to meet with friends, and to take the temperature of the city.<sup>218</sup> In 1820 or thereabouts, a partner of Messrs. Parry & Co., was on his way from Madras, across the Peninsula to Calicut and went up the Kuttyadi ghat, he was much impressed with the growth of the trees and the quantity of the crop, and on his return to Madras sent Mr. King to purchase grass hills near Mananthavady and opened about 75 acres of land for coffee.<sup>219</sup> It was the first attempt that failed.<sup>220</sup> Mr. Pugh from Ceylon, an experienced planter, then visited Mananthavady and established the first coffee estate known as Pew Estate.<sup>221</sup> The exact year is not known, but it was between 1830 and 1840.<sup>222</sup> According to P. K. Michael

---

<sup>215</sup> *Ibid.*

<sup>216</sup> *Ibid.*

<sup>217</sup> C. A. Innes, *Op. Cit.*, p. 214.

<sup>218</sup> Markman Ellis, *The Coffee-House: A Cultural History*, Phoenix, London, 2005, p. 211.

<sup>219</sup> T. K. Gopala Panikkar, 'Extracts from Malabar and its Folk, 1990, Plantations in Wayanad', in M. G. S. Narayanan (Ed.), *Malabar*, Malabar Mahotsav Souvenir, 1994, p. 138, RAK.

<sup>220</sup> *Ibid.*

<sup>221</sup> *Ibid.*

<sup>222</sup> *Ibid.*



Tharakan, Coffee was introduced in Wayanad in 1840.<sup>223</sup> Large areas of forests changed hands from about 1840 for coffee planting.<sup>224</sup> By 1847 a rough track was established from Nilgiri hills through Gudalur to Sulthan's Bathery in the Wayanad.<sup>225</sup> The area was surveyed in 1847 and pronounced very suitable for coffee plantations.<sup>226</sup> On 14<sup>th</sup> May 1881, the Wayanad Deputy Collector, Mananthavady, sent a letter to the District Collector of Malabar. His list includes 108 Coffee Estates of Wayanad and its names.<sup>227</sup>

C. A. Innes says that between 1893 and 1903, the area under Coffee in Wayanad decreased from 20096 acres to 5477 acres, and it is gradually being supplanted by tea.<sup>228</sup> The cultivation of Tea on the Nilgiri hills dates back to 1835.<sup>229</sup> The British started large scale tea plantations in Wayanad and Nilgiri region in the 1870's.<sup>230</sup> After 1892, the Coffee estates and Cinchona plantations were transformed into tea gardens. Rao Bahadur C. Gopalan Nair informed the Collector of Malabar that Muppainad amsam was a tea region.<sup>231</sup> Wayanad Tea Co., which had previously been formed by Parry & Co. and also Wentworth Estate, then owned by Peirce Leslie & Co. and

---

<sup>223</sup> P. K. Michael Tharakan, *Coffee...*, *Op.Cit.*, p. 13.

<sup>224</sup> B. A. Cariapa, *Revised Working Plan for The Wynad Forest Division 1950-51 to 1959-60*, Government Press, Thiruvananthapuram, 1955, p. 24, KFHT.

<sup>225</sup> R. Prabhakar and Madhav Gadgil, 'Maps as Makers of Ecological Change: A case study of the Nilgiri Hills of Southern India', in David Arnold & Ramachandra Guha (Ed.), *Nature and Culture and Imperialism: Essays on the Environmental History of South Asia*, Delhi, Oxford University Press, 1996, p. 171.

<sup>226</sup> *Ibid.*

<sup>227</sup> R-Dis. Folded File, Sl.No.52, B.No.11, Revenue Department, RAK.

<sup>228</sup> P. K. Michael Tharakan, *Coffee...*, *Op. Cit.*, p.13.

<sup>229</sup> *Proceedings of the Madras Government, Revenue Department, 28<sup>th</sup> August 1874*, Miscellaneous Proceedings, 1882, No. 149, p. 1, B.No.556, Correspondence File, Revenue Department, RAK.

<sup>230</sup> Paul Jose, 'Kazhchayude Cheppu Thurannu', Gudallur, *Focus Manorama, Malayala Manorama*, 31 March 2017, p. 1.

<sup>231</sup> *Forest well-wooded lands in Wayanad, Op. Cit.*

R.S.Anderson.<sup>232</sup> The coffee crop is not now of much importance, but tea has extended rapidly, and the prosperity of the taluk is consequently on the increase.<sup>233</sup> The Planters had a strong feeling concerning the need of plantations in the neighborhood of their Estates to supply charcoal for making tea and timber for tea boxes, and land may be given to them free, to enable them to form plantations.<sup>234</sup> Plantations will prove a direct financial advantage to Government and will have a beneficial effect on the climate of the district.<sup>235</sup>

Besides coffee and tea, other spices also were cultivated in Wayanad. In the whole of Wayanad, only 100 acres cultivated cardamoms.<sup>236</sup> All the local officers of experience in the Wayanad agreed that the development of the taluk is unnecessarily retarded by the difficulty experienced by planters in obtaining Government land at a reasonable initial cost.<sup>237</sup>

The first cinchonas were planted in Cherampadi by Captain Cox and Mr. Irvine in 1868.<sup>238</sup> From 1880 to 1890, it was primarily grown, but the significant exports from Ceylon and Java sent the price down to what would hardly pay for the harvesting and shipping.<sup>239</sup> The industry was ruined by overproduction.<sup>240</sup> As far as Wayanad was concerned for the Cinchona boom

---

<sup>232</sup> W. K. M. Langley (Ed.), *Century in Malabar: The History of Peirce Leslie & Co., Ltd (1862- 1962)*, p.64, RAK.

<sup>233</sup> *A Statistical Atlas of the Madras Presidency, Op. Cit.*, p. 5.

<sup>234</sup> *Proceedings of the Madras Government, Revenue Department, Op. Cit.*, p. 1.

<sup>235</sup> *Ibid.*

<sup>236</sup> *Forest Land in Wayanad, 1888-1907*, J. H. Garstin, Proceedings of the Board of Revenue (Land Revenue), 1888, Proceedings , 20<sup>th</sup> January, 1888, p. 4, Sl.No. 61, B.No. 164, Correspondence Files, RAK.

<sup>237</sup> *Forest Land in Wayanad, 1888-1907*, J.Andrew, Proceedings of the Board of Revenue (Land Revenue), Madras, Proceedings 129, 8 May 1907, Correspondence Files, B. No. 164, p. 3, RAK.

<sup>238</sup> T. K. Gopala Panikkar, *Op. Cit.*, p. 138.

<sup>239</sup> *Ibid.*

<sup>240</sup> *Ibid.*

to complete the ruin of most of the coffee, and the Cinchona estates, after a short spell of prosperity, suffered the same fate as Coffee in the case of the Gold mines.<sup>241</sup>

### **Estates in Wayanad**

The creation of several estates was a significant development in the agrarian history of Wayanad. These estates, mainly owned by the individual entrepreneurs, played a decisive role in the socio-economic life of Wayanad. Therefore a survey of these estates was an essential factor to know the agrarian transformation of Wayanad. On 24<sup>th</sup> June 1879, the Deputy Collector of Wayanad sent a letter to the Collector of Malabar regarding the list of Tea and Coffee Estates in Wayanad. In that letter, he listed 93 Estates and its name and extent.<sup>242</sup> It gives a specific account of the plantations of each amsam. On 7<sup>th</sup> June 1883, the Deputy Collector, Mananthavady, sent another letter regarding the Chundale Estate was sold in the spring of 1881.<sup>243</sup>

To understand the agriculture pattern of Wayanad, it is essential to list out the significant estates before 1930. As per the Resurvey of 1928, 18 out of 58 Desams in Wayanad Taluk, had large estates. The Desams<sup>244</sup> who have maintained Estates is 1. Periya, 2. Varayal, 3.Tondar, 4. Thgindummal, 5. Tavinhall, 6. Vemom, 7. Thirunelli, 8. Kalpetta, 9. Pinangod, 10. Achchuranam, 11. Kunnattidavaga, 12. Kottappadi, 13. Triikkaippatta, 14. Muppayinad, 15. Muttil, 16. Chingeri, 17. Nenmeni and 18. Kidanganad. Resurvey Register did not mention any estates in the rest of the Desams. The following are the brief description of these Estates in each Desam.

---

<sup>241</sup> C. Rajagopalachari, 'Preface', in W. K. M. Langley, (Ed.), *Op. Cit.*

<sup>242</sup> *List of Tea and Coffee Estates in Wayanad Taluk*, 1879, Sl.No.52, B.No.11, Folded File, Revenue Department, RAK.

<sup>243</sup> *Sale of Chundale Estate*, R-Dis. File, Sl.No.17, B.No.23, Folded File, Revenue Department, RAK.

<sup>244</sup> *Vythiri and Mananthavady Division, Area and Population, 1886*, R-Dis File, Sl.No.3, B.No.32, Folded File, Revenue Department, RAK.

1. Among the 18 Desams, the Periya Desam, Periya Peak Estate had 76 acres and 19 cents of developed area and 188 acres 29 cents of an undeveloped area, which are old holding. In the same estate, 35 cents of a developed area can be seen as New Holdings.<sup>245</sup>
2. In Varayal Desam, Glenleven Estate is an old holding which has 74 acres and 30 cents of developed area and 20160 acres and 59 cents of an undeveloped area, which are Old Holdings.<sup>246</sup>
3. In Tondar Desam, Thettamala Tea Estate is the largest developed area that has 403 acres and 78 cents and 273 acres, and 95 cents is an undeveloped area. Another estate, Vettayotan Kunnu, held 179 acres 40 cents is an undeveloped area. Kallumottan Kunnu Tea Estate held 273 acres and 95 cents undeveloped area, also located in the same Desam. All the three are Old Holdings.<sup>247</sup>
4. Manathavady Tea Estate is one of the largest Estate in Thindummam Desam, which has 441 acres and 72 cents of developed area and 452 acres and 15 cents of undeveloped area. Makkimala Estate is another one that has 176 acres and 40 cents of developed area and 1381 acres and 29 cents of undeveloped area. Pew Dindimal Estate (46 acres and 80 cents of developed area and 305 acres and 32 cents of undeveloped area), Fringford Estate (14 acres and 72 cents of developed area and 128 acres and 85 cents of undeveloped area), Sew Sanker Estate (2 acres and 67 cents of developed area and 327 acres and 47 cents of undeveloped area), Ramsay Estate (384 acres and 33 cents of undeveloped area), Forest Flower Estate (320 acres and 87 cents of undeveloped area) and Erithimala Estate (640 acres and 48 cents of undeveloped area)

---

<sup>245</sup> *Resurvey Settlement Register, No.1, Periya Desam*, p. 4, RAK.

<sup>246</sup> *Resurvey Settlement Register, No.2, Varayal Desam*, p. 4, RAK.

<sup>247</sup> *Resurvey Settlement Register, No.6, Tondar Desam*, p.4, RAK.

undeveloped area) are the other Estates, and all belong to New Holdings.<sup>248</sup>

5. Tavinhal Estate in Tavinhal Desam has 56 acres and 87 cents of developed area and 596 acres and 6 cents of undeveloped area. Kakkancheri Kunnu (13 acres 38 cents of the developed area), Pew D adimal (715 acres and 52 cents of undeveloped area), and Benespoir alias Kumanmala Estate (83 acres and 99 cents of undevelopewd area) are other Estates in the Desam which belong to Old Holdings.<sup>249</sup>
6. In Vemom Desam, Jessie Estate, which has 542 acres and 47 cents of developed area and 7 acres and 25 cents of undeveloped area, is an Old Holding. Other Old Holding in Vemom are Cherkkara Kunnu( 8 acres and 02 cents is developed area and 28 acres and 08 cents of undeveloped area), Nemori Estate (167 acres and 43 cents of developed area and 463 acres and 39 cents of undeveloped area), Cherakkara Estate (95 acres and 19 cents of developed area and 273 acres and 50 cents undeveloped area), Kalliyotu Estate (8 acres and 90 cents of developed area and 31 acres and 62 cents of undeveloped area), Jessie Estate and Minihaha Estate (369 acres and 18 cents developed area and 207 acres and 34 cents of undeveloped area), Karichikandi Kunnu (1 acre and 17 cents of undeveloped area), Glenbotou or Dedington Estate (749 acres and 54 cents of undeveloped area), Nemmeni Kunnu (1 acre and 24 cents developed area), Ala Kunnu, Thammankottu Kunnu (2 acre and 42 cents developed area ), Kannothe malai Estate (390 acres and 37 cents undeveloped area ) and Wycoon Estate (249 acres and 60 cents undeveloped area ).<sup>250</sup> The

---

<sup>248</sup> *Resurvey Settlement Register, No.7, Tindummal Desam, p.4, RAK.*

<sup>249</sup> *Resurvey Settlement Register, No.8, Tavinhal Desam, p.4, RAK.*

<sup>250</sup> *Resurvey Settlement Register, No.18, Vemom Desam, p. 4, RAK.*

New Holdings in Vemom are Cherakkara Estate (315 acres and 32 cents developed area and 47 acres and 96 cents of undeveloped area), Kalliyot or Clifton Estate (95 acres and 27 cents developed area and 79 acres and 57 cents undeveloped area), Cherakkara Tea Estate (87 acres and 71 cents developed area and 6 acres and 04 cents of undeveloped area), Jessie Estate (1 acre and 27 cents developed area), Nemmeni Kunnu (54 cents undeveloped area) and Illathu Sholai Estate (122 acres and 98 cents undeveloped area).<sup>251</sup>

7. In Thirunelli Desam, the Old Holdings are nil. But the New Holdings are Resealas Estate (177 acres and 77 cents developed area and 185 acres and 83 cents undeveloped area), Brahmagiri Estate also called Rockchat field (86 acres and 40 cents developed area and 1922 acres and 36 cents undeveloped area), Olagod Estate (55 acres and 72 cents developed area and 268 acres and 80 cents), Long cliff Estate (89 acres and 60 cents developed area and 209 acres and 36 cents undeveloped area), Vellarimala Estate ( 6 acres and 65 cents developed area and 308 acres and 82 cents undeveloped area), Tolpatti Kunnu (119 acres and 24 cents and 126 acres and 04 cents undeveloped area), Chempakapati Kunnu (60 cents developed area) and Druncree Estate (69 acres and 20 cents developed area and 196 acres and 60 cents undeveloped area).<sup>252</sup>
8. In Kalpetta Desam, the larger Estates are Perindotty Estate (333 acres and 74 cents developed area and 284 acres and 15 cents of undeveloped area) and Caroline Estate (123 acres and 97 cents developed area and 801 acres and 30 cents of undeveloped area). Besides these there exist, Adelaide Estate (42 acres and 43 cents developed area and 282 acres and 13 cents undeveloped area) and

---

<sup>251</sup> *Ibid.*

<sup>252</sup> *Resurvey Settlement Register, No.20, Thirunelli Desam, p. 4, RAK.*

Suriambathkunnu (64 acres and 25 cents of developed area and 3 acres and 05 cents undeveloped area). All are Old Holdings.<sup>253</sup>

9. Achoor Estate, Old Holding (91 acres and 25 cents of the developed area), and New Holdings (127 acres and 87 cents of a developed area) is the Estate in Pinangode Desam.<sup>254</sup>
10. In Achchuranam Desam, Charlotte Estate (1846 acres and 87 cents developed area and 373 acres 14 cents undeveloped area) and Kallur Estate (129 acres and 59 cents developed area and 1706 acres and 01 cents undeveloped area) are the larger Estates. Achoor Estate alias Aramangalam or Emily Estate (269 acre and 81 cents developed area and 123 acres and 27 cents undeveloped area), Kunhom Kunnu (9 acres and 28 cents developed area), Kunhom Kunnu, Mokkalini Kunnu, Thanniyana or Musaferkhan Kunnu, Chundalamottan Kunnu (36 acres and 21 cents developed area and 165 acres and 82 cents undeveloped area), Peacock Estate (23 cents developed area and 130 acres and 65 cents undeveloped area), Peringodi Estate (216 acres and 38 cents developed area and 395 acres and 36 cents undeveloped area), Paralakoon Estate (137 acres and 99 cents developed area and 1237 acres and 99 cents undeveloped area), Chembatti Estate (50 cents developed area and 58 acres and 30 cents undeveloped area), Culloden Estate (86 acres and 41 cents undeveloped area), New Peringodi Estate (76 acres and 09 cents undeveloped area), Reversedale Estate (88 acres and 57 cents undeveloped area), Jane Estate (1727 acres and 62 cents undeveloped area) and Bengathode Estate (260 acres and 13 cents undeveloped area). All the estates, as mentioned above in Achchuranam Desam, are Old Holdings. The only New Holding is

---

<sup>253</sup> *Resurvey Settlement Register, No.45, Kalpetta Desam, p. 4, RAK.*

<sup>254</sup> *Resurvey Settlement Register, No.46, Pinangode Desam, p. 4, RAK.*

Achoor Estate alias Aramangalam or Emily Estate (23 acres 93 cents developed area and 25 acres and 91 cents undeveloped area).<sup>255</sup>

11. The largest Estate in Kunnathidavaga Desam is Chundale Estate, and it possesses 427 acres and 60 cents developed area and 348 acres and 59 cents undeveloped area. Charalotte Estate (64 cents undeveloped area), Venga Kotta Estate (122 acres and 46 cents developed area and 196 acres and 99 cents undeveloped area), Annappara Estate (48 acres and 44 cents developed area and 307 acres and 09 cents undeveloped area) and Andathode Estate (86 acres and 61 cents developed area) are the other Old Holdings in this Desam. The New Holdings in Kunnathidavaga Desam are Andathode Estate (6 acres and 23 cents developed area), Chhundale Estate (02 cents developed area), and Alaketti Nilam (1 acre and 74 cents developed area).<sup>256</sup>
12. In Kottappadi Desam, the number of Estates can be seen. The more substantial Old Holdings are Erumakkolli Estate (403 acres and 41 cents developed area and 933 acres and 84 cents undeveloped area), Elambileri Peak Estate (1094 acres and 67 cents undeveloped area) and Forester Estate (1372 acres and 76 cents Undeveloped area). The other Old Holdings are Andathode Estate (182 acres and 51 cents developed area and 279 acres and 62 cents undeveloped area), Athiralam Kunnu, Peetika Kunnu (60 cents developed area), Poolachal Kunnu, Pulayilavo Kunnu, Kallumottan Kunnu (2 acres and 40 cents developed area and 107 acres and 60 cents undeveloped area), Erimala Estate (87 acres and 85 cents undeveloped area), Kootamunda Estate (53 acres and 30 cents developed area and 1 acre and 40 cents

---

<sup>255</sup> *Resurvey Settlement Register, No.47, Achchuranom Desam, p. 4, RAK.*

<sup>256</sup> *Resurvey Settlement Register, No.48, Kunnattidavaga Desam, p. 4, RAK.*



undeveloped area), Anappara Estate (100 acres 88 cents developed area and 109 acres and 11 cents undeveloped area), Chulikkamala Estate (143 acres and 61 cents developed area and 667 acres and 30 cents undeveloped area), Caroline Estate (297 acres and 30 cents undeveloped area), Muppayinad Peak Estate (42 acres and 154 cents developed area and 127 acres and 77 cents undeveloped area), Kardoora Estate (256 acres and 60 cents developed area and 153 acres and 02 cents undeveloped area), Nellimunda Estate (209 acres and 75 cents developed area and 74 acres and 49 cents undeveloped area), Clanshavoy Estate (80 acres and 48 cents undeveloped area), Vallipila Kunnu (6 acres and 39 cents undeveloped area), Pootakolli Estate (163 acres and 32 cents developed area and 70 acres and 99 cents undeveloped area), Meppadi Estate (134 acres and 55 cents developed area and 378 acres and 47 cents undeveloped area), Karpenkolli Estate (40 acres and 79 cents developed area and 50 acres and 58 cents undeveloped area), Kodanad Estate (79 acres and 30 cents developed area and 372 acres and 72 cents undeveloped area), Panora Peak Estate (217 acres and 60 cents developed area and 733 acres and 20 cents undeveloped area), Pala Kunnu (7 acres and 88 cents undeveloped area), Pullyembetta Estate (570 acres and 13 cents undeveloped area), Chembra Peak Estate (976 acres and 90 cents undeveloped area) and Elamala Estate (429 acres and 10 cents undeveloped area).<sup>257</sup> On 20<sup>th</sup> July 1932, Chembra Peak Estates Ltd. was taken over by Peirce Leslie & Co.Ltd. And its total extent was estimated 4586 acres.<sup>258</sup> The New Holdings are Nitumballi Estate (40 acres and 97 cents developed area and 36 acres and 35 cents undeveloped area), Chulukuvayal Nilam (11 acres and 08 cents developed area), Kadoor Kunnu (35 acres 89 cents

---

<sup>257</sup> *Resurvey Settlement Register, No.49, Kottappadi Desam*, p. 4, RAK.

<sup>258</sup> W. K. M. Langley, *Op. Cit.*, p. 134.

developed area and 15 acres and 73 cents undeveloped area), Kottur Edathum Kunnu (2 acres 98 cents developed area) and Kardoora Estate (2 acres and 77 cents developed area and 3 acres and 26 cents undeveloped area).<sup>259</sup>

13. In Triikkaippatta Desam, there are no Old Holdings. There is one New Holdings, and its name is Nitumbala Estate (218 acres and 03 cents developed area and 535 acres and 90 cents undeveloped area).<sup>260</sup>
14. Many large and small Estates are there in Muppayinad Desam. The Old Holdings are, Katalati Estate (42 acres and 77 cents developed area and 254 acres and 44 cents undeveloped area), Vellarimala Estate (780 acres and 36 cents developed area and 9804 acres and 90 cents undeveloped area), Veetti Kunnu (1 acre and 82 cents undeveloped area), Aripetta Estate (218 acres and 32 cents developed area and 61 acres and 40 cents undeveloped area), Katteri Kunnu (1 acre and 24 cents developed area), Nellimunda Estate (129 acres and 53 cents developed area and 120 acres and 92 cents undeveloped area), Thaniyottu Estate (3 acres and 25 cents developed area and 176 acres and 69 cents undeveloped area), Cheriya Aripatta Thottam (6 acres undeveloped area), Pativayal Kunnu (34cents undeveloped area), Hope Villa Estate (205 acres and 61 cents undeveloped area), Elphinston Estate (32 acres and 05 cents undeveloped area), Kallodi Estate (440 acres and 09 cents undeveloped area), Tanimala Estate (147 acres and 02 cents undeveloped area), Kizhaukumala or Coleria Estate (14 acres and 79 cents developed area and 509 acres undeveloped area), Valiavarippara Kunnu (46 acres and 62 cents undeveloped area), Cherikunnu (28 cents undeveloped area), Tenavaram Kunnu (4 acres

---

<sup>259</sup> *Resurvey Settlement Register, No.49, Op. Cit., p. 4.*

<sup>260</sup> *Resurvey Settlement Register, No.50, Triikkaippatta Desam, p. 4, RAK.*

and 42 cents undeveloped area), Ripon Estate (142 acres and 03 cents developed area and 68 acres and 58 cents undeveloped area), Anacarp Estate (718 acres and 29 cents undeveloped area), Chulikkumala (129 acres and 70 cents developed area and 149 acres and 02 cents undeveloped area), Muppainad Peak Estate (157 acres and 37 cents developed area and 488 acres and 96 cents undeveloped area), Nedumkarana Estate (243 acres and 83 cents developed area and 105 acres and 21 cents undeveloped area), Nettikarana Estate (25 acres and 18 cents developed area and 93 acres and 74 cents undeveloped area), Muppankalayi kunnu (1 acre and 41 cents undeveloped area)<sup>261</sup>, Choyimala Estate (65 acres and 76 cents developed area and 131 acres and 17 cents undeveloped area), Pathumala Estate (183 acres and 81 cents developed area and 27 acres and 27 cents undeveloped area), Pannapuzha Estate (168 acres and 93 cents developed area and 61 acres and 21 cents undeveloped area), Meemuvathi Estate (199 acres and 57 cents undeveloped area) and Neelacarp Estate (4 acres and 64 cents undeveloped area). The New Holdings are Katalati Estate (160 acres and 24 cents developed area), Aripatta Tea Estate (120 acres and 26 cents developed area and 22 acres and 06 cents undeveloped area), Chelanm Kunnu (2 acres and 55 cents undeveloped area), Chellanoth Kollinilam (32 cents undeveloped area), Arayangel Kunnu (55 cents undeveloped area), Molomkottu Kunnu (157 acres and 03 cents undeveloped area), Athikkamkolli Nilam (1 acre and 16 cents undeveloped area), Tarippakunnu (4 acres and 20 cents undeveloped area), Natakunnu (22 acres and 50 cents undeveloped area), Etakunnu (2 acres and 25 cents undeveloped area), Nannanur Nilam (26 acres and 99 cents undeveloped area), Matakunnu (37 acres and 09 cents undeveloped area), Choorakkakolli Nilam (3 acres and 72 cents

---

<sup>261</sup> *Resurvey Settlement Register, No.51, Muppainad Desam, p. 4, RAK.*

undeveloped area) , Koilomkunnu (1 acre and 89 cents undeveloped area), Kolakamkunnu and Chelannikunnu (2 acres and 56 cents undeveloped area), Kolekunnu (1 acre and 21 cents undeveloped area), Nannannur, Kovilakam kandi, Kevilagara kandi, Kovilagam kunnu, Panippura (4 acres and 86 cents undeveloped area) , Kattiyeri Kunnu (4 acres and 75 cents undeveloped area), Chuthankandi Kunnu (2 acres and 43 cents undeveloped area), Chunda kunnu, Kakkankunnu, Chinnamukku kunnu, Chundakandi kunnu, Ambu kunnu, Valukandi kunnu, Kovilankunnu, Aryamangalam kunnu (286 acres and 08 cents undeveloped area), Kundani kunnu (2 acres and 60 cents undeveloped area), Arayamangalam kunnu (3 acres and 11 cents undeveloped area), Appalamkunnu Vattakunnu Estate (1 acre and 71 cents undeveloped area), Karanikunnu Vattakunnu Estate (2 acres and 31 cents undeveloped area), Nedumkarana Estate (27 acres and 80 cents developed area and 30 acres and 67 cents Undeveloped area), Kallerikunnu Estate, Nitumbara kunnu, Chatalukunnu and Veettikunnu (39 acres and 46 cents developed area and 6 acres and 15 cents undeveloped area), Pullurkunnu Estate (4 acres and 44 cents developed area), Mandakakunnu Estate (7 acres and 01 cents developed area), Mannappara or Etakkal Peak Estate (142 acres and 96 cents developed area and 35 acres and cents 11 undeveloped area), Vattakkavu kunnu and Vallakkunnu Estate (5 acres and 57 cents developed area and 34 acres and 44 cents undeveloped area), Karaunrkunnu Cheriya Karauikunnu (71 acres and 14 cents undeveloped area), Veettikunnu (6 acres and cents 29 undeveloped area), Cherikunnu (3 acres and 32cents undeveloped area), Mupppankalayi kunnu (50 cents undeveloped area), Netmbara kunnu (3 acres and 31 cents undeveloped area), Vattakunnu

(487 acres and 52 cents undeveloped area) and Vattakavukunnu Thottam (17 acres and cents 72 undeveloped area).<sup>262</sup>

15. In Muttill Desam, Muttill Peak Estate (216 acres and 77 cents developed area and 657 acres and 29 cents undeveloped area) and Eva or Madkkimala Estate (122 acres and 33 cents undeveloped area) are the two Old Holdings. The only New Holdings is Muttill Peak Estate (14 acres and 79 cents developed area and 13 acres and 02 cents undeveloped area).<sup>263</sup>
16. The one and only New Holdings in Chingeri Desam is Arattapara Estate (99 acres and 96 cents developed area). There were no Old Holdings in this Desam.<sup>264</sup>
17. In Nenmeni Desam, there is no Old Holdings, and the New Holdings is Torimala Estate (597 acres and 05 cents developed area and 209 acres and 72 cents undeveloped area) and 155 acres and 73 cents developed land area held under Waste Land Rules.<sup>265</sup>
18. In Kidanganad Desam, the New Holdings are Beenachi Estate (550 acres and 37 cents developed area), Etakkal Hump Estate (146 acres and 90 cents developed area) and there are no Old Holdings.<sup>266</sup>

From the estates mentioned above in 18 Desams, we can understand the fact that the remaining area of Wayanad was either forest or the seat of smallholdings. The developed area was the actual assessed area, and the undeveloped was the unassessed area of the Estates. Therefore the largescale unassessed area became an integral part of these estates. From the above list,

---

<sup>262</sup> *Resurvey Settlement Register, No.51, Op. Cit., p. 5, RAK.*

<sup>263</sup> *Resurvey Settlement Register, No.52, Muttill Desam, p. 4, RAK*

<sup>264</sup> *Resurvey Settlement Register, No.53, Chingeri Desam, p. 7, RAK.*

<sup>265</sup> *Resurvey Settlement Register, No.54, Nenmeni Desam, p. 4, RAK.*

<sup>266</sup> *Resurvey Settlement Register, No.55, Kidanganad Desam, p. 4, RAK.*

it is stated that these undeveloped areas sometimes constitute the more significant part of the estates. *adivasi* lands were also invaded due to the enclosure of land. It also restricted the mobility of the indigenous people. The marginalized people had no space in this plantation economy. Under the new system, many lost ground and became landless peasants. Profit grew the deciding factor in altering the existing landscape. Thus the agrarian capital determines the course of agriculture development. Large scale inflow of wealth in the agriculture sector of Wayanad led to the increased demand of hilly tracts.

Extensive paddy fields were the peculiarity of many of these places. The small scale peasants like Chettis, Kurichias, Nairs etc. and landlords also cultivated paddy. Though some of them have cash crops, their main focus was on food crops. Following the footsteps of European planters, several indigenous landlords also transformed their land into plantations, especially coffee. A critical adverse result of the rise of the new estates was the disappearance of traditional agriculture-based communities. This tendency resulted in increased commercialization of agriculture. As a result of the growth of new estates, agricultural output increased considerably. The food crops production decreased, and in its place, the cash crops dominated. Towards the beginning of the nineteenth century, the plantation economy and its new method of farming became the flourished in Wayanad. Wastelands and arable lands were extensively brought under cultivation. The introduction of monoculture uprooted the biodiversity of the earth.

## Conclusion

The region has a long history of forest dependence by local communities.<sup>267</sup> The human intervention on the environment of Wayanad was minimal before the advent of the British. The comparative self-sufficient nature of the village economy of Wayanad met its demand. The foreign export was limited to spices and rare commodities. The marshy land situated in between the hills later transformed into paddy fields.<sup>268</sup> This has happened before British colonialism. The Colonial Government gave much importance to the Wayanad plateau because they mainly considered it as an economic gain rather than its biodiversity. After 1800 the growth of plantations led to the enormous destruction of the natural forest. The government encouraged the practice of estate formations, which led to the capitalist enterprises in agriculture. The invention of monoculture in the distinct land of Wayanad destroyed flora and fauna of the area. This was the first stage of the destruction of the ecological balance of Wayanad<sup>269</sup> during the colonial period. The Plantations and Gold Mining ventures led to the presence of a well-established European community in Wayanad.<sup>270</sup> They developed connecting routes in these areas. The organized endeavour of landlords and planters helped them to dominate in the new scenario. So ‘the uncultivated landlords’ gradually lost their significance. At the same time, the unorganized nature of *adivasis* alienated them not from society but their motherland. They became the silent spectators in all these developments. Though their material condition was not much improved in the earlier periods, they lived with the minimum demands. While societal law oppressed them mentally, the various

---

<sup>267</sup> A. K. Enamul Haque, et. al., (Ed.), *Environmental Valuation in South Asia*, Cambridge University Press, New Delhi, 2011, p. 146.

<sup>268</sup> Jaison Thomas, courtesy: P. U. Das, ‘Kalam Thettunna Kalavastha’, in *Focus Manorama, Malayala Manorama*, 26 August 2016, p.1.

<sup>269</sup> *Ibid.*

<sup>270</sup> R. Prabhakar and Madhav Gadgil, *Op. Cit.*, p. 171.

forest laws imposed physical restrictions upon them for their free movement. The forest rights deprivation started in the 19<sup>th</sup> century under the British regime.<sup>271</sup> The early agricultural labourers i.e., the *adivasis*, were exempted from these estates. The flow of a new group of farm labourers in the estates of Wayanad resulted in the emergence of a new community in the estate *padis*. The Cultural Landscape of Wayanad also conditioned with modern developments. The following chapter deals with the agrarian migration and its effect on Wayanad.

---

<sup>271</sup> Bidhan Kanti Das, 'Making Forest Dwellers Deprived: Examining Implementation Process of Forest Rights Act, 2006 in India', in Bidhan Kanti Das & Rajat Kanti Das (Ed.), *Rethinking Tribe in Indian Context: Realities, Issues and Challenges*, Rawat Publications, New Delhi, 2017, p. 135.



## CHAPTER 4

# AGRICULTURE AND ENVIRONMENT SINCE AGRARIAN MIGRATION

The plantation economy has caused an entire change in the landscape of Wayanad. The British successfully had exploited the fertile land and its climate, which we already have discussed in the previous chapter. The European and the indigenous entrepreneurs took relentless efforts to set up the plantations. This situation gradually began to change in the twentieth century. By about the first quarter of the 20<sup>th</sup> century, this trend came to an end. This chapter mainly discusses the environmental, demographic, and agrarian conditions of Wayanad after the 1930's. It also deals with the environmental and agrarian policies after independence, which affected this region. Here we get a comparative analysis of pre-independent and post-independent periods.

Human beings move from one place to another mainly for their livelihood. The general trend of the mobility of labour in India is not at all different during these days. The actual mobility of labour from one region to another was low because no area expanded fast enough to exert a very strong pull on labour from the rest of the country: the population of India was too large and the rate of economic growth too slow for this to happen<sup>1</sup>. Among humans, economic disasters have led to mass emigration<sup>2</sup> — mobility of people imbalances demographic features and regional development<sup>3</sup>. The Great Depression(1929-30) caused not only the collapse of the industry, but also the agriculture sector. The Second World War also must have forced the

---

<sup>1</sup> Amiya Kumar Bagchi, *Private Investment in India 1930-1939*, Cambridge University Press, Cambridge, 1972, p. 131.

<sup>2</sup> Daniel G. Freedman, *Human Sociobiology: A Holistic Approach*, The Free Press, A Division of Macmillan Publishing, New York, 1979, p. 135.

<sup>3</sup> V. N. P. Sinha & M. D. Ataulloh, *Migration: An Interdisciplinary Approach*, Seema Publications, New Delhi, 1987, p. 5.

Europeans to retreat from the hinterland. The conquest of Burma by the Japanese caused to cut off the food supplies (mainly rice) on which several parts of India were crucially dependent.<sup>4</sup>

During the 1930s, Wayanad witnessed a mass migration from the Travancore region. They were basically peasants. The above-mentioned reasons accelerated the process of migration. It paved the way for the agrarian transformation of the region. For, agricultural transformation is not only the understanding of changing relationships between landowners and peasants, caste and tribe or landowner and tenants<sup>5</sup> but also a broader process, encompassing the transformation of production of crops, use of tools, belief rationalities, relationships, institutions, polities, etc.<sup>6</sup> Through a comprehensive understanding of agriculture and the environment, we can depict this change.

Migration is a mass movement of the people from one region to another. According to V.N.P.Sinha and M.D.Ataullah, the mobility of humanity from one rural area to another is called rural-rural migration.<sup>7</sup> Such migration commonly occurs in developing countries where most of the people live in rural areas or where there is a lack of balanced economic growth.<sup>8</sup> Since 1930 a new group of cultivators, especially from central Travancore, began to migrate into Wayanad. The main motive was the unoccupied land in abundance, which could be used for cultivation. Cochin and Travancore states experienced a high population density, resulting in the lack of enough agricultural land for farming. This process altered, the unit of cultivation all

---

<sup>4</sup> T. G. Jacob, *Wayanad Misery in an Emerald Bowl: Essays on the Ongoing Crisis in the Cash Crop Economy- Kerala*, Vikas Adhyayan Kendra, Mumbai, 2006, p. 23.

<sup>5</sup> Hari Charan Behera, *Agrarian Transformation in Tribal Areas: Emerging Trends and Issues*, Discovery Publishing House, New Delhi, 2010, p. 4.

<sup>6</sup> *Ibid.*

<sup>7</sup> V. N. P. Sinha and M. D. Ataullah, *Op .Cit.*, p. 61.

<sup>8</sup> *Ibid.*

over Wayanad dividing it into two tracts, the vast plantations remained, and its owners sometimes changed, and the other, peasant families holding small plots, included migrants and local cultivators. Intensity and diversity of wants led to the variety in the use of land.<sup>9</sup> People are found moving from less agriculturally developed regions to fertile and relatively more agriculturally developed areas.<sup>10</sup>

It is worth noting the actual situation in southern Kerala before mass migration to Malabar. Though agriculture was the principal occupation of the people, in Travancore State, the density in terms of acreage per person decreased from census to census.<sup>11</sup> It had fallen from 2 acres in 1881 to less than one acre in 1931.<sup>12</sup> The table number 19 in the Appendix I underlines this fact. It shows that from 1881 to 1931, the gradual decrease of the density in terms of acreage in Travancore. It was due to the increase in population. Between 1921 and 1931, the net area sown increased only by 9.6 percent in Travancore, while the rise in the population was 27.2 percent.<sup>13</sup>

The table number 20 in the Appendix I clearly states that the population increased in Travancore, and the density of cultivable land decreased. They also began to cultivate cash crops instead of food crops. The economic depression affected the cultivators and agricultural labourers in our country. First of all, India is an agrarian country, where agriculture is the principal occupation of the majority of the people. The prices of paddy did not vary much except in the last years of the decade when the prices of all commodities declined to owe to the world-wide economic depression.<sup>14</sup> The

---

<sup>9</sup> *Ibid.*, p. 139.

<sup>10</sup> *Ibid.*, p. 61

<sup>11</sup> *Report of the Census of Travancore 1931*, Census of India 1931, p.16, 49623, Centre for Development Studies, Thiruvananthapuram (Hereafter CDS).

<sup>12</sup> *Ibid.*

<sup>13</sup> *Ibid.*, p. 22.

<sup>14</sup> *Ibid.*, p. 23.

increase in population was a nationwide phenomenon. It resulted in pressure on the total cultivated land. During the 1921 Census, the cultivated area per head of population supported by agriculture was 0.97 acre, whereas, in Census 1931, it was 0.80 acre.<sup>15</sup> (For more details, see table number 21 in the Appendix I).

It was the actual agrarian situation of the country. Due to the rise in population, the area of cultivation per individual was reducing day by day. The case of Cochin State was not at all different from Travancore (For more details, see table number 22 in the Appendix I). P. K. Michael Tharakan states that commercialization of agriculture in Travancore<sup>16</sup> and the plantation agriculture generally was extensive, and it requires a relatively large amount of finance.<sup>17</sup> He says that the break-up of matrilineal joint families in Kerala was yet another factor that led to the agrarian migration to Malabar.<sup>18</sup>

Several studies are there that dealt with the agrarian migration to Malabar during the first half of the 20<sup>th</sup> century. Between 1930 and 1940, four significant settlements of farmers from Travancore developed in Malabar.<sup>19</sup> They are Kuttiadi (Kozhikode District), Mananthavadi (Wayanad District), Peravur (Kannur District), and Kulathuvayal (Kozhikode District).<sup>20</sup> He indicates that in the first half of the decade 1930-40, there was an average weekly inflow of two or three families from Travancore.<sup>21</sup> In the 1940 to 1950 decade, migrants from Travancore entered Malabar in a still more

---

<sup>15</sup> *Ibid.*, p. 43.

<sup>16</sup> P. K. Michael Tharakan, 'Migration Farmers from Travancore to Malabar from 1930 to 1960: An Analysis of the Economic Causes', *Unpublished M.Phil. Dissertation*, CDS, Jawaharlal Nehru University, 1976, p. 36.

<sup>17</sup> *Ibid.*, p. 45.

<sup>18</sup> *Ibid.*, p. 43.

<sup>19</sup> *Ibid.*, p. 5.

<sup>20</sup> *Ibid.*

<sup>21</sup> *Ibid.*

significant number.<sup>22</sup> The following table clearly states the differences in population after the 1930's .

**Table No. 4.1**

**Variation in Population during Fifty Years of Wayanad Taluk.**

Year	Persons	Variation	Net Variation 1901-51	Males	Variation	Females	Variation
1901	75,149	-	-	41,632	-	33,517	-
1911	82,549	7,400	-	45,489	3,857	37,060	3,543
1921	84,771	2,222	-	47,473	1,984	37,298	238
1931	91,769	6,998	-	50,877	3,404	40,892	3,594
1941	106,350	14,581	-	57,952	7,075	48,398	7,506
1951	169,280	62,930	94,131	92,099	34,147	77,181	28,783

Source: J.I.Arputhanathan, *Census Handbook, 1951*, Malabar District, Govt. Press, Madras, 1953, p.16.

During 1941 the population of Wayanad taluk crossed one lakh margin. The variation of the population from 1901 to 1951 was 94,131. The conditions of the Malabar District is not so different (For more details, see table number 23 in the Appendix I).

There are different perspectives regarding the reason for migration. Madhusudan Nag's study on the short term family migration in India analyses various theories of migration. He says Everett Lee formulates the 'push-pull' framework to explain the dynamics of migration.<sup>23</sup> K.V.Joseph's work on migration indicates Larry A.Sjaastad, a Scholar of International Economics (1934-2012). He regards migration as a resource allocating endeavour in which calculations of costs and returns are of primary importance.<sup>24</sup> Michael Tharakan observes some crucial aspects of Malabar migration. The majority

<sup>22</sup> *Ibid.*

<sup>23</sup> Madhusudan Nag, '*Short Term Family Migration in India: An Analysis of Magnitude and Characteristics*', Unpublished M.Phil. Dissertation, CDS, Jawaharlal Nehru University, 2016, p. 13.

<sup>24</sup> K. V. Joseph, *Migration From Kerala, 1920-1960*, CDS, Trivandrum, 2000, p. 13.

of the migrants from Travancore were small farmers;<sup>25</sup> it was in the hilly tracts of Malabar that most of the Travancorean settlements developed,<sup>26</sup> and the majority of the migrants were Christians.<sup>27</sup> A significant motive behind migration, both external and internal, is an improvement in the economic status of the migrant and his family.<sup>28</sup> Besides these academic efforts, several works were published on Malabar Migration. Therefore here, there is no need to go into the depth of the social impact of migration to Wayanad.

At this juncture, in Wayanad Taluk, an important area of Government wasteland has been available for assignment, but the demand for land is less owing to the great scarcity of labour and would be cultivator has his choice of the vast area of private property which he frequently occupies even without permission.<sup>29</sup> In the plains, there was no such significant expansion of the area under cultivation.<sup>30</sup> The favourable atmosphere for purchase of land property existed in Malabar. According to the Transfer of Property Act 1882, a contract for the sale of immovable property is a contract that a sale of such property shall take place on terms settled between the parties.<sup>31</sup> Sale is a transfer of ownership in exchange for a price paid or promised or part paid and part promised.<sup>32</sup> The migrants purchased the land from Janmies<sup>33</sup>. This situation also accelerated the process of migration.

---

<sup>25</sup> P. K. Michael Tharakan, *Op. Cit.*, p. 6.

<sup>26</sup> *Ibid.*, p. 7.

<sup>27</sup> *Ibid.*, p. 8.

<sup>28</sup> K. C. Zachariah, et. al., *Migration in Kerala State, India: Dimensions, Determinants and Consequences*, Working Paper II, CDS, Thiruvananthapuram, Indo- Dutch Programme on Alternatives in Development, 2000, p. 137.

<sup>29</sup> *A Statistical Atlas of the Madras Presidency, Statistical Atlas: Malabar*, Revised of Fasli 1330, Govt. Press, Madras, 1924, p. 7, RAK.

<sup>30</sup> *Ibid.*

<sup>31</sup> *The Transfer of Property Act, 1882 (IV of 1882)*, As modified up to the 1 April, 1930, Legislative Department, Government Press, New Delhi, 1938, p. 31, A/157, RAK.

<sup>32</sup> *Ibid.*

**Table No. 4.2**

<b>DENSITY OF POPULATION, 1901-1981</b>									
	1901	1911	1921	1931	1941	1951	1961	1971	1981
Kerala	165	184	201	245	284	349	435	549	655
Wayanad	35	39	40	43	50	79	129	194	260

Source: M. Vijayanunni, *Census of India 1981*, Series 10, Kerala, Govt. Press, Ernakulam, 1984, p.19.

The above table shows that the density of the population in Wayanad was less. But the mobility of a large number of people created pressure on the land.

Daniel G. Freedman says, Migration always increases during environmental chaos, and consequently so does heterozygosity.<sup>34</sup> Migration paved the way for the reduction of forests in Wayanad.<sup>35</sup> However, the attitude of the forest department to save the forest areas was very strong and nostalgic. *Administration Report of the Forest Department of the Madras Province* published a poem inside the cover page.<sup>36</sup> It shows the romantic approach to the woodlands.

*'Salute to the trees'*

*by Henry Van Dyke.*

*Many a tree is found in the wood*

*And every tree for its use is good;*

*Some for the strength of the gnarled root;*

*Some for shelter against the storm,*

---

<sup>33</sup> K. J. Baby, *Nadugadhika* (Play in Mal.), Gadhika Publications, Nadavayal, Wayanad, 1993, p. 99.

<sup>34</sup> Daniel G. Freedman, *Op. Cit.*, p. 135.

<sup>35</sup> K. J. Baby, *Op. Cit.*, p. 99.

<sup>36</sup> *Administration Report of the Forest Department of the Madras Province*, For the Year Ending 31 March, 1939, Vols. I & II, Government Press, Madras, 1939, A/940, Kerala Forest Headquarters Central Library, Thiruvananthapuram (Hereafter KFHT).

*And some to keep the hearth stone warm;  
Some for the roof and some for the beam:  
And some for a boat to breast the stream;  
In the wealth of the wood since the world began  
The trees have offered their gifts to man.  
But the glory of trees is more than their gifts:  
'Tis a beautiful wonder of life that lifts  
From a wrinkled seed in an earth-bound clod,  
A column, an arch in the Temple of God,  
A pillar of power, a dome of delight,  
A shrine of song and joy of sight,  
Their roots are the nurses of rivers in birth;  
Their leaves are alive with the breath of the earth;  
They shelter the dwelling of man; and they bend  
O'er his grave with the look of living friend.  
I have camped in the whispering forest of pines,  
I have slept in the shadow of Olives and vines;  
In the knees of an Oak, at the foot of a palm  
I have found good rest and slumber's balm.  
And now, when the morning gilds, the boughs  
Of the vaulted elm at the door of my house,  
I open the window and make salute:  
"God bless thy branches and feed thy root  
Thou hast lived before, live after me,  
Thou ancient, friendly, faithful tree."*



The government maintained an account of the forest wealth of the country. It highlighted the need to protect the forest wealth of the country. As per the Agricultural Statistics of India, the forest area constitutes 11.8 percent, and the area of 18.6 percent was not available for cultivation. (For more details, see table number 24 in the Appendix I). It is a fact that the forest area and the net area sown decreases year after year. This phenomenon was common in the British period itself.

If we come to South India, the reserved forests in the Madras Presidency are divided into two classes, viz., remunerative and protective forests and ryots' forest.<sup>37</sup> The former is under the control of the Forest Department, and Forest panchayats manage the latter under the power of the Board of Revenue.<sup>38</sup> The area of forests under the influence of the Forests and Revenue Department at the end of 1934 was 15652 square miles and 3270 square miles, respectively.<sup>39</sup> Besides this, the Forest department was also in charge of 65 square miles of ryots forests transferred to it owing to the inability to form panchayats and 603 square miles of reserved lands.<sup>40</sup>

The topography of Wayanad is mentioned in the Government reports that "the tract in Kozhikode Forest Division lies between latitude 11<sup>0</sup> 10' and 11<sup>0</sup> 50' and longitudes 75<sup>0</sup> 50' and 76<sup>0</sup> 30'. The significant ranges viz., Chedleth, and Sulthan's Battery are in the Wayanad Plateau. The foot-hills at an elevation below 1,000 feet are often capped without crops of hard laterite. On the Plateau, the soil is a rich clayey loam generally two to four feet deep with subsoils, either red gravel or yellowish clay of considerable depth. The recorded annual rainfall over the tract normally varies between 60' and

---

<sup>37</sup> *Administration Report of the Forest Department of The Madras Presidency for the Year ending 31<sup>st</sup> March 1934*, Government Press, Madras, 1934, p. 25.

<sup>38</sup> *Ibid.*

<sup>39</sup> *Ibid.*

<sup>40</sup> *Ibid.*

175’.”<sup>41</sup> Therefore the climatic condition of Wayanad witnessed no substantial change during the first half of the twentieth century.

Kerala Gazetteer points out that, “the forests of Wayanad Plateau fall under three main types viz. (1) Plateau deciduous, (2) Tropical evergreen, and (3) Semi-evergreen. Plateau deciduous type is found in the Wayanad Plateau at elevations between 2,300 and 3,500 feet. It is characterized by the presence of a sizable proportion of teak and *Terminalia tomentosa* (Karimarutu in Malayalam). Other common tree species are *Lagerstroemia lanceolata* (Ben Teak or Venteak in Malayalam), *Grewia tileaefolia* (Unnam in Malayalam), *Pterocarpus marsupium* (venga in Malayalam), *Dalbergia latifolia* (Kariveetti in Malayalam), etc. *Bambusa arundiinaceae* (Mula in Malayalam) is the predominant bamboo, but *Dendro calamus strictus* (Cheriyamula in Malayalam) is found in drier localities. With the bamboo is associated with a sprinkling of timber trees of stunted growth such as jack, aini, and blackwood, and there is a considerable quantity of small scrubby evergreen growth. Noticeable features of uncultivated swampy lands are screwpine (*Pandanus odoratissimus*), *Melastoma malabaricum*<sup>42</sup>, and *lygodium*<sup>43</sup>. Tropical evergreen forests are found at elevations above 1,000 feet. The distribution of species is mainly governed by altitude. The main species occurring are *Mesua ferrea*<sup>44</sup>, *Palquium ellipticum*<sup>45</sup>, *Cullania excels*<sup>46</sup>, etc. But *Vateria indica*<sup>47</sup>, *hopea*

---

<sup>41</sup> A. Sreedhara Menon, (Ed.), *Kerala District Gazetteers, Kozhikode*, 1962, Government Press, Thiruvananthapuram, pp. 315-316.

<sup>42</sup> *Melastoma Malabathricum* is otherwise known as Malabar Melastome.

<sup>43</sup> *Lygodium* is a genus of about 40 species of ferns, native to tropical regions across the world.

<sup>44</sup> *Mesua Ferrea*, the Celon ironwood, Indian Rose Chestnut or Cobra Saffron, is a species in the family Calophyllaceae. This slow-growing tree is named after the heaviness and hardness of its timber.

<sup>45</sup> Common Canopy trees in low and medium elevatipn evergreen forests.

<sup>46</sup> *Cullenia* is a genus of flowering plants native to India and Srilanka.

<sup>47</sup> *Vateria Indica* , the white dammar, is a species of plant.

*paviflora*<sup>48</sup>, etc. seldom occur. The only forest under this type in this division is Ladysmith Reserve Forest in Chedleth Range.”<sup>49</sup> The transformation affected due to the British occupation changed the nature of the forest is indicated in this report.

The Madras Administrative Report of 1947-48 says forest contributed 183 lakhs of Rupees, i.e., 3.6 percent and land revenue was 530 lakhs of Rupees, i.e., 10.5 percent of the total income of the Madras Presidency.<sup>50</sup> In Madras Presidency, at the end of the year 1930, 132 elephants valued at Rs. 308954, and 39 buffaloes, bullocks, and asses valued at Rs. 2914 had the department.<sup>51</sup> Six buffaloes were sold during that year.<sup>52</sup> The elephant capture operations continued in Wayanad and the right amount of money gained by the forest department through its sale.<sup>53</sup> During the year 1931-1932, extraction in the Begur, Chedleth, and Sulthan’s Bathery ranges was restricted to 81728 cubic feet against 328454 cubic feet in 1930-31.<sup>54</sup> A quantity of 66237 cubic feet was carted to sale depots against 208355 cubic feet in the previous year.<sup>55</sup> The raising of teak crops continued in Wayanad.<sup>56</sup> As per the Working plans and schemes during the year 1931-32, the total area regenerated from 1929 to 1939 in Wayanad Forest Division was 8424 acres.<sup>57</sup> The total number of timber, fuel, bamboos, and Minor Produce cut or

---

<sup>48</sup> It is called Kampakam or Thampakam in Malayalam.

<sup>49</sup> A. Sreedhara Menon, *Op. Cit.*, p. 316.

<sup>50</sup> *Madras Administration Report 1947-48, Part II*, Government Press, Madras, 1949, p. 33, RAK.

<sup>51</sup> *Report on the Administration of the Madras Presidency for the Year 1930-31*, Government Press, Madras, 1932, p. 99, RAK.

<sup>52</sup> *Ibid.*

<sup>53</sup> *Administration Report of the Forest Department of Madras Presidency for the Year ending 31<sup>st</sup> March 1932*, Government Press, 1933, Madras, p. 4, RAK.

<sup>54</sup> *Ibid.*, p. 22.

<sup>55</sup> *Ibid.*

<sup>56</sup> *Ibid.*, p. 13.

<sup>57</sup> *Ibid.*, p. 98.

collected by Government agency received during the year 1931-32 was 16831.<sup>58</sup> The value of removed wood was Rs. 168773/- and the cost of Bamboos was Rs. 8/-.<sup>59</sup> The demand for timber continued to be on the increase, and the Forest Department continued to supply the Railways and Port Trust with the required quantities of teak and hardwood logs.<sup>60</sup>

The total number of unauthorized felling or appropriation of wood and minor forest products in Wayanad Forest during 1931-32 was 9.<sup>61</sup> There was an increase in all forms of offenses reported (except unauthorized grazing in reserved forests), particularly under injury to forests by fire.<sup>62</sup> The table number 25 in the Appendix I provides the list of Forest offenses of the three ranges, i.e., Begur, Chedleth, and Sulthan Bathery, from 1939 to 1949. During these periods 57 cases related to grazing, 17 matters related to felling, 9 trials related to hunting, 1 case related to cultivation, and 21 cases related to the removal of timber were reported, whereas no case related to fire. It is said that during the 1947-48 period, the forest offenses were more in the three ranges.<sup>63</sup> The compounding fees collected from the Begur range was Rs.393/-, Chedleth range was Rs. 802 in 1948-49 and the Sulthan Bathery range was Rs. 612/- in 1947-48.<sup>64</sup> The working plan of the forest department says no felling, hunting, and fire from 1940 to 1949.<sup>65</sup> The forest records underlie the

---

<sup>58</sup> *Ibid.*, p. 146.

<sup>59</sup> *Ibid.*, p. 164.

<sup>60</sup> *Madras in 1947, Outline of Administration, Part I*, Government Press, Madras, 1948, p. 55.

<sup>61</sup> *Administration Report of the Forest Department...*, *Op. Cit.*, p. 64.

<sup>62</sup> *Report on the Administration of the Madras Presidency for the Year 1932-33*, Government Press, Madras, 1934, p. 98.

<sup>63</sup> B. A. Cariapa, *Revised Working Plan for the Wayanad Forest Division 1950-51 to 1959-60*, Government Press, Madras, 1955, p.10; I. Natarajan Chettiar, *Revised Working Plan for The Wynad Forest Division 1962-63 to 1971-72*, Government Press, Trivandrum, 1965, pp. 7-10, KFHT.

<sup>64</sup> *Ibid.*

<sup>65</sup> *Ibid.*

fact that there was no increase in the encroachment of forest after migration because the migrant farmers mainly concentrated on the Janmam land.

The colonial government spent money for the conservation of the forest. Due to the Economic Depression, very little money was spent on new works for the conservation of forests in 1932-33.<sup>66</sup> The timber market has been incredibly dull, the felling of fresh stock was restricted.<sup>67</sup> One such incident regarding the ownership of trees in the private land was seriously discussed in the government platforms in the Madras presidency. The Legislative Council of the Governor of Madras had a discussion regarding the ownership of trees planted by the ryots on the channel and river banks. K. S. Sivasubramanya Ayyar raised a question that, in Tanjore district, the ryots have been prosecuted for cutting trees on bunds adjoining their lands and how many such prosecutions have been launched against the ryots.<sup>68</sup> The answer was that the Government does not claim the ownership of trees planted by ryots before 1<sup>st</sup> July 1927 on channels and river banks.<sup>69</sup> This was a clear message of the forest department of the presidency to the cultivators.

The government continued to encourage the Plantation economy in the Western Ghats. Regarding the agriculture of the region, the government had different attitudes towards plantations and small scale agriculture. The Government sanctioned the Cinchona plantation in Nilgiris in the years 1947 and 1948.<sup>70</sup> The traditional pattern of cultivation had limited space in the policy framework of the country. Xenophon says, “agriculture for an honourable and high-minded man is the best of all occupations or arts by

---

<sup>66</sup> *Report on the Administration of the Madras Presidency for the Year 1932-33, Op. Cit.*, p. 93.

<sup>67</sup> *Ibid.*

<sup>68</sup> The Legislative Council of the Governor of Madras, Tuesday, 14 March 1933, *Land Revenue Administration*, p. 676, RAK.

<sup>69</sup> *Ibid.*

<sup>70</sup> *Madras in 1947, Outline of Administration, Part 1, Op. Cit.*, p.57

which men procure the means of living’’. Though this concept is directly linked with the Indian agrarian condition, the majority of the farmers were left out from the developmental schemes.

Amiya Kumar Bagchi has rightly observed that, in all the regions of India, from the beginning of British rule to its end, peasants were highly indebted to moneylenders, were on insecure tenure, with little support of public expenditure on irrigation or other growth-enhancing investments.<sup>71</sup> He indicates that in 1930-31 the area irrigated in Madras Presidency, was 91,53,000 acres and the Gross area cropped in the Presidency was 3,91,92,000 acres, and in 1938-39 it was 84,44,000 acres and 3,59,58,000 acres respectively, whereas in British India, the area irrigated was 4,82,26,000 acres, and the Gross area cropped was 24,29,15,000 acres in 1930-31, and 1938-39 was 5,37,30,000 acres and 24,35,84,000 acres.<sup>72</sup> The above figures show that there was no drastic change in these periods. Peasants were continuously subjected to the threat of crop failure through drought or floods or of price depression, because of troughs of domestic demand or international trade cycles.<sup>73</sup> Though the government encouraged the process of transforming the unoccupied land into cultivable land in Wayanad, they never gave importance in providing the necessary infrastructure to accelerate agricultural growth.

However, the right to own the landed property in this region was favourable to the cultivators. According to the Malabar Tenancy Act, the exemptions or the act did not apply to lands transferred by a landlord for felling timber or fugitive cultivation or for planting tea, coffee, rubber, cinchona or any other particular crop prescribed by a rule made by the

---

<sup>71</sup> Amiya Kumar Bagchi, *Colonialism and Indian Economy*, Oxford University Press, New Delhi, 2014, p. xxxii.

<sup>72</sup> Amiya Kumar Bagchi, *Private Investment...*, *Op. Cit.*, p.104.

<sup>73</sup> Amiya Kumar Bagchi, *Colonialism and...*, *Op. Cit.*, p.xxxii.

Government or the erection of any building for or ancillary to the cultivation of such crop, or the preparation of the same for the market.<sup>74</sup> The Forest policy afforded increased facilities to ryots and others living in the vicinity of government forests.<sup>75</sup> Large and increasing areas of forest land have been made available for cultivation by the poorer classes on special terms, and grazing facilities have been increased and fees reduced.<sup>76</sup>

The Government suggested artificial fertilizers for the control of plant disease. Artificial manures were used to a considerable extent.<sup>77</sup> Bordeaux mixture of 1 percent and 0-5 percent strength was likewise useful in the control of *tikka* disease<sup>78</sup> in the groundnut.<sup>79</sup> Ashes alone or a combination of ashes and ammonium sulphate are the most economic manures among the blends tried.<sup>80</sup> Sixty-five spraying demonstrations were carried out against various pests and diseases in the Madras Presidency.<sup>81</sup> These included Bordeaux mixture<sup>82</sup> against Mildew on citrus<sup>83</sup> and grapevine, tobacco decoction for Aphis on tobacco, and fish oil rosin soap against bug on

---

<sup>74</sup> *The Malabar Tenancy Act-1929, Madras Act XIV of 1930*, As modified up to the 1<sup>st</sup> February 1952, Government Press, Madras, p. 4, A-187, RAK.

<sup>75</sup> *Administration Report of the Forest Department of the Madras Province*, For the Year ending 31<sup>st</sup> March, 1939, *Op. Cit.*, p. 1.

<sup>76</sup> *Ibid.*

<sup>77</sup> *Report of Subordinate Officers of the Department of Agriculture, Madras for 1932-33*, Government Press, Madras, 1933, p. 81, A/484, RAK.

<sup>78</sup> *Cercospora Personata* causes infections in the plants. They commonly attack the plants like groundnut and other legumes. The disease caused by this fungus is the leaf spot disease, also known as Tikka disease, of groundnut.

<sup>79</sup> H. K. Sen, *Indian Farming*, Vol.VI, No.1, January 1945, Imperial Council of Agricultural Research, India, New Delhi, p. 32, RAK.

<sup>80</sup> *Report of Subordinate Officers of the Department of Agriculture, Madras for 1931-32*, Government Press, Madras, 1932, p. 114, A/483, RAK.

<sup>81</sup> *Report of Subordinate Officers of the Department of Agriculture, Madras for 1932-33*, *Op. Cit.*, p. 82.

<sup>82</sup> A Fungicide for vines, fruit trees, and other plants, composed of equal quantities of copper sulphate and calcium oxide in water.

<sup>83</sup> Citrus Powdery Mildew is a fungal disease that causes leaf and shoot distortion, premature leaf drop, and twig and branch dieback.

coffee.<sup>84</sup> The government made an earnest effort to popularise the modern industrial manures for agriculture in India.

There was no attempt to make by the government for the promotion of traditional manures in Indian agriculture sector. But these programmes were mainly utilized by large farms. The ordinary farmer was less aware of the artificial manures. However the entomologist, paddy specialist and Agricultural Chemist prepared separate Administrative Reports on the Agriculture of Madras Presidency. The Government also set up Paddy breeding stations. Four hundred and sixty samples of soils, manures, feeding stuffs and fodders, plants, grains, straws, cotton, sugarcane, oilseeds, insecticides and fungicides were analysed in Madras Presidency during 1931-32.<sup>85</sup> The Government also published monthly journal in vernacular languages where in improved methods of cultivation were explained.<sup>86</sup> The food situation worsened after the war as imports from the usual sources were not received either because of transport difficulties or other reasons.<sup>87</sup> So there arises urgent necessity of augmenting the food production of the Province in all possible ways.<sup>88</sup> Further concessions were granted by Government for the advancement of Grow more Food Campaign.<sup>89</sup> During the present emergency, one of the most effective means of materially increasing food production obviously consists in new land under cultivation.<sup>90</sup>

The Government promoted mechanization in the agriculture sector. The journal, *Indian Farming*, had propaganda that tractor farming has

---

<sup>84</sup> *Report of Subordinate Officers of the Department of Agriculture, Madras for 1932-33, Op. Cit.*, p. 82.

<sup>85</sup> *Report of Subordinate Officers of the Department of Agriculture, Madras for 1931-32, Op. Cit.*, p. 85.

<sup>86</sup> H. K. Sen, *Op. Cit.*, p. 33.

<sup>87</sup> *Madras in 1947, Outline of Administration, Op. Cit.*, p. 15.

<sup>88</sup> *Ibid.*

<sup>89</sup> H. K. Sen, *Op. Cit.*, p. 33.

<sup>90</sup> *Ibid.*, p. 34.



immense potentialities for Indian agriculture.<sup>91</sup> It also published an advertisement on crop fests and harvesting machines. But it had less effect on the lives of the ordinary farmer. The total number of tractors available in Malabar district was 9.<sup>92</sup> For example, the average farmers in Wayanad used bullocks and buffaloes for ploughing and used the bullock carts for the movements of goods. One sack consists of ten *para*<sup>93</sup> paddy, and ten sacks of paddy could be filled in a bullock cart. It came to be known as one *vandi nellu*.<sup>94</sup>

With the increasing attraction towards the uncultivated land in Wayanad, the people of Travancore and Cochin began to migrate to Wayanad. It altered the demography of the region. With the arrival of the new group, the socio-economic structure of the area also changed. The particulars of the population in the district and each taluk in 1941 and 1951 and the percentage of variation are furnished below:-

**Table No. 4.3**

<b>Name of district and taluk</b>	<b>Population 1941</b>	<b>Population 1951</b>	<b>Percentage of variation</b>
Malabar district	3,929,425	4,758,342	21.1
Waynad	106,350	169,280	59.2

Source: J. I. Arputhanathan, *Census Handbook 1951, Malabar District*, Govt. Press, Madras, 1953, p.5.

The above table shows that the percentage of variation of the population from 1941 to 1951 in Wayanad taluk was three times more than that in Malabar District. By the Second World War, Great Britain had had

<sup>91</sup> *Ibid.*, p. 45.

<sup>92</sup> *Administration Report of the Agricultural Department for Fasli Year 1949-50*, Government Press, Madras, 1951, p.93, A/398, RAK.

<sup>93</sup> Measuring vessel from Kerala. One *para* is around eight kg.

<sup>94</sup> One *vandi nellu* means one bullock cart paddy.

perforce to become agriculturally minded.<sup>95</sup> About four million additional acres have been brought under cultivation in India, and the present emphasis is on maximum production of foodstuffs.<sup>96</sup> The increased population paved the way for the emergence of several towns in the Malabar region. Though its number was very less, it was a definite sign of the urbanization. But the majority of the people who migrated to Wayanad chose the agricultural tract better than the urban centers because their prime aim was cultivation.

It is interesting to note the distribution of population in rural and urban areas of Wayanad taluk and Malabar District in the 1951 census. There were no metropolitan areas in Wayanad taluk, and the people settled in rural areas. The total population of Wayanad settled in 34 villages (For more details, see table number 26 in the Appendix I). During those periods, people preferred rural areas better than urban centres. The availability of cultivable land attracted the peasants to settle in interior tracts.

### **Assignment-Land in Wayanad taluk**

Under the initiative of the Government, the land was distributed to the landless in Wayanad. There are several examples of this kind of land distribution. In Muttill *amsam*, R.S.No.633/1A1 is suitable for the assignment. It can be cultivated with tapioca, sweet potatoes, ragi, and other food crops and also coffee.<sup>97</sup> Dry paddy can be successfully grown in some portions.<sup>98</sup> The land is containing bamboo clusters almost everywhere.<sup>99</sup> There is dense

---

<sup>95</sup> F. M. De Mello (Ed.), *Indian Farming*, Vol.II, No.6, The Imperial Council of Agricultural Research, June, 1941, New Delhi, p. 281, RAK.

<sup>96</sup> *Ibid.*

<sup>97</sup> *Letter from the Tahsildar, Taluk Office, Mananthavady, Wynad, dated 18-11-1949 to the Collector of Malabar, Kozhikode, R-Dis File No. 6931-48 (Vol.I), Sl.No.1, B.No.617, Revenue Department, RAK.*

<sup>98</sup> *Ibid.*

<sup>99</sup> *Ibid.*

forest growth, only to an extent approximating 300 acres.<sup>100</sup> In the remaining part, trees can be seen scattered here and there.<sup>101</sup> The portion which does not contain thick forest growth can be brought under cultivation easily.<sup>102</sup> There were 236 sivayijama occupations<sup>103</sup> in this land last year, covering an extent of about 150 acres. The occupants are mostly landless poor and are entitled to get their occupations assigned to them under G.O.No.1523 Rev. dated 11-7-1949.<sup>104</sup> There are more than 50 new occupations this year.<sup>105</sup> The sivayijama occupations are mostly on the four boundaries, generally on roadsides and places adjoining paddy fields.<sup>106</sup> The lands which are not already occupied may be assigned to a group of cultivators.<sup>107</sup> The total extent available may come to about 2000 acres.<sup>108</sup>

### **Wayanad Colonisation Scheme**

Wayanad Colonisation scheme was another significant step of the Government to settle the issue of landless people. The land was generally assigned to soldiers who fought in the second world war by the British government.<sup>109</sup> The main problem faced by the Government was food scarcity.<sup>110</sup> P. K. Michael Tharakan states the number of persons settled in Wayanad by 1951, under the colonization scheme of the Government, was

---

<sup>100</sup> *Ibid.*

<sup>101</sup> *Ibid.*

<sup>102</sup> *Ibid.*

<sup>103</sup> The lands were assessed as waste under Sivayijama Occupation. Land less poor persons of the village will be given Government wasteland for cultivation.

<sup>104</sup> *Letter from the Tahsildar, Taluk Office, Wynad, Mananthavady dated 18-11-1949, Op. Cit.*

<sup>105</sup> *Ibid.*

<sup>106</sup> *Ibid.*

<sup>107</sup> *Ibid.*

<sup>108</sup> *Ibid.*

<sup>109</sup> E. M. Manoj, 'For Posing a Threat to Life and Property, British Era Rosewood Face the Axe', *The Hindu*, Kozhikode, 29 April 2018.

<sup>110</sup> K. K. N. Kurup, *Agrarian Struggles in Kerala*, CBH Publications, Trivandrum, 1989, p. 13.

2850.<sup>111</sup> The colonization scheme at Araku<sup>112</sup> and Wayanad was continued during the year.<sup>113</sup> Both research work on trial improvements suited to the tracts and extension work of improvements found successful in these backward areas were put to the local ryots.<sup>114</sup> The Government of Madras has a G.O.Rt.No.759 dated 29<sup>th</sup> October 1946 states that the Land Acquisition of Block No.V, Sivaijama occupation of Kidanganad and Nenmeni villages in Wayanad Taluk of Malabar District under Wayanad Colonisation Scheme.<sup>115</sup> The Special Deputy Collector for the Wayanad land colonization scheme, *Vayittiri* (Vythiri) sent a letter to the Collector of Malabar on 21-06-1946, regarding the Land acquisition of Block No.VI, Sivayijama occupations in Government wetlands and valuation statement submitted of Wayanad Taluk, Nenmeni amsam, and Desam.<sup>116</sup> He says the Sivayijamadars<sup>117</sup> have no accounts to show how much money they have spent on these lands by way of reclamation.<sup>118</sup> The value of reclamation and improvements is therefore based on personal inspection estimate and enquiry. Improvements like building the fruit-bearing trees have been valued at the same rates of valuation in conformity with the standards adopted for assessing the improvements in private wetlands.<sup>119</sup>

They followed the traditional cultivation practice in this new land. Trials with double cropping of paddy- a long duration crop from July-December followed by a short duration crop from January- April gave

---

<sup>111</sup> P. K. Michael Tharakan, *Op. Cit.*, p. 18.

<sup>112</sup> Araku Valley is a hill station and valley region in the southeastern state of Andhra Pradesh.

<sup>113</sup> *Administration Report of the Agricultural Department for Fasli Year 1949-50, Op. Cit.*, p. 36.

<sup>114</sup> *Ibid.*

<sup>115</sup> *Department of Revenue, 1947, R-Dis File No.8206.*, Revenue Department, M.46, RAK.

<sup>116</sup> *Ibid.*

<sup>117</sup> Assignment has been offered to and referred by the sivayijamadar.

<sup>118</sup> *Department of Revenue, 1947, Op. Cit.*

<sup>119</sup> *Ibid.*

promising results.<sup>120</sup> Co. 13, MTU 3, PTB 10 and Palthondi were found suitable as second crops.<sup>121</sup> Selection work among local varieties is in progress. Liming of fields has not produced any beneficial results.<sup>122</sup> Trials with Co. 419 sugarcane have indicated the possibility of growing sugarcane in Wayanad- the yields of jaggery ranged from 2 to 4 tons.<sup>123</sup> New Era cowpea has been successfully raised in wetlands that retain subsoil moisture.<sup>124</sup> Attapadi red gram was found suitable for cultivation. Tapioca, sweet potatoes, yams, and colocasias were successful, but the limiting factor for introducing this cultivation is the damage from wild pigs.<sup>125</sup> The valuable rosewood trees along with teak are the property of the government.<sup>126</sup> In trials of fruit plants, Mala lemons, Seville lemon, and passion fruit have done very well.<sup>127</sup> In the propagation trials of Mandarin oranges, budding them on rough lemon seedling rootstocks was successful in February to April.<sup>128</sup> Among the fodders, thin Napier grass, Elephant grass, and Guinea grass have done well. About 300 acres were provided with contour bunds and were contour planted.<sup>129</sup> Nearly 100 acres of land were brought under the double cropping of paddy. Due to propaganda, 90 percent of the paddy area under the

---

<sup>120</sup> *Administration Report of the Agricultural Department for Fasli Year 1949-50, Op. Cit., p. 37.*

<sup>121</sup> *Ibid.*

<sup>122</sup> *Ibid.*

<sup>123</sup> *Ibid.*

<sup>124</sup> *Ibid.*

<sup>125</sup> *Ibid.*

<sup>126</sup> *Centuries old Rosewood trees in Wayanad face the axe*, April 17, 2018, [timesofindia.indiatimes.com](http://timesofindia.indiatimes.com)>, accessed on 18 January 2018, 2 pm.

<sup>127</sup> *Administration Report of the Agricultural Department for Fasli Year 1949-50, Op. Cit., p.37.*

<sup>128</sup> *Ibid.*

<sup>129</sup> *Ibid.*

broadcast system of cultivation is now being transplanted. The settlers opened fifty more manure and compost pits.<sup>130</sup>

The following seeds<sup>131</sup>, seedlings, etc., were distributed:-

- |                 |   |                           |
|-----------------|---|---------------------------|
| 1. Paddy        | - | 67,475 lb. <sup>132</sup> |
| 2. Redgram      | - | 35 „                      |
| 3. Cowpea       | - | 48 lb.                    |
| 4. Vegetables   | - | 15 lb.                    |
| 5. Fruit plants | - | 2,168 numbers.            |
| 6. Sugarcane    | - | 25,955 setts.             |

Large-scale migration to Wayanad was triggered by this project.<sup>133</sup> The District staff concentrated their efforts on the intensive cultivation schemes launched during the year.<sup>134</sup> To accelerate the work, 100 additional Agricultural Demonstrators were employed in 100 taluks where work was considered too heavy for Agricultural Demonstrator.<sup>135</sup> Seed Development Officers and staff were appointed to look after the work in first seed farms mainly and to check up the purity and viability in secondary farms.<sup>136</sup> The Plant Protection Officers and staff appointed last year to continue to intensify the control measures over pests and diseases.<sup>137</sup>

---

<sup>130</sup> *Ibid.*

<sup>131</sup> *Ibid.*

<sup>132</sup> 67475 lb. is equal to 30606.15 kg.

<sup>133</sup> Darley Jose Kjosavik & Nadarajah Shanmugaranam, *Political Economy of Development in India: Indigeneity in transition to the State of Kerala*, Routledge, New York, 2015, p. 57, books.google.co.in, accessed on 25-01-2018, 4.30 pm.

<sup>134</sup> *Administration Report of the Agricultural Department for Fasli Year 1949-50, Op.Cit.*, p.37.

<sup>135</sup> *Ibid.*

<sup>136</sup> *Ibid.*

<sup>137</sup> *Ibid.*

Wayanad Colonisation Scheme was designed to relieve congestion, overpopulation, and consequent poverty in erstwhile Malabar district by setting a large number of Ex-servicemen, aboriginals, landless civilians, etc., and helping them to develop the large undeveloped tracts of Wayanad.<sup>138</sup> The Wayanad Colony, with its headquarters at Ambalavayal extends over an area of 37146.82 acres or 53 Sq.miles comprised within the villages of Sulthan Bathery, Ambalavayal and Nenmeni, and South Wayanad Taluk.<sup>139</sup> An extent of 3238.82 acres or 5 Sq.miles of Government lands in the adjacent villages of Chingeri village was annexed to the colony to settle the residents, and aboriginals found surplus in the central settlement.<sup>140</sup> Sixty-two percent of the colonists were ex-servicemen.<sup>141</sup> Particulars of colonists so far settled are shown below.

**Table No. 4.4**

Ex-Servicemen	1834
Ex-Tappers	5
Political Sufferer	1
Landless Civilians	6
Ex-Indian National Army Men	3
Aboriginals	251
Local Residents	750
Total	2850

Source: *Census Handbook, 1951, Malabar District*, Govt. Press, Madras, 1953, p.8, CDS.

<sup>138</sup> *Kerala State Administration Report, 1967-68*, Government of Kerala, 1969, Government Press, Trivandrum, 1969, p. 327.

<sup>139</sup> *Ibid.*

<sup>140</sup> *Ibid.*

<sup>141</sup> *1951 Census Handbook, Malabar District*, Government Press, Madras, 1953, p.8, CDS.

The scheme includes an Agricultural Farm (now known as the Central Horticultural Research Station), a Sericulture Farm, and a Hospital.<sup>142</sup> The Sericulture Farm has been closed with effect from 31-12-1967.<sup>143</sup> The colonists under the scheme had been making representations for the issue of permanent Patta to them, and they also made an agitation for this in June 1967.<sup>144</sup> The government has ordered in G.O.MS. 292/67/RD dated 19-7-1967 to issue permanent *pattas* to the regular colonists.<sup>145</sup> Besides these kinds of Government promotion schemes, a large number of people came to Malabar without any external assistance. It was only due to their adventurous spirit; they reached Wayanad.

The early migrant farmers initially started the cultivation of food crops such as rice and tapioca. They purchased paddy fields from the Janmis and Chettis. So large scale paddy land in Wayanad were cultivated. The shortage of food crops in Travancore forced them to cultivate food crops. It increased the food production of the Wayanad region. As per the Census Handbook of 1971, the first and foremost valuable commodity of import of the ten crucial market towns of Kozhikode District is rice.<sup>146</sup>

The cultivation pattern in Wayanad after the mass migration and independence has changed. When we compare it with the previous chapter, the following changes happened in Wayanad. The table number 27 in the Appendix I provides information about the amenities available in the 31 villages of Wayanad- South Wayanad and North Wayanad taluks as per the Census 1971. Thirunelli village (200.58 km<sup>2</sup>) was the largest in terms of area,

---

<sup>142</sup> Kerala State Administration Report, 1967-68, *Op. Cit.*, p.327.

<sup>143</sup> *Ibid.*

<sup>144</sup> *Ibid.*

<sup>145</sup> *Ibid.*, p. 328.

<sup>146</sup> K. Narayanan, Kerala, *District Census Handbook, Census 1971, Series-9, Kerala, Part A & B*, Government Press, Ernakulam, 1974, p. 16.



whereas the smallest was Vengappally (21.11 km<sup>2</sup>). It states that rice was cultivated in all the villages of Wayanad, and it was the principal food crop. Tapioca was another staple food that was grown in the 26 villages. The primary drinking water facility in the 31 villages as well, whereas the 15 villages also depend on canal water. Seven villages had tap water facilities. Eighteen villages used to river water and only one village, i.e., Kuppathode, tube well water used for drinking water. Kidanganad (163.4 km<sup>2</sup>) and Thirunelli (149.89 km<sup>2</sup>) were the villages where had more forest areas, whereas in the 15 villages had no forest area according to this Census report. Purakkadi village had more irrigated areas (45.78 km<sup>2</sup>), whereas 15 villages had no irrigated area. It underlies the fact that rain was the primary source of water for cultivation in Wayanad. Pulpalli village (60.5 km<sup>2</sup>) was the larger area in terms of the unirrigated area, whereas in 3 villages had no such zone. In Kottappadi village (45.04 km<sup>2</sup>) was the largest area of cultivable wasteland available whereas in 6 villages there was no such land available as per this report. Kottappadi (16.46 km<sup>2</sup>) and Thondernad (18.48 km<sup>2</sup>) villages had the larger area not available for cultivation, whereas in Kaniyambetta (0.01 km<sup>2</sup>) and Vemom (0.1 km<sup>2</sup>) villages had the smaller area not available for agriculture.

The second wave of migration to Wayanad was started during the 1960's. The state government took the necessary steps to implement the land reform bill. It gave new hope to the cultivators to encroach more and more land for cultivation. It was during the second phase of migration, more revenue lands and *Devaswom* lands were invaded and confiscated by the new migrants. One such incident took place at Pulpally. But, with the wholehearted support of the migrants, the mainstream political parties failed the attempt of the government to evict the migrants. Sri A.K.Gopalan, the Communist leader, openly supported the agitations. This phase redrew the boundaries of the possession of land in Wayanad. Many people encroached

*Devaswom* and Revenue land, whereas some migrants confiscated the land of *adivasis*. The backward tribes like the Kurumbas lost their property. But the Kurichiyas still maintained their landed property. Above all, the Adivasis lost their freedom of movement and right to gather forest produce due to the illegal activity. They experienced a new form of capitalist agriculture. It freed them from the yoke of the old feudal order. They received their wages in the form of money. But the socio-economic condition of the tribes did not improve much. Some of them faced severe exploitation from the migrant farmers. Some of the new occupants purchased the land of *adivasis* with lesser amounts than the actual market price. So they were again alienated from the forest in the post-colonial times as well. K. Panur, in his works, *Keralathile Africa* and *Keralathile America*, emotionally depicts this issue of *adivasi* land alienation.

Due to the implementation of land reforms in Kerala, these migrant farmers got ownership rights in this land. It ultimately led to the disappearance of *Janmi* system in Kerala. But it paved the way for the emergence of a new semi-capitalist class in Wayanad. The new owners of land changed the cultivation pattern according to the increasing demands of products at the market. Later they shifted to the plantation crops. It was due to several reasons. Firstly, the United Kingdom and the United States of America were the principal purchasers of pepper, and their intake was considerably increased.<sup>147</sup> Similarly, the Tea exports to Australia was also increased.<sup>148</sup> The increasing demand for the plantation products forced the peasants to cultivate crops such as pepper, coffee, and tea.

It is essential to understand the habitation pattern of migrants. Infact, it brought about demographic change in Wayanad. Most commonly, mass

---

<sup>147</sup> *Madras Administration Report 1947-48*, Part II, Government Press, Madras, 1949, p. 201, RAK.

<sup>148</sup> *Ibid.*

migration led to the emergence of new urban centres. But in the case of Wayanad, it was quite different from the typical situation. The table number 28 in the Appendix I shows the status of urban centres in Wayanad. Compared to the rest of the areas in Malabar district, the intensity of urbanization was far less in Wayanad Taluk.<sup>149</sup> It was prepared as per the 1951 census. The total number of inhabited towns and villages in Wayanad taluk was 31. The total population of Wayanad taluk was 169280. During those periods Wayanad taluk had less than 2000 people. No place in current Wayanad is included in the functional category of a town. Both the migrants and early inhabitants lived in village areas. During those days, the lack of infrastructure facilities was the frontispiece of most of our villages. So both the indigenous people and migrants suffered many hardships.

### **Material conditions of Adivasis**

It is essential to note the material condition of the original inhabitants, the Adivasis after the Travancore migration. There are several arguments regarding the ill effects of immigration. The Forest Department records mentioned the hill men and jungle tribes dwelling in the forests.<sup>150</sup> They were granted rent-free leases of land for cultivation and were allowed concessions in the matter of grazing and use of forest produce in return for their services in protecting the forests.<sup>151</sup> The *Administration Report of the Forest Department of the Madras Presidency for the Year ending 31st March*, also says the hill tribes of Wayanad have been granted free leases of land for cultivation, in particular reserved forests and their labour is adequately paid

---

<sup>149</sup> J. I. Arputhanathan, *Census Handbook 1951*, Malabar District, Government Press, Madras, 1953, p. 17.

<sup>150</sup> *Report on the Administration of the Madras Presidency for the Year 1932-33, 1934*, *Op. Cit.*, p. 98.

<sup>151</sup> *Ibid.*

for.<sup>152</sup> In response to the letter from the Office of Board of revenue, Madras,<sup>153</sup> the Revenue Divisional Office of Palaghat, replied<sup>154</sup> that the tribes as a whole do some cultivation in the hills, forest areas in which they live. Some of them were under their landlords. Due to the high price of agricultural products and an increase in wages of coolies, the economic condition of the *adivasis* and very backward communities except in the Attappady valley has improved a little.<sup>155</sup> The moneylender charged abnormal rates of interest on the amount advanced by them.<sup>156</sup> The *adivasis* and very backward communities of the district live in the huts in the hilly villages and forest areas of Chirakkal, Kottayam, Kurumbranad, Wayanad, and Walluvanad taluk. They do not generally mingle with other communities.<sup>157</sup> The social condition of the primitive tribes and very backward communities was not improved. Out of the 42 Labour schools in their district for the education of the eligible communities, five schools in Wayanad taluk and four schools in the Attappady valley are exclusively for the benefit of the children of the *adivasis* and very backward communities.<sup>158</sup> They have yet to realize the value of education. On 26 April 1942, The Sub Collector of Tellicherry, Mr. A. R. Sornillier, reported to the Collector of Malabar that, in Wayanad Taluk, the economic and social conditions of *adivasis* and other backward communities excluding Kurichias and Kurumas

---

<sup>152</sup> *Administration Report of the Forest Department of the Madras Presidency for the Year Ending 31st March 1934*, p. 33, RAK.

<sup>153</sup> *Annual Report of the Material Condition and Progress Report of the Aboriginal Tribes and Very Backward Communities*, 1946, Office of Collector of Malabar, Reference No. A/1658-45-1 dated the 9 May 1946, R-Dis File No.9602/46 dated 22-5-1946, Revenue Department, RAK.

<sup>154</sup> *Letter dated 14-5-1946*, Office of Collector of Malabar, R-Dis File No.9602/46 dated 22-5-1946, Revenue Department, RAK.

<sup>155</sup> *Ibid.*

<sup>156</sup> *Ibid.*

<sup>157</sup> *Ibid.*

<sup>158</sup> *Ibid.*

remain unchanged since the submission of his last report.<sup>159</sup> The financial situation of Kurichias and Kurumas has slightly improved as a result of the increase in the price of paddy, but the social conditions of these people remain unchanged.<sup>160</sup>

The indigenous people in the hill areas of Wayanad usually used traditional water sources. One well at Arattuthara in Wayanad taluk, which could not be sunk during 1944-45 for want of contractors, was sunk during 1945-46.<sup>161</sup> The revenue records says, the wells already constructed are not adequately used by the *adivasis*<sup>162</sup>. They prefer to use stream water instead of well water. The sanitary condition of the indigenous people in the areas is far from satisfactory. There has not been much improvement in the condition and programme of *adivasis* and very backward communities.<sup>163</sup>

The indigenous people were familiar with the traditional method of cultivation. "The method of farming has not improved."<sup>164</sup> To make the soil fertile for cultivation, they cut down the forest growth and burn them, which is harmful<sup>165</sup>. Now that parts of these forest lands have been taken on lease from Janmis by businessmen from the plains, the *adivasis* are prevented from burning the forest areas with the result that virgin soil is not available for cultivation, to the same extent as before. The rates of interest charged from them are very high, with the result that the *adivasis* will have nothing left for

---

<sup>159</sup> *Annual Report on the Material Condition and Progress of Aboriginal Tribes and Very Backward Communities, 1941-42*, Office of the Collector of Malabar, Periodical Return, dated 30-4-1942, R-Dis File No.4374/42, Sl.No. 13, B.No. 554, Revenue Department, RAK.

<sup>160</sup> *Ibid.*

<sup>161</sup> *Letter dated 14-5-1946, Revenue Department, Op. Cit.*

<sup>162</sup> *Letter dated 26-4-1946 of Revenue Divisional Officer, Malappuram to the Collector of Malabar, Calicut, Office of Collector of Malabar, R-Dis File No.9602/46 dated 22-5-1946, Revenue Department, RAK.*

<sup>163</sup> *Ibid.*

<sup>164</sup> *Ibid.*

<sup>165</sup> *Ibid.*

them, a few months after the harvest, not enabling them to pull through till the next crop. The tribesmen were dependent on the markets in the plains for their bare necessities in life".<sup>166</sup> The comparative self-sufficiency of the *adivasis* gradually ended.

The indigenous people had been experiencing different kinds of exploitation. The illiteracy and ignorance were taken advantage of by some of the unscrupulous merchants in the plains who charge them at abnormal rates for gold supplied to them.<sup>167</sup> No schools have been opened. The Labour schools do not appear to have much favour among the indigenous people in the hill areas. The Government took the initiative of the intensive propaganda to impress on these indigenous people in the value of education.<sup>168</sup>

The government reports sometimes exaggerated the reforms taken by them, which drastically changed the condition of the *adivasis*. Annual Report on the Material condition and progress of the *adivasis* and backward communities 1945-46 reported that in Wayanad, the economic and social status of all backward communities, including Paniyas, are gradually improving due to the high price for agricultural products.<sup>169</sup> Apart from the general consciousness of their importance, the employed people among them have begun to realize the disabilities of their communication, which supply most of the Labour required for agricultural operations.<sup>170</sup> This recognition has contributed in no small measure to the improvement of their condition.<sup>171</sup> But the other side of the fact was different. When Gandhiji visited Wayanad

---

<sup>166</sup> *Ibid.*

<sup>167</sup> *Ibid.*

<sup>168</sup> *Ibid.*

<sup>169</sup> Letter from C. P. Kelu Erady, Revenue Divisional Officer, Tellichery to the Collector of Malabar, Calicut, R-Dis File No.121/46 dated 26-4-1946, RAK.

<sup>170</sup> *Ibid.*

<sup>171</sup> *Ibid.*

on 14<sup>th</sup> January 1934, he pointed out the backward status of the *adivasis* and the inhuman treatment of the upper-class landlords towards them.

However, the *adivasis* from the earlier period itself were the conservators of the forest. Natural resource management systems emerge from a combination of tradition, local wisdom, and agro-climatic conditions.<sup>172</sup> Local communities are the conservers of these practices and teachers of the knowledge of biodiversity management.<sup>173</sup> This knowledge also ensures sustained production to maximize food security under the prevailing agro-ecological conditions.<sup>174</sup>

Due to the implementation of forest acts and the growth of plantations thoroughly devastated the life and economy of the *adivasis*. The mass migration after the 1930's had created far-reaching impact in the life of the *adivasis*. The migrants have increasingly occupied the cultivable land and started the cultivation of paddy and tapioca. The *adivasis* became the agricultural labourers of the migrant farmers, especially the Kurumbas, Paniyas, and Adiyas. For the first time, they received daily wages in the form of cash. The lemongrass oil was an essential item of exchange for the farmers in that period, which earns money. The process of making lemongrass oil needs more wood, which resulted in the felling of large scale trees. During the second stage of migration, i.e., after the 1960's the migrants began to encroach the *Dewaswam* land. Some migrants ruthlessly occupied the *adivasi* land. Thus they skillfully exploited the ignorant *adivasis*. The excessive greed for land was a characteristic feature of the second stage of migration.

---

<sup>172</sup> Hemal S. Kavinde, et. al., *Wild Food Management in Wayanad, Kerala: An Explanatory Study*, Unpublished Study Report, Community Agro-biodiversity Centre, Kalpetta, Uttara Devi Resource Centre for Gender and Development, M.S. Swaminathan Research Foundation, Wayanad, 2001, p. 1.

<sup>173</sup> *Ibid.*

<sup>174</sup> *Ibid.*

The years after independence witnessed several changes in the policies of the Government. After the General Election of 1952 and the State Reorganisation Act of 1956, the democratic decentralization process accelerated. After the formation of Kerala state in 1956, the Malabar region merged into the state of Kerala. The subsequent elections gave several promises to the people, and some of them are put into practice. In India, land reforms had been viewed as a political necessity at the time of independence.<sup>175</sup> Some states introduced land reforms and abolished landlordism, which gave security to the tenants.

As per the Census Handbook of Malabar District, there were four agricultural classes in Malabar District.<sup>176</sup> They are,

1. Cultivators of land, wholly or mainly owned, and their dependents.
2. Cultivators of land, wholly or mainly unowned, and their dependents.
3. Cultivating labourers and their dependents.
4. Non-cultivating owners of the land, agricultural rent receivers, and their dependents.

The colonial government brought modern agriculture education and research in India. For that, they set up several institutions in the country. But they had no interest in the complete restructuring of our agriculture sector. Their motive was to transform the agriculture sector as a raw material centre for the feeding up of their industries. Artificial manure and machines were distributed from their enterprises. Thus they modelled the agrarian revolution which took place in Great Britain. The post-independent government also had a definite plan to restructure the agricultural sector of the country. Food and

---

<sup>175</sup> Vandana Shiva, *The Violence of the Green Revolution: Agriculture, Ecology and Politics in the South*, Other India Press, New Delhi, 2001, p. 50.

<sup>176</sup> *Census Handbook 1951*, Malabar District, Government Press, Madras, 1953, p. vi.



Agriculture Department issued an order of His Excellency the Governor by M. Murugesu Mudaliar, the Deputy Secretary to Government dated 20<sup>th</sup> April 1950, provide a clear picture regarding the Agriculture Education of the country. The progress of agriculture research is on the whole satisfactory, though nothing new and outstanding and of particular significance appears to have been achieved.<sup>177</sup> The growth recorded, mainly, in the pulses section and the Agricultural Engineering Section, seems to be meager and calls for more attention.<sup>178</sup>

Agriculture Statistics of Kerala is one of the important publications of the department of Economics and Statistics.<sup>179</sup> This publication deals with various aspects of the agricultural economy of the State.<sup>180</sup> Kerala, being a non Land Record State, Agriculture Statistics are collected through the sample survey conducted every year under the Central scheme- Establishment of an agency for reporting agriculture Statistics (EARAS) from 1975-1976 onwards.<sup>181</sup> The data relating to land use, the area under crops, and production of plants are based on the results of crop cutting experiments, and field enumerations carried out on sample Cluster Survey Numbers in each Block.<sup>182</sup> Agriculture Statistics are collected in Kerala from very early times through land utilization surveys.<sup>183</sup> These data collected through sample surveys from selected clusters will be consolidated, compiled, and estimates prepared at blocks and district levels.<sup>184</sup> Out of the total geographical area of

---

<sup>177</sup> *Administration Report of the Agricultural Department for Fasli Year 1948-49*, G.O. No.765, 20 April 1950, Government Press, Madras, 1950, p. i, Food & Agriculture Department, A/397, RAK.

<sup>178</sup> *Ibid.*

<sup>179</sup> *Agricultural Statistics, 1995-96*, Department of Economics and Statistics, Thiruvananthapuram (Hereafter DES), 1998, p. 2.

<sup>180</sup> *Ibid.*

<sup>181</sup> *Agricultural Statistics, 1999-2000*, DES, 2001, p. 2.

<sup>182</sup> *Agricultural Statistics, 1995-96, Op. Cit.*, p. 2.

<sup>183</sup> *Ibid.*, p. 3.

<sup>184</sup> *Ibid.*

38,85,497 hectares in Kerala, 55 percent area is used as cultivable land, 28 percent area under forest, and 11 percent area put under non agriculture use.<sup>185</sup> Thus the area used for agricultural purpose is only a little more than half of the total area.<sup>186</sup>

Being an agrarian region, major industries did not develop in Wayanad till 1950. As per the Census of 1951, 19 tea factories run in Wayanad, and 624 persons were employed in these factories.<sup>187</sup> These were the only significant industries in Wayanad. At the same time, the number of small scale and cottage industries were not high in Wayanad compared to other taluks in Malabar district.<sup>188</sup> 9 units of Manufacture of beedies whereas 30 persons were employed in Wayanad.<sup>189</sup> The number of cobbler and footwear were 3, and 7 persons were employed in it.<sup>190</sup> The number of copper, brass, and bell-metal works in Wayanad were 10, and 28 persons were employed in it.<sup>191</sup> This census data shows one pottery unit whereas two persons were employed.<sup>192</sup> 4 Medical and pharmaceutical preparations manufacture unit in which 15 persons were employed.<sup>193</sup> 2 units of manufacture of perfumes and nine persons were employed in it.<sup>194</sup> These data reveal the fact that at the end of 1950, the industrial development of this region was not much increased. The European established major industries i.e., tea industry was the main outlet of

---

<sup>185</sup> *Ibid.*

<sup>186</sup> *Agricultural Statistics, 2004-2005*, DES, 2006, p. 3.

<sup>187</sup> *Census Handbook 1951, Malabar District, Op. Cit.*, p. 7.

<sup>188</sup> The enquiry was confined to establishments to which the Factories Act was not applicable. Individuals who worked on their own and did not employ other people were left out of account.

<sup>189</sup> *Census Handbook 1951, Malabar District, Op. Cit.*, p. 13.

<sup>190</sup> *Ibid.*

<sup>191</sup> *Ibid.*

<sup>192</sup> *Ibid.*

<sup>193</sup> *Ibid.*

<sup>194</sup> *Ibid.*

the finished product of the tea estate.<sup>195</sup> So the root of the socio-economic background of the people of Wayanad mainly concentrates in the Agriculture sector. The following table shows the variation of different kinds of workers in Kerala and Wayanad from 1971 to 1981.

**Table No. 4.5**  
**WORKERS IN AGRICULTURAL AND NON-AGRICULTURAL**  
**SECTORS 1971-81**

		Total Workers	Main Workers	Agricultural Sector		Non-Agricultural Sector	
		1971	1981	1971	1981	1971	1981
Kerala	Number	6216459	6791175	3014777	2804594	3201682	3986581
	Percentage to Total Workers/Main Workers	100	100	48.5	41.3	51.5	58.7
	Percentage to Total Population	29.12	26.68	14.12	11.02	15	15.66
Wayanad	Number	152474	185835	94986	112939	57488	72896
	Percentage to Total Workers/Main Workers	100	100	62.3	60.78	37.7	39.22
	Percentage to Total Population	36.84	33.54	22.95	20.38	13.89	13.16

Source: M. Vijayanunni, *Census of India 1981, Series 10, Kerala*, Govt. Press, Ernakulam, 1984, p.22.

The above table shows that the percentage of agriculture workers in Wayanad is more than that of the state average. The percentage of total workers in Wayanad is also more than the state of Kerala.

In Malabar District, the taluks of Chirakkal, Kottayam, Kurumbranad, Kozhikode, Ernad, and Ponnani are deficit in food grains while Palaghat and Wayanad are surplus areas.<sup>196</sup> Tea, coffee, rubber, and little cinchona are the

<sup>195</sup> One such old tea factory of Achoor estate can be seen on way side from Vythiri to Padinjaraathara route.

<sup>196</sup> *Census Handbook 1951, Malabar District, Op. Cit.*, p.4.

plantation crops of the Wayanad taluk.<sup>197</sup> The chief food crop was paddy. Cholan, ragi, samai, and maize are cultivated in small extents.<sup>198</sup> In Wayanad, the soils are of red ferruginous series with regar soils in the north of the taluk.<sup>199</sup> The black and blackish soils derived from the forest washes are highly fertile.<sup>200</sup> The Kurichiyas have divided the land into units of paddy and plantations.<sup>201</sup> The early migrants also followed this practice. The following table shows the actual number of cultivators in Wayanad.

**Table No. 4.6**  
**CULTIVATORS 1971-81**

	Census Year	Total			Males			Females		
		Number	Percentage to Total Population	Percentage to Workers	Number	Percentage to Male Population	Percentage to Male Workers	Number	Percentage to Female Population	Percentage to Female Workers
Kerala	1971	1106663	5.18	17.8	1039331	9.82	21.81	67332	0.62	4.64
	1981	887232	3.49	13.07	805552	6.43	15.67	81680	0.63	4.95
Wayanad	1971	38476	9.3	25.24	36465	16.93	32.11	2011	1.01	5.17
	1981	39331	7.1	21.17	35601	12.53	26.67	3730	1.38	7.17

Source: M.Vijayanunni, *Census of India 1981, Series 10, Kerala*, Govt. Press, Ernakulam, 1984, p.33.

The above table shows that the percentage of the total number of cultivators was also high in Wayanad than the state average. Interestingly, the percentage of female population those who involved in agriculture are also high in Wayanad than the state average. In 1981, it became double than the state average.

<sup>197</sup> *Ibid.*

<sup>198</sup> *Ibid.*

<sup>199</sup> *Ibid.*

<sup>200</sup> *Ibid.*

<sup>201</sup> Hemal S. Kavinde, et. al., *Op. Cit.*, p. 12.

**Table No. 4.7****AGRICULTURAL LABOURERS 1971-81**

	Census Year	Total			Males			Females		
		Number	Percentage to Total population	Percentage to workers	Number	Percentage to Male Population	Percentage to Male Workers	Number	Percentage to Female Population	Percentage to Female Workers
Kerala	1971	1908114	8.94	30.69	1195755	11.29	25.1	712359	6.62	49.06
	1981	1917362	7.53	28.23	1198775	9.57	23.32	718587	5.56	43.55
Wayanad	1971	56510	13.65	37.06	35640	16.55	31.39	20870	10.51	53.63
	1981	73608	13.28	39.61	44803	15.76	33.49	28805	10.68	55.35

Source: M.Vijayanunni, *Census of India 1981, Series 10, Kerala*, Govt. Press, Ernakulam, 1984, p.34.

The above table shows that the percentage of agricultural labourers of Kerala decreased from 1971 to 1981. But in Wayanad its rate, both male and female labourers increased. With the arrival, both the cultivators and labourers the residential area of Wayanad increased. The following table shows the number of residential houses in Kerala and Wayanad.

**Table No. 4.8****NUMBER OF OCCUPIED RESIDENTIAL HOUSES, 1971-81**

	Area in Sq.km.	Number		Decadal Increase	Percentage Decadal Variation	Density of Occupied Houses (per Sq.Km.)	
		1971	1981			1971-81	1971-81
Kerala	38863	3418244	4297322	879078	25.72	88	111
Wayanad	2132	73409	101409	28000	38.14	34	48

Source: M.Vijayanunni, *Census of India 1981, Series 10, Kerala*, Govt. Press, Ernakulam, 1984, p.8.

The above table shows that the percentage of decadal variation of residential houses in Wayanad is high than the state average. Though there was a fast increase in the density of occupied dwellings in both Wayanad and

Kerala from 1971 to 1981, the frequency of the population in Wayanad was less than the state average.

With the use of the abundant water sources, the agriculture sector of Wayanad, improved much. The clearing of more forest areas for agricultural land increased the demand for water. It led to the construction of several irrigation projects in Wayanad. As per the census 1951, the number of minor irrigation sources in Wayanad taluk was two and the area irrigated was 134.60 acres.<sup>202</sup> The colonial government was less interested in irrigation projects. This situation began to change after independence due to the introduction of five-year plans. There was no primary irrigation source in Wayanad taluk in the 1950's and 1960s.

The increase in population naturally leads to infrastructure development in any region. They are in different forms. The new roads and transportations were the unified efforts of the local people. Later these roads were taken by the government and raised its status into state or district roads. The taluk wise distribution of the roads is given:-

**Table No. 4.9**

Name of taluk	National Highways (in Miles)	Provincial Highways (in Miles)	Major District roads (in Miles)	Other District roads (in Miles)	Village roads (in Miles)	P.W.D. roads (in Miles)	Municipal roads (in Miles)	Total (in Miles)
Wayanad		26	140	25	23	-	-	214
Total in Malabar District	42	330	811	389	448	8	196	2,224

Source: J. I. Arputhanathan, *Census Handbook 1951*, Malabar District, Govt. Press, Madras, 1953, p.4.

<sup>202</sup> J. I. Arputhanathan, *Op. Cit.*, p. 4.

Compared to the rest of the regions in Malabar, a very less number of roads had existed in Wayanad. It was mainly due to the lesser population. Though Wayanad shares boundaries with Nilgiri and Mysore regions and had earlier routes to these places, there were no National highways in Wayanad.

### **Patterns of Agrarian Change**

The agrarian condition after independence resulted in several changes. From the first five year plan period itself, the governments began to give due importance to agriculture and the improvement in infrastructural development. With this purpose, they constructed colossal irrigation projects. The post-independent Government realized the fact that the lack of sufficient food grain in India should be eradicated through scientific methods in farming practices. With the growth of new experiences in agrarian crops all over the world, agriculture production increased in many countries. Genetically modified plants and new techniques in cultivation accelerated this development. A domesticated plant is a genetically modified species utterly dependent on humans for survival, and a semi-domesticated plant has been significantly altered but is still not wholly reliant on humans for survival.<sup>203</sup> Because of greater demand for labour and the resulting higher wages and also on account of the expansion of non-farm opportunities for gainful employment, the proportion of population below the poverty line is also much lower in such areas.<sup>204</sup> Ecological degradation, if any, in such areas has resulted not so much from the increasing pressure on common lands and forests for extension of cultivation, for fodder and fuel-wood as from the commercial demand for timber and other forest products.<sup>205</sup> The area like

---

<sup>203</sup> Hemal S. Kavinde, et. al., *Op. Cit.*, p. 2.

<sup>204</sup> C. H. Hanumantha Rao, 'Agricultural Development and Ecological Degradation: An Analytical Framework', in Roshan D' Souza (Ed.), *Environment, Technology and Development: Critical and Subversive Essays*, Orient BlackSwan, New Delhi, 2013, p. 172.

<sup>205</sup> *Ibid.*, p. 173.

Wayanad also showed a general trend. The increasing pressures for bringing the area under plough, the unregulated grazing and indiscriminate felling of trees for commercial purposes in addition to slaughter for fuel-wood have accentuated the degradation of land resulting in scarcity of drinking water, fuel-wood, and fodder.<sup>206</sup> The cattle, together with other livestock, have been exerting pressure on village common lands and forests for grazing.<sup>207</sup> These areas also account for the vast majority of the rural poor in the country, including those belonging to the tribal belt.<sup>208</sup> Thus, areas like Wayanad also were affected by this kind of change.

### **Green Revolution**

The strategic shift of the Indian agriculture sector occurred due to the Green Revolution. In the welcome speech of the President of Centre for the Study of Social Change, he says, “We have historical background of religious and political reform movements. Similarly, Green revolution may culminate in a progressive social change of a comprehensive nature”.<sup>209</sup> Before Green Revolution, approximately 300 types of traditional paddy seeds had cultivated in Kerala.<sup>210</sup>

After two decades of Green revolution, the effects of it became visible. Vandana Siva says science itself is a product of social forces and has a social agenda determined by those who can mobilize scientific production.<sup>211</sup> Thus knowledge transforms nature and society, and a centralized state controls

---

<sup>206</sup> *Ibid.*

<sup>207</sup> *Ibid.*

<sup>208</sup> *Ibid.*

<sup>209</sup> Tarkateerth Laxmanshastri Joshi, *Green Revolution: The Unfinished Task*, Centre for the Study of Social Change, New Delhi, 1974, p. x.

<sup>210</sup> N. Anil Kumar, et. al., *Oushadha Gunamulla Nelvithinangal, Part.1, Navara*, (Mal.) M. S. Swaminathan Research Foundation, Community Agrobiodiversity Centre, Puthoorvayal, Kalpetta, 2001, p. 22.

<sup>211</sup> Vandana Shiva, *Op. Cit.*, p. 21.



agricultural policy, and the disillusioned and discontented farming community became its victims.<sup>212</sup> The reduction in the availability of fertile land and genetic diversity of crops as a result of the Green Revolution practices indicates that at the ecological level, the Green Revolution produced scarcity, not abundance.<sup>213</sup> So many wide traditional varieties of seeds in Wayanad became extinct. It was due to the encouragement of the Government; the farmers began to adopt the new style of farming.

The spread of a new variety of species destroyed the natural forest. Species that cross over their natural distribution and get introduced to new habitats are known as alien species.<sup>214</sup> Those alien species which have thus increased its spread in the new location displacing the local biota are called alien invasive species.<sup>215</sup> With their capability to impact native biodiversity and landscape-level changes, Alien Invasive Species is an essential concern in forests of Kerala, which warrants immediate action.<sup>216</sup> One of the critical challenges in managing alien invasive species in forests is thus to avoid the use the synthetic herbicides, the use of which would be counterproductive owing to their impact on native flora and fauna.<sup>217</sup> The above-mentioned information underlies the fact that it is vital to maintain the natural forest.

When unified Kerala was formed on the 1<sup>st</sup> November 1956, with the erstwhile Princely States of Travancore, Cochin, and Malabar which was part of Madras Presidency, in terms of the States Reorganization Act 1956, forest department was also reorganized into three Territorial Circles, viz; Quilon,

---

<sup>212</sup> *Ibid.*, p. 23.

<sup>213</sup> *Ibid.*, p. 24.

<sup>214</sup> T. V. Sajeev, et. al., 'Are Alien Invasive Plants a Threat to Forests of Kerala?', KFRI Occasional Papers 001, Forest Health Programme Division Kerala Forest Research Institute, Peechi, 2012, p. 5.

<sup>215</sup> *Ibid.*

<sup>216</sup> T. V. Sajeev, et. al., *Op. Cit.*, p.18.

<sup>217</sup> *Ibid.*

Chalakkudy and Kozhikode, with fourteen forest divisions, viz; Trivandrum, Thenmala, Punalur, Konni, Ranni under Quilon circle, Kottayam, Malayattur, Chalakkudy, Trichur under Chalakkudy circle and Nemmara, Palakkad, Kozhikkode, Wayanad under Kozhikode circle.<sup>218</sup> Thus after independence, the forest department, without any structural change continued the colonial pattern of administration.

The massive extraction of forest and its resources by the colonial administration resulted in destruction of nature. The post-independent government also followed the forest policies of the colonial government. As on the second Five Year Plan period, the private and reserved forests in the Malabar District, including waste or communal land containing trees or shrubs, have an area of 2958 sq.miles consisting of 535 sq.miles of Reserve forests and 1750 sq.miles of private forests.<sup>219</sup> The forests of the Kozhikode District are under the administrative control of Kozhikode and Nilambur Divisional Forest Officers.<sup>220</sup> The Kozhikode Forest Division is comprised of five ranges, and the ranges in Wayanad are Chedleth range and Sulthan Bathery range. Kuppadi was the headquarters of both the ranges.<sup>221</sup> Mananthavady was a major seat of the North Wayanad forest division.

It may be noted that each range is under the charge of the Range Officer, and such range is the administrative unit of the Department at the taluk level.<sup>222</sup> So even after independence, the forest department increased its hold in the respective forest areas. They established more and more ranges for the control of forest wealth in the Wayanad region.

---

<sup>218</sup> *Administration Report 2014-15*, Kerala Forest and Wildlife Department, p. 1, KFHT.

<sup>219</sup> *Second Five Year Plan (1956-1961)*, Madras State, Malabar District, Vol. I, p. 2, F/89, RAK.

<sup>220</sup> A. Sreedhara Menon (Ed.), *Op. Cit.*, p. 313, RAK.

<sup>221</sup> *Ibid.*

<sup>222</sup> *Ibid.*

No forest area is set apart as fuel and fodder reserves.<sup>223</sup> The British declared total ownership of forest lands and established a system of reserved forests where people were not allowed to freely move around in the forests, practice shifting cultivation, or gather forest produce.<sup>224</sup> Thus, the *adivasis* were alienated from the forest during the colonial period itself. The following table shows the distribution of the forests in South Wayanad taluk.

**Table No. 4.10**

<b>Range</b>	<b>Taluk</b>	<b>Area (In Sq. Kms.)</b>
Chedleth	Portion of South Wayanad	416.860
Sulthan Battery	Do	270.888

Source: A. Sreedhara Menon, *Kerala Gazetteers*, Trivandrum, Kerala District Gazetteers, Kozhikode, 1962, p.314.

Besides the above mentioned reserved forest land, there was plenty of unreserved forests available in Wayanad. The ownership of this land has come under different individuals. Most of the forest lands were the property of private owners.<sup>225</sup> The Private forests have with Government as a result of passing the Kerala Private Forests (Vesting and Assignment) Act 1971.<sup>226</sup> Thus these forest areas were incorporated into the forest department.

---

<sup>223</sup> *Ibid.*, p. 314.

<sup>224</sup> Biswamoy Pati, 'Introduction: Situating the Adivasis in Colonial India', in Biswamoy Pati, (Ed.), *Adivasis in Colonial India: Survival, Resistance and Negotiation*, Indian Council for Historical Research, Orient BlackSwan, New Delhi, 2011, p. 14.

<sup>225</sup> A. Sreedhara Menon, *Op. Cit.*, p. 314.

<sup>226</sup> *Forest Statistics, 1969-70 and for the Decade 1960-70*, Forest Department, Kerala State, St. Joseph's Press, Trivandrum, 1972, p. 9, KFHT.

**Table No. 4.11**

<b>Kerala Forest Statistics 1974-75</b>				
<b>Forest Area under the Control of the Forest Department as on 1-4-1975 (in Sq.km.)</b>				
	<b>Reserved Forests</b>	<b>Reserve Land</b>	<b>Fuel and Fodder Reserve</b>	<b>Total</b>
Wayanad Forest Division	444.374	15.074	–	459.448
Total-Kerala	8819.425	174.283	1.165	8994.87

Source: *Kerala Forest Statistics, 1974-75*, Planning and Statistical Cell, Kerala, 1976, p.9.

Wayanad Wildlife sanctuary was established in May 1973, which is an integral part of the Nilgiri Biosphere Reserve.<sup>227</sup> It is bounded by a protected area network of Nagarhole and Bandipur in the northeast and Mudumalai of Tamil Nadu on the southeast.<sup>228</sup> The total area of the Wayanad Wildlife Sanctuary is 344.44 km square, of which natural forests constitute 242.954 km square, and the remaining area of 101.487 km square is with plantations.<sup>229</sup> Wayanad Wildlife Sanctuary comprises of four forest ranges with a total of 18 sections.<sup>230</sup>

So the years after the independence forest department continued strict measures of conservation in Wayanad. At the same time, they generated revenue from the forest resources. The table below clearly states that the total revenue obtained in Kerala from the forest department.

---

<sup>227</sup> P. Satyanarayana, *Survey Report on the Flora of Wayanad Wildlife Sanctuary, Kerala*, Government of India, Ministry of Environment & Forests, Botanical Survey of India, Southern Regional Centre, Coimbatore, p.1, KFHT.

<sup>228</sup> *Ibid.*

<sup>229</sup> *Ibid.*

<sup>230</sup> *Ibid.*, p. 2.

**Table No. 4.12**

<b>State Revenue vis-à-vis Forest Revenue (Revenue in Million Rupees)</b>			
<b>Year</b>	<b>State Revenue</b>	<b>Forest Revenue</b>	<b>Percentage</b>
1965-66	804	57	7.09
1966-67	1065.3	66.6	6.25
1967-68	1211.3	74.4	6.14
1968-69	1384	82.8	5.98
1969-70	1314.5	88.3	6.72

Source: *Forest Statistics, 1969-70* and for the decade 1960-70, Forest Department, Kerala State, St. Joseph's Press, Trivandrum, 1972, p.12, Kerala Forest Headquarters Central Library, Thiruvananthapuram (Hereafter KFHT).

Though the forest department had generated revenue from the forest through the felling of trees and the migrants increasingly settled in Wayanad, it did not adversely affect the weather of the region in their early arrival. According to the Census Handbook of 1951, the average annual rainfall and the average number of rainy days in a year in the Wayanad taluk are furnished below:

**Table No. 4.13**

<b>Name of the Taluk</b>	<b>Average Annual Rainfall in Inches</b>	<b>Average number of Rainy Days in a Year</b>
Wayanad	140.68	129.3

Source: J. I. Arputhanathan, *Census Handbook 1951*, Malabar District, Govt. Press, Madras, 1953, p.3.

This report says Wayanad had second average annual rainfall next to Kurumbranad taluk and second average number of rainy days in a year next to Fort Cochin. So being a part of Western Ghats, the rain was satisfactorily good in Wayanad like the previous years. It indicates the fact that the demographic change in Wayanad, did not affect the climatic condition during the 1940s. But later, it began to change. The unconditional cutting of trees

and setting up of new forest plantations even after independence worsened the situation.

### Forest Plantations

The Government promoted plantations in forest land even after independence. The forest areas suitable for raising plantations are being classified and planted up with teak, softwood, *Rawulfia serpentine*<sup>231</sup>, sandalwood, etc.<sup>232</sup> A target of 2400 hectares of teak plantations fixed for the year 1974-75 all over Kerala, but the achievement during the year was 1602 hectares.<sup>233</sup> The following table shows the distribution of different plantations in Wayanad and Kerala.

**Table No. 4.14**

Division-wise Distribution of Different Plantations as on 1-4-1975 (in Ha.)								
Division	Teak	Softwood	Hardwood	Eucalyptus	Cashew	Rubber	Others	Total
Wayanad	4229	3583	—	710	780	2	713	10017
Total-Kerala	62044	19219	1533	31312	3335	1190	4383	123016

Source: *Kerala Forest Statistics, 1974-75*, Planning and Statistical Cell, Kerala, 1976, p.12.

It says the forest department enthusiastically involved in making plantation. The total area of the plantations of Kozhikode Forest Division as on March 31, 1960, and the ranges in which they are situated are given below.

<sup>231</sup> The Indian Snakeroot, devil pepper, or serpentine wood, is a species of flower in the milkweed family Apocynaceae.

<sup>232</sup> A. Sreedhara Menon, *Op. Cit.*, p. 316.

<sup>233</sup> *Administrative Report of the Forest Department for the year 1974-75*, Government of Kerala, 1977, p. 21, KFHT.

**Table No. 4.15**

<i>Teak</i>	<b>Areas</b>	<b>Cents</b>
Chedleth Range	3,754	03
Sulthan's Battery Range	1,452	00
Kuttiyadi Range	271	00
Tamarasseri	26	00
Total	5,503	03

Source: A. Sreedhara Menon, *Kerala Gazetteers*, Trivandrum, Kerala District Gazetteers, Kozhikode, 1962, p.316.

The above table shows that most of the plantation areas were in Wayanad. The colonial policy to grow more forest plantations, which is continued by the forest department, also destroyed the natural forest. We can understand the fact that the most extensive area is, of teak plantations in the jungles of Kerala, and it brings more revenue than any other forest produce.<sup>234</sup> (For more details, see table number 29 in the Appendix I). During 1969-70 the forest department spent Rs.1126398/- for the planting of Eucalyptus. During the 15 years gap, the area of teak plantations almost doubled. The total area of softwood tripled. The sudden increase of Eucalyptus plantation was another remarkable development (For more details, see table number 30 in the Appendix I). Social Forestry projects mainly intend to the democratic approach of forest conservation. But in practice, it paved the way for the growth of the above-mentioned trees rather than the natural tree. Under the banner of such projects, enormous quantities of plants supplied and planted in the forest areas. The Government spent a huge amount of money on this endeavour.

### **Eucalyptus**

A significant feature of the forest plantation was the planting of Eucalyptus in the Wayanad forest. Eucalyptus was introduced in India in the

---

<sup>234</sup> *Forest Statistics, 1969-70 and for the Decade 1960-70, Op. Cit.*, p. 14.

1840s from its cradle land, Australia.<sup>235</sup> As a full-grown eucalyptus consumes eighty gallons of water a day, it is not suitable for dry soil but beneficial for marshy area.<sup>236</sup> Eucalyptus is used for matchboxes, rayon, furniture, medicine.<sup>237</sup>

From 1956 onwards, softwood plantations were raised both in the plateau and in the plains<sup>238</sup>. Softwood species are regenerated in the plateau in combination with teak from 1959, onwards.<sup>239</sup> Eucalyptus Grandis is a species that establishes in areas at 1200 meters above sea level and comes up well on soil, which has subsoil, that is clayey, moist but not waterlogged.<sup>240</sup> It proliferates up to 20 mm. in diameter and 2 meters in height per year.<sup>241</sup> There are a few Eucalyptus Grandis plants in front of the Forest Rest House at Chedleth, which were planted in 1962.<sup>242</sup> They have already attained a height of about 4.5 meters (15 to 20 ft) and a diameter of over 2 inches, which is far above its usual rate of growth. Judging from the response of these plants, it is considered worthwhile to attempt some plantations of Eucalyptus Grandis also.<sup>243</sup>

The well-known writer and environmental activist Mahasweta Devi questions the planting of Eucalyptus in an Indian forest. She asks which class benefits from factories, workshops, plants, and markets connected with

---

<sup>235</sup> Maheswata Devi, 'Eucalyptus: Why?', in Roshan D' Souza (Ed.), *Environment, Technology and Development: Critical and Subversive Essays*, Orient BlackSwan, New Delhi, 2013, p. 86.

<sup>236</sup> *Ibid.*, p. 87.

<sup>237</sup> *Ibid.*, p. 86.

<sup>238</sup> S. Parameswar Iyer, *A Working Plan for Kozhikode Forest Division (1964-65 to 1973-74)*, Kozhikode Circle, 1964, p. 94, R 21/30, KFHT.

<sup>239</sup> *Ibid.*

<sup>240</sup> *Ibid.*

<sup>241</sup> *Ibid.*

<sup>242</sup> *Ibid.*

<sup>243</sup> *Ibid.*



various eucalyptus products? Definitely not the poor and the downtrodden.<sup>244</sup> Forest is meant for the society sustained by the forest<sup>245</sup>. Social forestry for which society? Not for the poor and the downtrodden.<sup>246</sup> If any tree in India needed uprooting, it was eucalyptus<sup>247</sup>. Water consumption by one eucalyptus is equal to that of ten sal trees.<sup>248</sup> Eucalyptus plantation is a threat to Indians' store of subsoil water-reserve and country's ecological, natural, and atmospheric balance.<sup>249</sup> An anti-eucalyptus movement on a national scale seems to be the only answer.<sup>250</sup>

The extensive spread planting of Eucalyptus trees in Wayanad destroyed the biodiversity of the forests of Wayanad. Though there is a strong argument against the cultivation of this tree, another section firmly stands for its maintenance. According to M.E.D.Poore and C.Frier, "Eucalyptus are not good trees for erosion control."<sup>251</sup> Recently the Forest Minister answered in the Kerala Legislative Assembly that there is no scientific evidence of the overconsumption of water by Eucalyptus.

### **Forest-Based Industries**

Forest produce also helped with the development of several industries in the state. The flow of these forests contributes to the urban areas fostered these industries. Most of them are wood-based industries. As per the Forest Statistics of 1969-70, the number of famous Forest Based Industries in Kerala was fourteen. (For more details, see table number 31 in the Appendix I).

---

<sup>244</sup> Maheswata Devi, *Op. Cit.*, p. 86.

<sup>245</sup> *Ibid.*

<sup>246</sup> *Ibid.*

<sup>247</sup> *Ibid.*, p. 87.

<sup>248</sup> *Ibid.*

<sup>249</sup> *Ibid.*

<sup>250</sup> *Ibid.*, p. 88.

<sup>251</sup> M. E. D. Poore and C. Frier, *The Ecological Effects of Eucalyptus*, Natraj Publishers, Dehra Dun, 1987, p. 63.

Among the fourteen, eleven were plywood industries. Both the private and Government sector own these firms. No sector was functioning in Wayanad district. But Wayanad forest division abundantly supplied raw materials for these industries. It reveals the fact that forest depletion was not the necessity of rural folk. Most of these industries are set up at urban centres. Several labourers depend on these industries, and they lead to the industrial growth of the cities. It depleted the forest. The high consumption of these products by the people from both urban and rural areas in the last 60 years, accelerated the process of cutting off more and more trees in the forest, as the long-fibered raw material, bamboo occupies an vital place in paper and pulp industry.<sup>252</sup> Bamboo pulp is suitable for the production of high-quality papers.<sup>253</sup> Of the 4.2 million tonnes of bamboo raw material, about 50% goes to the paper and pulp industries.<sup>254</sup>

The infrastructural development of Kerala was due to the flow of raw materials from remote areas. The transport and communication network of our country also contribute to this infrastructural development. India has a wide range of railway network. The forests of Western Ghats supplied the rail sleepers from the colonial period itself. This practice also continued even after independence. (For more details, see table number 32 in the Appendix I). It is another source of exploitation of the forests. The supply of railway sleepers denuded the jungle. The significant portion comes from the thick forests of Wayanad forest division. Therefore both the public and the private sector industries were the utilizers of our forest.

---

<sup>252</sup> T. Surendran & K. K. Seethalakshmi, *Investigations on the Possibility of Vegetative Propagation of Bamboos and Reeds by Rooting Stem Cuttings*, KFRI Research Report 31, Kerala Forest Research Institute, Peechi, Thrissur, 1985, p. 1.

<sup>253</sup> *Ibid.*

<sup>254</sup> *Ibid.*

## GRASIM

One of the primary reasons for the depletion of the natural forest of Wayanad was the establishment of the Grasim industry at Mavoor. As part of encouraging industrialization, Grasim was offered Bamboo from the State of Kerala at a rate of Rs. 1/tonne.<sup>255</sup> The factory started the production process in 1963.<sup>256</sup> The demand then was for 2 lakh tonnes/ year with a total agreed commitment for up to 3.2 lakhs tonnes.<sup>257</sup> This pricing and supply continued until 1974.<sup>258</sup> The main finished product of this industry was rayons, which were not used by the common man. Hundreds of trucks loaded with bamboo, flowed from Wayanad to Kozhikode. The total consumption of forest resources and the total loss by Grasim industry will be discussed in the next chapter.

When we analyse the agriculture and environment of Wayanad since 1930, the main change occurred due to migration. It altered the landscape of Wayanad. The concept of the land of Wayanad changed from wild forest areas to a fertile ground to cultivate. The demographic pattern of Wayanad also was broken. The migrant farmers include the Christians, Muslims, and Thiyyas of Travancore. They had different kinds of attitudes to the land of Wayanad compared to the *adivasis*. Though their arrival and the subsequent political changes in Kerala ruined feudalism in Wayanad, it restricted the free movement of *adivasis*. The governments in the state during post-independent period generally followed a lenient attitude towards the migrant farmers. Though the early migrants purchased the land of Wayanad at a low price, the later arrivals alarmingly started encroaching the *Devaswom* and revenue land. The landowners also expected the implementation of land reforms. So the landlords enthusiastically sold their property to the migrants and received the

---

<sup>255</sup> Sridhar R., *Grasim Since 1963: The Burden on Our Heads : An Enquiry into What This Industry did to Our forests*, Centre for Nature Studies, Thiruvananthapuram, 2000, p. 7.

<sup>256</sup> *Ibid.*

<sup>257</sup> *Ibid.*

<sup>258</sup> *Ibid.*

price. By around 1970's approximately 20 percent of the total territory of Wayanad was occupied by the migrants. It was through either legal or illegal means. The small scale peasants made their livelihood with the hitherto uncultivated tract. According to the forest records, we cannot see the encroachment of forest land. The following table shows the distribution of land in Wayanad during 1971.

**Table No. 4.16**

<b>PERCENTAGE DISTRIBUTION OF LAND BY TYPE OF USE IN THE RURAL AREAS OF THE TALUK As Per Census 1971</b>						
Taluk	Total area (in %)	Forest <sup>259</sup> in %	Irrigated Land in %	Unirrigated Land in %	Cultivable Waste in %	Area not Available for Cultivation in %
1	2	3	4	5	6	7
South Wayanad	100	35.92	7.47	39.78	12.89	3.94
North Wayanad	100	39.24	6.57	40.53	9.94	3.72

Source: K. Narayanan, *District Census Handbook, Kozhikode, Census 1971, Series-9, Kerala, Part X- A & X- B, Govt. Press, Ernakulam, 1974, p.9.*

<sup>259</sup> Forest: This includes all actually forested areas on the lands classed or administered as forests under any legal enactment dealing with forests whether state owned or private.

Irrigated and unirrigated lands: This covers all agricultural lands and includes net area sown with crops and orchards and also current and other fallows. The fallow lands include all lands which were taken up for cultivation for a period of not less than one year and not more than five years. In case of irrigated land sources of irrigation are canal, tank, well, tube well etc.

Cultivable Waste: This includes land available for cultivation whether or not taken up for cultivation or abandoned after a few years for one reason or other. Such lands may be either fallow or covered with shrubs and jungles which are not put to any use. These may be assessed or unassessed and lie in isolated blocks or within cultivated holdings. Land once cultivated but not cultivated for five years in succession is also included in this category. Lands under thatching grasses, bamboo bushes and other groves for fuels, which are not included under orchards or forests shall also come under this head. All grazing lands, whether they are permanent pastures and meadows or not; village common and grazing lands within forest areas are included in this category. Area not available for cultivation: This includes lands not available for cultivation such as barren, unculturable and land put to non agricultural use. Land put to non-agricultural use stands for all lands occupied by buildings, roads and railways or under water e.g. rivers and canals, and other lands put to uses other than agricultural. Barren and unculturable land covers all barren and uncultivable lands like mountains, deserts etc. Lands which cannot be brought under cultivation unless at a high cost are classified as uncultivable whether such land is in isolated blocks or within cultivated holdings.

The above table shows that by 1970s three-fifths of the total land of Wayanad was occupied, out of which, one fifth was under the control of the migrants. The forest department clearly demarcated the rest of the area. According to the official version of the forest department, no reserved forest was transferred to the inhabitants. However, the new migrants started a variety of cultivation in the newly developed land, which uprooted the diversity of the earth. Still, they had a keen interest in paddy cultivation. Several uncultivated areas became cultivable land. So this land never became a denuded territory. Before their arrival, it was owned by both the forest department, and large scale estate owners made a profit from this land. Later the new migrants also followed their footsteps, though they suffered several hardships.

The population pressure on Wayanad led to the development of new transport and communication. The following table shows the percentage of the decadal variation of the population in Wayanad taluk and Kerala from 1901 to 1981.

**Table No.4.17**

PERCENTAGE DECADAL VARIATION IN POPULATION, 1901-81								
	1901-11	1911-21	1921-31	1931-41	1941-51	1951-61	1961-71	1971-81
Kerala	11.75	9.16	21.85	16.04	22.82	24.76	26.29	19.24
Wayand	9.85	2.69	8.26	15.89	59.17	62.6	50.35	33.87

Source: M. Vijayanunni, *Census of India 1981, Series 10, Kerala*, Govt. Press, Ernakulam, 1984, p.29.

### **Conclusion**

It is a fact that the flow of population from other regions of Kerala into Wayanad has caused an increase in population in Wayanad and a decrease in people in other parts. So the population pressure on Wayanad must have been an advantage to the other regions. But this flow of population by about 1980, changed the demographic pattern of Wayanad. From this time onwards, the

social structure of Wayanad was stabilized in its present form. Thus Wayanad became the land of several demographic groups like Jains, Nairs, Chettis, Muslims, Thiyyas, and Christians. Now this region is inhabited by pluralistic society like the other parts of Kerala. But this new development increasingly sidelined the early inhabitants, i.e.; the *adivasis* though their material condition was not so good in previous times onwards. They did not get the benefits, which the other communities could access. The unbalanced economic growth of our country alienated the *adivasis* from the mainstream.

The post-colonial situations favoured the small scale peasants to occupy the Wayanad region. But the forest department continued the colonial policies. They collected the forest produce and sold it in the market. The revenue-generating measures of the department depleted the biodiversity of the forest. Both the government-owned industries and the privately-owned industries have increasingly utilized the forests of Wayanad. For that, they drained the natural forest and planted monoculture plantations. So the environmental chaos of Wayanad was due to the continuation of the colonial forest policies, the intrusion of migrant farmers, and their introduction of the new methods of cultivation and the protection of the interest of large scale estate owners. Wayanad became the 13<sup>th</sup> district of Kerala on 1<sup>st</sup> November of 1980. It was only after the 1970's that the cultivation pattern of old Wayanad began to disappear due to the emergence several external developments, which will be discussed in the fifth chapter.

## CHAPTER 5

### **CHANGING PRACTICES AND ITS IMPACT ON ENVIRONMENT AND AGRICULTURE**

By about the 1970's the migration from central Travancore was almost completed. The Christians, Muslims, and Ezhava communities occupied several cultivable wastelands in Wayanad. Along with the earlier inhabitants, they played a prominent role in the socio-economic scenario of Wayanad. Though the people continued to migrate in the later periods as well, it was not a mass movement. So the present demographic pattern of Wayanad evolved around the 1970's. The majority of the people still directly or indirectly depend upon agriculture. Changes in land-use and land-cover in the region are potentially of critical importance to lakhs of people.<sup>1</sup> Out of the 2131 square km land of Wayanad, 39 percent is forest, 31 percent is large scale estates, and only 30 percent was small scale holdings.<sup>2</sup> The migrant farmers survived their earlier hardships. The socio and economic stability of different sects in Wayanad brought them into a comfortable position. Gradually they began to play a vital role in shaping the future of Wayanad. To know the accurate picture of the agriculture and environment of present Wayanad, we should understand the main changes after 1980. This chapter mainly discusses the trends and development of Wayand after 1980.

The 39 percent of the land is forest land includes forest plantations and Natural forest. According to the reports of the Government, no such land has encroached after migration. The forest department records and the Economics and Statistics report also made it clear. The major change happened in the

---

<sup>1</sup> A. K. Enamul Haque, et. al., (Ed.), *Environmental Valuation in South Asia*, Cambridge University Press, Delhi, 2011, p. 146.

<sup>2</sup> P. U. Das, 'Mannu Kannakanam' in *Malayala Manorama* (Mal.), Kottayam, 27 September 2019.

nature of the forest in Wayanad. It adversely affects the environment and human beings. Today Man-Wildlife conflict is a common phenomenon in Wayanad. Even after migration, wild animals mainly concentrated in thick forest areas. But this situation slowly began to change after 2010. At present, no agriculture tract is secure from the threat of wild animals in Wayanad. The number of wild animals increased in the forests of Wayanad due to several reasons. The Government stopped the practice of capturing. The hunting operations almost ended due to the strict supervision of the forest department. At the same time, several human-made problems also worsened the situation. Indira Gandhi once remarked, “the inherent conflict is not between conservation and development, but between environment and the reckless exploitation of man and earth in the name of efficiency”.<sup>3</sup> The intrusion of humans into the comfort zones of the wild animals is not due to agricultural expansion but by the recent tendencies, i.e., the growth of real estate projects of significant structures and changes in the agriculture pattern. It was due to the shift in the economic focus of the people. People began to invest more money in nonagricultural activities and transform the very agrarian face of Wayanad.

The various afforestation programmes also worsened the situation. In 1982, the Report of the Committee on Forests and Tribes specifically recommended that, forest policies and management should address the needs of ecological security, products used for fuel, food, timber and fibre needs of the rural and *adivasi* households; and cottage, small, medium and large industries.<sup>4</sup> Ministry of Environment, Forest and Climate Change (MoEF&

---

<sup>3</sup> J. Donald Hughes, *An Environmental History of the World, Humankind's Changing Role in the Community of Life*, Routledge, London, 2<sup>nd</sup> Edition, 2010, p. 248.

<sup>4</sup> Hemal S. Kavinde, et. al., *Wild Food Management in Wayanad, Kerala: An Explanatory Study* (Unpublished), Community Agro-biodiversity Centre, Kalpetta, Wayanad and Uttara Devi Resource Centre for Gender and Development, M. S. Swaminathan Research Foundation, 2001, p. 3.



CC) fixes and monitors the afforestation targets and achievements under 20 Point in the country, done under various centrally sponsored schemes/programmes as well as State Plan and Non-Plan Schemes.<sup>5</sup> We can see an increasing trend of afforestation in Wayanad. The significant negative impact of these measures is the growth of more and more forest plantations instead of natural forests. The Centre for Earth Science Studies made a study using the topographical maps of the Survey of India from 1905, and new Land sat imageries (Satellite images), in order to assess the trend of deforestation.<sup>6</sup> A large area of forest had been brought under plantations.<sup>7</sup> (For more details, see table number 33 in the Appendix I).

The development of wood-based industries has great importance to the state.<sup>8</sup> Pulp and Paper industry depend on the forest for raw material supplies.<sup>9</sup> Under the social forestry mission of the forest department plant teak-like plant in order to earn revenue from the forest like the colonial period.<sup>10</sup> It severely affects not only the ecosystems but the wild animals also. Its reflections can be seen in the climate, which directly affects the agriculture sector of Wayanad. The previous chapter already discussed the exploitation of

---

<sup>5</sup> *Forest and Climate Change, New Initiatives and Efforts*, Ministry of Environment, 2014-17, p.7, googlebooks, accessed on 06-06-2018, 8.20 am.

<sup>6</sup> V. Ramachandran, 'Socio-Economic Research in Forestry, Approach to Development in the Western Ghats', in K. S. S. Nair, et. al., (Ed.), *Eco Development of Western Ghats*, Kerala Forest Research Institute, Peechi, Kerala, p. 8, KFRI Library Cataloging in Publication data (Hereafter KFRIL).

<sup>7</sup> *Ibid.*, p. 7.

<sup>8</sup> K. M. Bhat, et. al., *Wood and Bark Properties of Branches of Selected Tree Species Growing in Kerala*, KFRI Research Report 29, Kerala Forest Research Institute, Peechi, Thrissur, December 1985, p. 1, KFRIL.

<sup>9</sup> A. Anandaraj & K. K. Subramanian, *Forest Management and Forest Based Industries: Some Lessons from Pulp and Paper Industry in Kerala*, Socio-Economic Research in Forestry, Kerala Forest Research institute and the Ford Foundation, 1993, p. 73, KFRIL.

<sup>10</sup> *Interview*, M. Gangadharan Master, Vice President, Pazhassi Granthalayam and Founding member of Wayanad Prakrithi Samrkskana Samithi, Manathavady, 2 June 2019.

forests by Grasim Industries. The following tables show the consumption of raw materials until 1998.

**Table No. 5.1**

<b>Computation of Realistic Loss Estimate Due to the Subsidized Raw Material Supply to Grasim</b>								
A	B	C	D	E	F	G	H	I
Period	No. of Years	Average Quantity (in tons Per Year)	Average Realistic Rates (based on Market Value in Rs.)	Amount on the basis of Market Value in Crores of Rs.	Special Rates for Grasim (as on Records in Rs.)	Amount on the basis of the Special Rates (in Crores of Rs.)	Loss Calculated as the Difference (G-E)(in Crores of Rs.)	Loss on March 1999 (in Crores of Rs.)
1962 to 1974	12	200000 (Bamboo)	2600	624	1	0.24	623.76	21325
1974 to 1984	10	60000 (Bamboo) 140000 (Eucaly)	3700 (Bamboo) 2000 (Eucaly)	500	18 (Bamboo) 22.5 (Eucaly)	4.2	495.8	4762
1984 to 1986	2	4858.25 (Bamboo) 58624.95 (Eucaly)	4300 (Bamboo) 2500 (Eucaly)	33.49 (Eucaly)	18 (Bamboo) 22.5 (Eucaly)	0.28	33.21	153
1988 to 1998	10	197566.5 (Bamboo) 77484.8 (Eucaly)	5000 (Bamboo) 4000 (Eucaly)	1308.89	Varied rates (see table F)	89.44	1219.45	2396
Total	34							28936

Source: Sridhar R., *Grasim Since 1963: The Burden on Our Heads: An Enquiry into what this Industry did to our Forests*, Centre for Nature Studies, Thiruvananthapuram, 2000.

The gradual destruction of the forest by the forest department and outsiders became a great source of concern to the villagers.<sup>11</sup> The reason for such degradation of forests is first a failure to meet the basic needs of rural people and second the exploitation of forest for urban markets.<sup>12</sup>

<sup>11</sup> P. R. Trivedi and U.K.Singh, *Forest and Wildlife Protection*, Janada Prakashan, Global Open University, Nagaland, New Delhi, 2017, p. 4231.

<sup>12</sup> Pushpa Indurkar, *Forestry, Environment and Economic Development*, Ashish Publishing House, New Delhi, 1992, p. 21.

**Table No. 5.2**

Raw Material supply to Grasim during the period 1988 to 1988							
(A) Report Year	(B) Reed (in nos.)	(C) (B/720)Reed (in tons)	(D) Bamboo (in nos.)	(E) (D/16) Bamboo (in tons)	(F) Eucalyptus (in tons)	(G) Other (in tons)	(H) (C+E+F+G) Total (in tons)
1988-89	280000	38809	_	5309.2	14628.5	_	20326.6
1989-90	_	_	1281025	80064.1	128844.9	_	208909
1990-91	1224000	1700	347606	21725.4	93956.3	_	117381.7
1991-92	_	_	1518504	94907	86687.4	_	181594.4
1992-93	_	_	641246	40078	270216.4	_	310294.4
1993-94	_	_	3549869	221869	39796.9	_	261665.9
1994-95	_	_	18210735	1138171	38804	18106.1	1195081
1995-96	977020	1357	2063519	128970	29027.8	5371.3	164726.1
1996-97	4216000	5855.6	1346991	84187	65525.9	4327.1	159895.6
1997-98	1590271	2209	2381978	148874	7359.6	_	158442.6
		11510.5		1964155	774847.6	27804.5	2778317

Total (Reed & Bamboo) = 19756665.2 MT*
Total (Eucalyptus & Others) = 802652.1 MT
Total Raw Material Supply = 2778317.3 MT
Average /Year Supply (Reed & Bamboo) = 1.976 lakh MT
Average /Year Supply (Eucalyptus & Others) = 0.802 lakh MT
Average/ Year (Raw Material total) = 2.778 lakh MT

Source: Sridhar R., *Grasim Since 1963: The Burden on Our Heads: An Enquiry into what this Industry did to our Forests*, Centre for Nature Studies, Thiruvananthapuram, 2000.

\*MT- Metric Tons.

The above tables show that the more massive consumption of forest goods at a cheaper rate. The total social and environmental cost of this consumption is unaccountable. The chief custodian of the 'forest wealth,' i.e., the forest department, still considers their land as a source of income. Planting more and more teak plantations is the main activity of the forest department, instead of preserving the natural forest for the wild animals and the environment. These kinds of efforts of the department for revenue generation,

ultimately ruin the environment. M. E. D. Poore and C. Frier say, “Eucalyptus should not be planted, especially on a large scale, without a careful and intelligent assessment of the social and economic consequences.” Both from the environmental and socio-political points of view, the writers suggest alternatives to the present system. The first condition for a healthy forest and environmental policy is that while taking decisions concerning investment, one should count the social and ecological benefits, not merely immediate financial gains.<sup>13</sup> Now the plantations are taken up with specific projected growth and survival of selected species. While the programme is justified on the basis of these projections.<sup>14</sup> Madhav Gadgil Report says that “We are practicing exclusionary development, exclusionary conservation, for vested interests profit from such exclusion”.<sup>15</sup> The entire ecosystem was transformed under the influence of the colonial model of ‘private property’ in the land, water, and other natural resources.<sup>16</sup> Policies are needed to create traditional methods of natural forest conservation.

### **Real Estate Boom**

On the other hand, the agricultural land of Wayanad also changed a lot after 1980. The conversion of agricultural land into commercial plots is widespread phenomenon all over Kerala. There are several reasons for this development. The farmers are withdrawing from the agriculture sector due to

---

<sup>13</sup> Walter Fernandes, ‘Forests, Environment and People: An Introduction’, in Walter Fernandes (Ed.), *Forests, Environment and People: Ecological Values and Social Costs*, Indian Social Institute, New Delhi, 1983, pp. 5-6.

<sup>14</sup> Madhav Gadgil, et. al., ‘Forests, Forest Management and Forest Policy: A Critical Review’, in Walter Fernandes (Ed.), *Environment and People, Ecological Values and Social Costs*, Indian Social Institute, New Delhi, 1983, p. 24.

<sup>15</sup> Madhav Gadgil, *Report of the Western Ghats Ecology Expert Panel*, Ministry of Environment and Forests, Government of India, 4 March 2011, p.16, google, accessed on 14-05-2015, 7.25 am.

<sup>16</sup> Atluri Murali, ‘Whose Trees? Forest Practices and Local Communities in Andhra, 1600-1922’, David Arnold & Ramachandra Guha (Ed.), *Nature, Culture, Imperialism: Essays on the Environmental History of South Asia*, Oxford University Press, Delhi, 1996, p. 121.

various causes.<sup>17</sup> It is not easy to draw a real picture of this change. However, the commercialization of agriculture and the non favourable import and export of agricultural products led agriculture to become an unprofitable enterprise.<sup>18</sup> The chemical fertilizers and high yield varieties of seeds lost the fertility of the soil. It was due to the coercion from the authorities after the Green revolution, strategies transformed our cultivable land. The adverse effects of these developments mainly affected the small scale peasants, whose main livelihood is agriculture. The less attraction of agriculture forced them to give up their agricultural land.

### **The decline of paddy fields**

Filling up the paddy fields is not a new story limited to Wayanad alone. One such study of P. P. Nikhil Raj and P. A. Azeez points out that it is a typical phenomenon in all the districts of Kerala.<sup>19</sup> Since 1995 about 63-76 percent of the total area of Kuttanad, an important wetland system of Kerala, has been filled up for non-agricultural or non-ecological purposes.<sup>20</sup> For the last 50 years, more than 50 percent of the paddy land has been lost in Kerala.<sup>21</sup> In 1975-76, there exists 30 percent of paddy land, and its percentage decreased to 24 percent in 1985-86, and it also reduced to 15 percent in 1995-96.<sup>22</sup> The area under paddy has drastically reduced from

---

<sup>17</sup> *Interview*, C. M. Francis, President, Rubber Production Society, Padichira, 15 August 2014.

<sup>18</sup> *Interview*, Baby Thombrayil, Farmer, Choothupara at his residence, 28 January 2018.

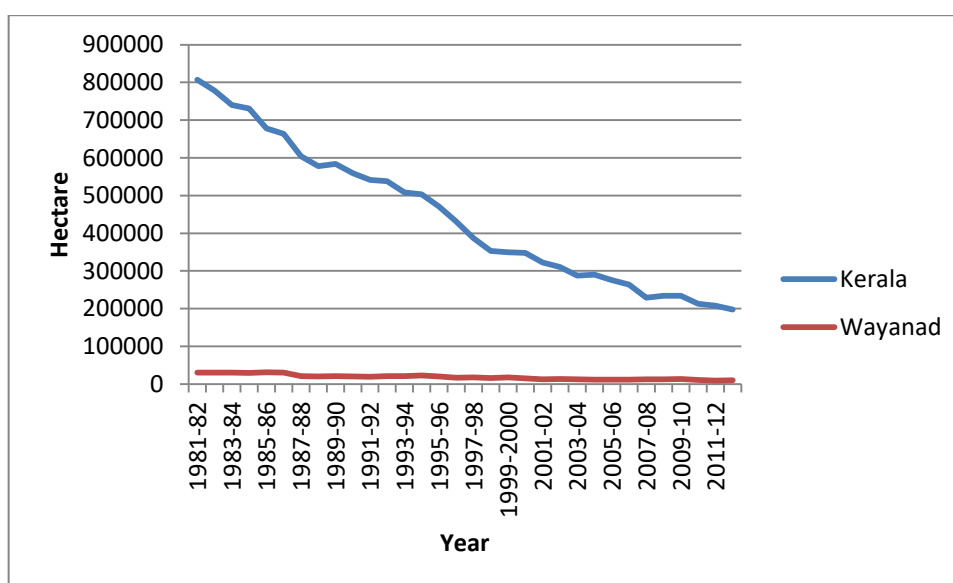
<sup>19</sup> P. P. Nikhil Raj & P. A. Azeez, 'Real Estate and Agricultural Wetlands In Kerala', in Roshan D' Souza (Ed.), *Environment, Technology and Development: Critical and Subversive Essays*, Orient BlackSwan, New Delhi, 2013, p. 178.

<sup>20</sup> *Ibid.*

<sup>21</sup> N. Anil Kumar, et. al., *Oushadhagunamulla Nelvithinangal, Part-1, Njavara* (Mal.), M. S. Swaminathan Research Foundation, Community Agro Bio-diversity Centre, Puthoorvayal, Kalpetta, January 2001, p. 22.

<sup>22</sup> *Ibid.*

30,000 ha to 4,000 ha during the last three decades.<sup>23</sup> The more considerable inflow of foreign money is an important factor supporting the high priced growth of the sector.<sup>24</sup> The following graph indicates the general trend of the decrease of paddy cultivation in Kerala and Wayanad. Based on the agricultural statistics from 1981 to 2013, the following chart was prepared. The curves indicate the total area of paddy cultivation in Kerala and Wayanad (Area in Hectares).



The state failed to offer any other avenue for profitable investment.<sup>25</sup> The policymakers, to, do not have any vision towards channeling these accessible funds for the betterment of the state.<sup>26</sup> The migration of small landowners after selling off their landholdings in fast-growing city centres to rural areas is also likely.<sup>27</sup> In terms of direct income, the real estate sector is

<sup>23</sup> P. Indira Devi, et. al., *National Agricultural Innovation Project: Base-line survey report of "Multi Enterprise Farming Models to Address the Agrarian Crisis of Wayanad District of Kerala": Socio-Economic Status of Wayanad District*, Kerala Agricultural University, Poorna Publications, Kozhikode, 2012, p. 13.

<sup>24</sup> P. P. Nikhil Raj & P.A,Azeez, *Op. Cit.*, p. 177.

<sup>25</sup> *Ibid.*

<sup>26</sup> *Ibid.*

<sup>27</sup> *Ibid.*, p. 180.

highly attractive compared to agriculture.<sup>28</sup> The Kerala Conservation of Paddy Land and Wetland Act, 2008 is aimed at protecting rice fields from illegal reclamation. However, the act is likely to be a burden on the small-scale farmers of Kole wetlands<sup>29</sup> since it allows the government to seize land that is not cultivated.<sup>30</sup>

Large scale paddy fields in Wayanad also are converted into other forms. The growth of the tourism industry in Wayanad created a boom in the real estate sector of Wayanad. The higher demand for the uncultivated land in Wayanad will change the traditional land usage of the region. The cropping pattern in Wayanad is mainly based on coffee and pepper.<sup>31</sup> Owing to economic and environmental changes, it is getting transformed slowly in favour of crops like rubber, coconut, etc.<sup>32</sup> The paddy fields in the area are initially altered for banana farming and later on arecanut plantations.<sup>33</sup> Acres of paddy land is converted into plantain fields in different parts of the region. Another side effect of this is the severe drop in groundwater storage.<sup>34</sup> The farmers claim that the high cost of production and the lack of labourers are the main reasons for their withdrawal from paddy cultivation.

There is a noticeable change in the livelihood of the people of Wayanad during the last three decades. It is also interesting to note the occupational change of the *adivasis* of Wayanad. Through the transformation from cultivable land into non cultivable land, less number of *adivasis* found new opportunities in the newly emerged sectors. The research team of Centre for Development Studies conducted a study in Pulpally Panchayat during

---

<sup>28</sup> *Ibid.*

<sup>29</sup> A wetland lying in Thrissur District in Kerala

<sup>30</sup> P. P. Nikhil Raj & P. A., Azeez, *Op. Cit.*, p. 177.

<sup>31</sup> P. Indira Devi, et. al., *Op. Cit.*, p. 93.

<sup>32</sup> *Ibid.*

<sup>33</sup> *Ibid.*, p. 68.

<sup>34</sup> *Ibid.*, p. 13.

2007 and revealed the fact that Economic and environmental shocks have affected the entire population in the area, regardless of their caste and community status.<sup>35</sup>

**Table No. 5.3**

**Percentage Distribution of Workers According to Community and Main Occupation.**

Caste	Cultivator	Casual Agricultural Labour	Casual Non-Agricultural Labour	Regular Salaried/ Wage Paid job	Professional/ Technical	Forest Dependence	Others	All
Paniyan	4.7	39.1	5.7	-	-	-	-	19.7
Kattunayakan	-	8.5	0.7	-	-	100	-	6.2
Mullukuruman	12.7	3.6	5.7	19.2	-	-	-	6.6
Chetty	22.2	9.4	13.1	-	-	-	18.1	12.9
Ezhava	9.8	15.2	20.7	21.1	-	-	50.0	16.0
Other OBC	6.2	9.6	35.9	-	-	-	16.7	12.0
Christian	41.3	9.1	12.5	59.7	67.0	-	15.2	21.7
Nair	3.1	5.5	5.7	-	33.0	-	0	4.9
All	100	100	100	100	100	100	100	100

Source: Table 3, K. N. Nair, et. al., *Agrarian Distress and Livelihood Strategies: A Study in Pulpally Panchayath, Wayanad District, Kerala*, Working Paper Series 396, Centre for Development Studies (CDS), Thiruvananthapuram, 2007, p.16.

The above mentioned micro-level studies give a realistic picture of the livelihood strategies of the *adivasis*. According to Christoph von Furer-Haimendorf, most of the changes in the economic condition and lifestyle of indigenous people have been caused by contacts with the materially more advanced and politically more powerful population.<sup>36</sup> While analyzing the cases of Central India, Nandini Sundar says, if *adivasi* lands and resources have under sustained attack by the forces of organized capitalism over the

<sup>35</sup> K. N. Nair, et. al., 'Agrarian Distress and Livelihood Strategies: A Study in Pulpally Panchayath, Wayanad District, Kerala', Working Paper Series 396, CDS, 2007, p. 12.

<sup>36</sup> Christoph Von Furer-Haimendorf, *Tribes of India: The Struggle for Survival*, Oxford University Press, New Delhi, 1989, p. 185.



past hundred or so years, their beliefs too have had to face a determined war of attrition by organized religions.<sup>37</sup> Apart from the problem of *adivasis*, the land claimed by the Forest Department is a frequent source of friction between indigenous people and forest officials.<sup>38</sup> The dissolution of *adivasis* and forest social formation began to manifest itself in the form of a series of institutional and structural changes.<sup>39</sup> At the most obvious level, the reservation of large tracts of the forest meant an effective loss of control over their habitat for forest-based communities.<sup>40</sup> Forests became state property in India under colonial rule.<sup>41</sup> Their policy was to grow uniform stands of trees as long as it was financially viable.<sup>42</sup> Ramachandra Guha says the local populations used forest in India for ‘non-timber’ products; they held biodiversity and other environmental services.

After the Muthanga agitation in Wayanad, organized efforts are made by the Adivasi organizations to encroach the vested forest areas in Wayanad under the initiation of mainstream political parties. They realized the failure of Muthanga Mission because of its intrusion in the reserved forest areas. At the same time, they understood the scope of these kinds of agitation because the majority of *adivasis* in Wayanad, especially the Paniyas and Adiyas are landless. So these agitators mainly chose vested forest areas and government plantations. There they built mud houses and started small scale agriculture.

---

<sup>37</sup> Nandini Sundar, ‘Adivasi vs. Vanavasi: The Politics of Conversion in Central India’, in Nandini Sundar (Ed.), *The Scheduled Tribes and Their India : Politics, Identities, Policies and Work*, Oxford University Press, New Delhi, 2016, p. 134.

<sup>38</sup> Christoph Von Furer-Haimendorf, *Op. Cit.*, p. 95.

<sup>39</sup> Rajan Gurukkal, ‘Some Aspects of Kerala’s Cultural Heritage and Ecological Sustainability’, in Vinod T.R., et. al., (Ed.), *Proceedings of Kerala Environment Congress 2013*, Focal Theme Culture and Heritage for Environment Management, Thiruvananthapuram, 2013, p. 88.

<sup>40</sup> Ramachandra Guha, *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya*, 20<sup>th</sup> Edition, Paper Black, Ranikhet, 2010, p. 55.

<sup>41</sup> *Ibid.*, p. 227.

<sup>42</sup> *Ibid.*

They hope that the government will allocate land to them in the nearest future. They did not find new jobs in the secondary sector so far. So they deserve sufficient land to cultivate. The government must give adequate land to the landless *adivasis*.

Between 1951 and 1988, the national forest estate was enlarged from 41 million hectares (ha) to 67 million ha, mainly through sweeping notifications declaring constitutionally protected Fifth Schedule *adivasi* areas as state forests.<sup>43</sup> According to Bidhan Kanti Das, some inclusive measures were initiated, like Joint Forest Management (JFM), 1990, guidelines under National Forest Policy 1988, Panchayaths (Extension to the Scheduled Areas) Act (PESA) 1996, etc.<sup>44</sup> But the introduction of the ‘Scheduled Tribes and other Traditional Forest Dwellers (recognition of forest rights) Act 2006, is perhaps the most essential step that challenges the ‘Eminent Domain’ of the state, intends to undo historical injustice over land rights, and tries to empower forest dwellers for their governance.<sup>45</sup> Though several acts and programmes were initiated, they could not overcome rural poverty. We should acknowledge the gathering rights of wild species and protection from overexploitation.<sup>46</sup> Several people, including the *adivasis*, went to the neighbouring states of Wayanad like Karnataka, where the ginger cultivation became prominent, to earn their livelihood due to weakness of the agriculture sector in Wayanad. There are several occasions when severe diseases affect their lives. So, in such a pathetic situation the government has to figure out some programmes to solve *adivasi* land alienation in the nearest future.

---

<sup>43</sup> Madhu Sarin, ‘India’s Forest Tenure Reforms, 1992-2012’, in Nandini Sundar (Ed.), *Op. Cit.*, p. 383.

<sup>44</sup> Bidhan Kanti Das, ‘Making Forest Dwellers Deprived: Examining Implementation Process of Forest Rights Act, 2006 in India’, in Bidhan Kanti Das & Rajat Kanti Das (Ed.), *Rethinking Tribe in Indian Context: Realities, Issues and Challenges*, Rawat Publications, New Delhi, 2017, p. 134.

<sup>45</sup> *Ibid.*, p. 135.

<sup>46</sup> Hemal S.Kavinde, et. al., *Op. Cit.*, p. 37.

## **Growth of the Construction sector and the Environment**

The growth of the construction sector is an essential factor in the investigation of environmental changes in Wayanad. Today there are three Municipal Councils in Wayanad, where there were only small villages and a few market places here and there previously. Besides these, many semi-urban areas, which are the landmarks of today's Kerala society, can also be seen in many parts of Wayanad. The upcoming palatial constructions in these places cause definitely, a facelift to Wayanad. But filling the fields and breaking the hill slopes for constructions have affected and disturbed the natural environment. Many multi storeyed buildings have come up in places that were cultivable once upon a time. These buildings were not just for human dwellings, but also for other purposes, like constructing restaurants, offices, banks, etc. It is noticed that after migration, houses, buildings, and roads were built in proportion to the population of the place. However, after the 1990s most of the structures have been done to meet the other commercial requirements. Urban expansion degrades and destroys natural habitats, polluting the water and air, and transforming green patches and water bodies into vast expanses of concrete construction.<sup>47</sup> At the same time, many affluent people who are not settled in Wayanad also are constructing magnificent buildings in the lands that they owned excessively. The raw materials required for all these are extracted in large quantities from the banks of the rivers and hills of Wayanad.

Once, Kabani was a lustrous and rich river flowing through Wayanad. The tributaries of Kabani and other streams contained enormous fish wealth and suitable living conditions, including pure water, for the proper growth and development of varieties of flora and fauna. But it is noticed that the courses

---

<sup>47</sup> Harini Nagendra, *Nature in the City: Bengaluru in the Past, Present and Future*, Oxford University Press, New Delhi, 2016, p. 11.

of these rivers and streams have been changed due to the mining of sand from the banks of the rivers. The extraction of sand resulted in landslides in waterways of Wayanad, as it has happened in rivers of other places in Kerala. It has caused the depletion in the accumulation of water in rivers. Many springs and streams in Wayanad have dried up, which shows, to what extent and depth, this phenomenon has affected the water sources in Wayanad, a region which is subjected to maximum deforestation and drastic climatic changes.

The conversion of paddy fields into *brick lands*<sup>48</sup> was a noted phenomenon after the 1980's. No doubt the reasons for this are the vanishing of cultivation of paddy and an onward leap in the field of constructions. On the sides of the Mananthavady- Sulthan Bathery road near Panamaram town, parallel to the river, the *brick lands* formed in kilometers are the best examples for this. It is a painful fact to remember that the paddy fields, which was the store of our staple food, was converted into some other form like this. These sorts of changes are observed in different parts of Wayanad.

As a part of development in the field of construction, many rock formations in Wayanad were converted into quarries in the course of time. The stones obtained from these were utilized not only for the structures in the hilly areas but also for the developmental projects in plains and the coastal regions. At the same time, the increase in the number and size of constructions in and around Wayanad is due to the existence of the quarries. Later, as a result of increased awareness of nature and the environment, stringent control was imposed on the formation of quarries. Today, there are 11 quarries prevalent in Wayanad with the permit from the Mining and Geology Department. Among these, only five are in fully working conditions. (For more details, see table number 34 in the Appendix I).

---

<sup>48</sup> Kattakkalam in Malayalam

With the endless cry for the development of the region, the growth of construction work in private sectors caused a tremendous expansion in the activities of quarries. Even when there is a strong move against the exploitation of the environment on one side, the urge of the people to improve their physical conditions without any consideration for the environment is a significant factor, which causes complete destruction of ecological balance. The requirements for the construction of residences of middle-class families, elaborate projects of different people, and modern developmental schemes of Government- all depend on these quarries. No doubt, this type of urbanization will pave the way for the destruction of ecological balance, just like the way in which the forest wealth was carried away, once, from Wayanad recklessly, causing an imbalance in Mother Nature. The quarries which were functioning around Ambalavayal had to face constant protests from the environmentalists. They feared and pointed out that this may even become a threat to the primitive stone carvings in the Edakkal caves.

People used to live in mud houses in olden times, without disturbing the nature much. But, the raw materials for constructing large dams, bridges, roads, etc. are taken from the natural settings, due to which severe drastic changes in the soil structure of Wayanad.

### **Tourism**

Wayanad, with its super special and blessed climatic conditions and natural beauty, attracted many tourists since the colonial period. Mist laden mornings in Wayanad used to give an atmosphere of European countries. Due to these favourable conditions and growth of the plantation industry, Wayanad became the dearest and exciting territory for Europeans. However, there was no such massive influx of tourists to hill slopes, small waterfalls, and lakes of Wayanad till the 1980s. But later, when tourism turned into the primary industry and became a source of income, there was a massive flow of

tourists to Wayanad not only from other regions of India but also from other countries.

It is interesting to learn that by the 1980s, many places having rich flora and fauna, lakes, and rocky areas which were unknown and inaccessible to cities, at the same time unattended by many, became tourist destinations. This phenomenon, which had the beginning in the 1980's, became intense in the 1990's and after that. As a result of the I T (Information Technology) boom in the main cities like Bangalore, Mysore, Chennai, and Hyderabad of our neighbouring states, many IT professionals came to Wayanad as tourists to spend their vacation, enjoying the beautiful nature and climate. The major holiday spots are Edakkal caves with inscriptions in Ambalavayal, Jain temple in Sulthan Bathery, Pookodu lake, Kuruva Island, Muthanga Wildlife Sanctuary, Soochippara waterfalls, Chembra peak, Thirunelli temple and Pakshipathalam in Thirunelli. Each of them had its own historical, environmental, or religious significances.

The Department of Directorate of Tourism under the Government of Kerala gives instructions and inspiration for the development of Tourism. District Tourism Promotion Council is another organization of the Government of Kerala to promote tourism. The private sector has made a lot of investment in this field in the form of hotels and homestays. The flow of people visits Wayanad increasing year after year. From 2012 to 13, the total number of visitors to Pookot Lake was 14015266, whereas in Edakal cave was 5434430. (For more details, see table number 35 in the Appendix I)

From there, it is assumed that in Kerala and other world countries, when tourism became a significant source of income, Wayanad also occupied a prominent place in the world map of tourism. There is an increase in the number of tourists and income (from this field) year after year, and therefore

the latest trend depicts that this field may become an important source of income in the economy of Wayanad.

At present many people in Wayanad depend directly or indirectly on tourism for their livelihood. The establishments of cooldrink sales outlets on roadsides and in main tourist centres, small restaurants, handicraft emporium, star hotels, resorts, malls, etc. give a hint to the fast-changing economy of Wayanad. Lots of labourers work in this field and earn their livelihood.

Nevertheless, the major part of the income in this field is in the hands of private entrepreneurs. During the previous two decades, there was a massive investment in this field by individual entrepreneurs. Many entrepreneurs, including large corporates, are attracted to this industry. This is evidenced by the considerable increase in the value of the landed property. The farmlands which were under the threat of invasion by wild animals became dear to many, and high demand was observed for such places for the development of tourism. Land prices have soared in these places, where agriculture was a different task.

All these have made a far-reaching consequence in Wayanad. Today, we have a vivid picture of people turning away from agriculture gradually. Service-oriented programme is becoming more significant in the wealth system. Farm tourism has become a significant business in the large plantations of Wayanad. Its advocates say such efforts are needed to cope with the absence of better markets for agricultural products in the context of globalization.

When there is no proper market for agricultural products, such undertakings are necessary to survive in the field. Needless to say that many who were depending on agriculture for their living earlier are seeking job opportunities in the tourism sector. Due to a boom in the construction sector,

workers could earn higher wages than what they earned from the agricultural sector, and now they are leaving the agriculture sector behind. Moreover, the latest trend is the incoming of the migrant labourers from the other states into the industry. Infact, the external cash flow is now dominating Wayanad's resources and transforming Wayanad altogether. The opportunities opened by the realization of the economic importance of some of the places in Wayanad, which were unknown earlier was looked upon with great enthusiasm and interest by the majority of people.

The ill-effects of all these are thrust upon the environment. Construction work was going on in full swing in many sensitive regions. This was continued in border areas of forest, on the banks of the rivers and the hill slopes. We have very scary and bitter experiences of the havoc caused by floods in 2018 and 2019, due to the unruly exploitations of the premises of the rivers. Constructions have come upon in the border regions of the forest and elephant corridors where the wild animals used to move freely. There was a time when the wild animals moved to the interior parts of the forest due to migration, followed by the expansion of agriculture, but later the territories of wild animals became the centres of large buildings. For a protected area that receives visitors, the 'recreational services' it can provide is a significant part of its non-use value.<sup>49</sup> There is a restriction for human movement during nights in the routes where the wild animals move freely. Nevertheless, reports say, the tourists do not spare even such places with the silent consent of the authorities and the private entrepreneurs.

After the 1980s, environmental conditions of Wayanad have been changed drastically due to tourism. The accommodations arranged for tourists under the guidance of the head of the family is called a Homestay. This type

---

<sup>49</sup> A. K. Enamul Haque, et. al., (Ed.), *Op. Cit.*, p. 233.



of 12 approved homestays are functioning in Wayanad today.<sup>50</sup> Other than these, there are eight recommended service villas operating under the guidance of managers. However, the exact number of both are far more than what is recorded. The ventures which are not registered in the department of tourism are furthermore. As per the statement of the district tourism promotion council, there are 45 resources or homestays in Wayanad with the registration of the World Tourism Association. Huge buildings are being constructed on the cover of tourism. Environmentalists have come forward pointing towards the disastrous situation in a tourist place like Kuruwa *dweep* (Kuruva island), which is a centre of beautiful flora, caused due to the thick flow of tourists. This was followed by a few restrictions for the entry of tourists. But people who earned their livelihood by becoming a part of the tourism industry, came up to oppose this step. At this juncture, mainstream political parties also took a firm stand against these restrictions, which caused deterioration of the common man.

The quantity of plastic products, disposed of after use in the Ghat region and other places of ecological significance, is increasing alarmingly. The growth in the number of tourists visiting Wayanad is making the condition worse as the accumulation of plastic products as garbage is becoming beyond control. The waste that is discharged from the resource into the rivers is another hazard. We cannot eliminate plastic use from our day to day activities.<sup>51</sup> However, we should not allow the plastic to reach the soil or water.<sup>52</sup> More the people visit, there are chances of more waste

---

<sup>50</sup> Interview, Sijo, Office Assistant, Directorate of Tourism, Government of Kerala, Kalpetta, 9 November 2018.

<sup>51</sup> Prakash Nellyat, 'Beating Plastic Pollution', in *The Hindu*, Kozhikode, 21 June 2018, p. 9.

<sup>52</sup> *Ibid.*

accumulation.<sup>53</sup> Worldwide, one million plastic bags and one million plastic bottles used every minute.<sup>54</sup> About 50% of our plastic use is single-use (disposable), and it constitutes 10% of the total waste generated.<sup>55</sup> More than 9.1 billion tons of plastic are said to have been “manufactured since the material was initially mass-produced in the 1950s.”<sup>56</sup> In 2015, scientists noted that “of the nearly 7 billion tons of plastic waste generated, only 9% was recycled, 12% incinerated, and 79% accumulated in landfills<sup>57</sup> or the environment.”<sup>58</sup> In India, which accounts for almost 18% of the world population in 2.4% of the global land area, the accumulation of plastic waste is enormous.<sup>59</sup> Each year, 13 million tones of plastic end up in the oceans.<sup>60</sup> The clean destination programme is very much relevant in this scenario as well<sup>61</sup>. Eco-friendly substitutes (cloth/paper/jute bags, leaves/areca leaf plates, paper straws) should be developed.<sup>62</sup> The government should restrict plastic production and encourage recycling through appropriate policies.<sup>63</sup> The ‘Plastic Waste Management Rules 2016’ need to be strictly followed.<sup>64</sup>

In Vythiri panchayath alone in 2010-11, there were nine resorts and homestays. By the year 2016-17, it has increased to 85. Almost all the resorts and homestays working in this region are constructed either by breaking the

---

<sup>53</sup> *Clean Destination Programme of Wayanad District Mission*, [www.kudumbashreeorg.org](http://www.kudumbashreeorg.org)> accessed on 31-03-2019, 8.40 pm.

<sup>54</sup> Prakash Nelliya, *Op. Cit.*, p. 9.

<sup>55</sup> *Ibid.*

<sup>56</sup> *Ibid.*

<sup>57</sup> Some Researchers suggest that by 2050 there could be more plastic than fish in the oceans by weight.

<sup>58</sup> Prakash Nelliya, *Op. Cit.*, p. 9.

<sup>59</sup> *Ibid.*

<sup>60</sup> *Ibid.*

<sup>61</sup> *Clean Destination Programme of Wayanad District Mission*, *Op. Cit.*

<sup>62</sup> Prakash Nelliya, *Op. Cit.*, p. 9.

<sup>63</sup> *Ibid.*

<sup>64</sup> *Ibid.*

hill slopes or by encroaching the banks of the rivers. The rainfall has been steadily decreasing in places like Lakkidi, Vythiri, etc. which were the most rainfed areas in Kerala once. In these areas, the land has been more of a real estate business centres than land for agriculture.

Responsible tourism and eco-tourism are emerging as a topic for discussion in the present Kerala context. We need micro and concrete models for sustainable development for preserving the environment because the basis of all these is the realization that the preservation of the environment for a longer period is essential for our survival, rather than just earning more in short periods.

### **Dams and Development**

Large dams are built for irrigation and electricity purposes. Electricity is an essential part of modern lifestyles. Moreover, such dams, can solve the shortage of irrigation facilities due to climatic change. At the same time, it is also a construction project that is destroying the natural habitat of people and animals in many places.

After independence, a large number of dams were built in India for irrigation and electricity purposes. Such initiatives have been able to some extent, complete the infrastructure development. After independence, studies of dams were conducted in Wayanad too. The Karappuzha Dam and Banasura Dam were the two major projects undertaken for construction.

Banasura Sagar Dam is located near Tariode town in Wayanad. It is the largest earthen dam in Asia and is situated in  $11^{\circ} - 40' - 10$  N latitude and  $75^{\circ} - 57' - 20$  E latitude. It has a total catchment area of 61.44 sq.km.<sup>65</sup> The primary source of water for the reservoir is the Karamanthodu, which is a

---

<sup>65</sup> Information Bulletin of Assistant Executive Engineer Office, Kuttiady Augmentation Scheme, Irrigation Department, Government of Kerala, Padinjaraithara.

tributary of the Kabani River. Over the past 18 years, this project area has received an average rainfall of 6247 m.m.<sup>66</sup> This Dam is a part of the Kutiady Augmentation Scheme. Centred on Padinjarathara, it has a homogeneous rolled earth main Dam and six-saddle dams.<sup>67</sup>

Established in 1979, the Banasura Sagar Dam aims to supply water to Hydro Electric Project in Kakkayam and during drought provide water for irrigation and supply required drinking water to the area. During the construction of the dam, some 1200 families were evacuated. The project area includes the Gram Panchayaths of Thariode, Kavummannam and Padinjarathara. The major part of the project, which is a multipurpose one, is controlled by the Kerala State Electricity Board. The water required for Kakkayam is flowing from here. Moreover, in the recent past floating solar power plant has been installed on the surface of the dam for power generation.<sup>68</sup> Another aim of the project, i.e., to provide irrigation in the neighbouring areas, is not completed, even after spending Rs. 252 crore. In effect, the amount of labour and money spent on the upkeep of agriculturists is halfway even today. The construction of canals is progressing under the Department of Irrigation. Infact, power generation and tourism development only have taken place in the Banasurasagar dam so far. The Banasura Sagar dam, which is one of the major tourist attractions, has become an abundant source of income for the Kerala State Electricity Board.

The Karappuzha dam, which began its construction in 1977, is located on the banks of Karappuzha, which is a tributary of the Kabani River. The construction of the dam was completed in 2004, but the canals have not been

---

<sup>66</sup> *Ibid.*

<sup>67</sup> *Telephonic Interview*, Eldose, Assistant Executive Engineer, Irrigation Department, Government of Kerala, Kutiady Augmentation Scheme, Padinjarathara on 9 November 2018.

<sup>68</sup> *Interview*, Bosen Lal, Assistant Engineer, Kerala State Electricity Board, Banasura Sagar Dam, 9 November 2018.

fully operational. The total catchment area of the dam is 62 square kilometers. The full storage capacity is 76.50 mm square FRL<sup>69</sup> (76500000 m square). The total water spread area of the dam is 855 hectares (8.55km square).

The estimated cost of the construction of the dam was Rs.7.6 crores. But the total cost so far is about Rs.322 crores. One hundred sixty-eight families, including *adivasis* were evicted as part of the project. Of these, 84 families have been resettled.

The project is spread over the villages like Muttill, Thrikkaippatta, Thomattuchal, and Ambalavayal. The water in this dam is used for the cultivation of paddy, banana, ginger, and vegetables. Plantation crops are not coming under this project (dam). Now the Karappuzha dam has set foot in the tourism field too. Many tourists are attracted to this region. Resorts and hotels have begun to develop as part of tourism in the vicinity of the Karappuzha dam.

The above mentioned two significant projects in Wayanad had a long wait. These two projects have already caused more than the first estimate of the projects. Failure to complete the project at the intended time is causing loss of public money in crores. These two great projects are two of the best examples of such an initiative in our country. The public has nothing to do but being only silent witnesses to the siphoning off of this public money into someone's hands. Farmers or ordinary people are not the real beneficiaries of such initiatives, aimed at the economic development of the rural sector.

It is in this context that another argument comes up, which claims that the water of river Kabani should be stopped and used only in Wayanad. The basis for this argument is that the water claimed by Kerala as per the Kaveri

---

<sup>69</sup> An FRL unit is comprised of Filter (F), Regulator (R), and a Lubricator (L). They are often used as one unit to ensure clean air in a pneumatic system but can also used individually.

River Water Tribunal is flowing to Karnataka through river Kabani. Since the British era, there has been controversy over the distribution of Kaveri river water. It was between the old Madras presidency and the kingdom of Mysore. It was later argued that the pre-independent treaties were invalid. The major parties were the states of Tamil Nadu and Karnataka. In 1990, the Government of India constituted a tribunal to make a decision on the matter. After hearing all the arguments, the tribunal delivered its judgment on 5<sup>th</sup> February 2007. It was decided that 419 TMC<sup>70</sup> water (58.19%) from Kaveri river should be distributed to Tamil Nadu, 270 TMC water (37.19%) to Karnataka, 30 TMC water (4.13%) to Kerala and 7 TMC water (0.96%) to Puducherry which is a union territory. However, the parties involved approached the Supreme Court against the decision. Accordingly, the Supreme Court delivered the judgment to give 404.25 TMC water to Tamil Nadu and 284.75 TMC water to Karnataka. There was no change in the quantity of water to Kerala and Puducherry. It is the river dispute that has finally led to violent clashes between the states of Karnataka and Tamilnadu. River water disputes between states are a phenomenon in post-independent India. Increased quantity of water is needed when the river originating in the Himalayas or the Western Ghats pass through the regions where the people use the river water for agricultural purposes. Political movements and social organizations, including national parties in Tamil Nadu and Karnataka, have given more emphasis on the ownership of river water, keeping the need of their farmers as a political weapon.

Kabani river, one of the tributaries of Kaveri, flows mainly through Wayanad. Moreover, the water flow from the Brahmagiri hills in the Western Ghats makes the river Kabani enriched with water. Since Wayanad is primarily an agricultural area, if Kabani's water is utilized for summer

---

<sup>70</sup> TMC is the abbreviation of one thousand million cubic feet, commonly used in India in reference to volume of water in a reservoir or river flow.

farming, agriculture may be prospered, and drought in the area may be mitigated. Even half of the 30 TMC water allotted to Kerala in the Kabani river is not used at present. Moreover, the water of Kabani is stored at the Kabani dam near Beachinahalli by Karnataka and used for agriculture when needed.

It is a fact that Kerala doesn't have any political backing or strong methods as in neighbouring states in storing water for agricultural purposes. This is a reflection of the carelessness of the society towards agriculture and the agriculturists. Installation of check dams or construction of canals on the Kabani river waterways will enhance the irrigation and storage of drinking water to some extent, during the drought. Close to the junction of the Mananthavady river and Panamaram river at Koodalkadavu, there exists a dam like this. Mud dams constructed in streams can be used to combat the drought in Wayanad during summer.

One such project is the Kadamanthodu project near Pulpally. It envisions a huge dam going to be built across Kadamanthodu. It is a reality that hundreds of families and their farmlands will be evacuated if this project is implemented. Wayanad is a land of forest and plantation regions. Such projects are going to flood the small farming areas and fields of farmers, including *adivasis* in the remaining parts of the region. In the changing coalition Governments, the regional parties, which manages the irrigation department, are keen to implement such large scale projects. A significant portion of the money already spent on these long-awaited, but incomplete large scale projects have reached in the hands of the project executors. Such mean objectives behind many major projects in India have to be realized. It is a sad story or sight that many long-overdue projects are turned into white elephants in our country. By the mid- the 1990s, it had become widely recognized that big dams had high social and environmental costs that

required at the very least reconsidering their place in the context of the drive towards making development more sustainable.<sup>71</sup>

In addition to all these, our mountains and rivers have been destroyed for the raw materials needed for the major projects. Large scale construction companies have the goal of taking up the next project once the previous project is completed. The plight of the projects are the illegal alliance of the middlemen-politicians or employees-who receive a fixed share also is well established. It remains to be examined whether Wayanad still has the capacity to afford larger projects in the future. There are strong opinions against big dams around the world.

To make sure of the agricultural needs and river catchment in Cauvery, small scale projects are more suitable for the landscape of Wayanad. It is a right way even for the livelihood of common people. We must understand the inconsistency of submersion of areas farmlands to meet the agricultural needs of other areas. At the same time, we need to find natural ways not to reduce the flow of water to the river Kabani. By the 1970s, the environment or nature suddenly appeared to be far more fragile.<sup>72</sup> In the Fifth Five- Year Plan (1974-79), the then Prime Minister, Indira Gandhi, noted in a foreword to the document, with clearly stated humility, that '(We) must inculcate in our engineers and all our people a deep reverence for nature.'<sup>73</sup>

The twentieth-century witnessed far-reaching changes in the agriculture sector of the country. Due to the advent of the Green Revolution, new farming techniques and high yield varieties of seeds were introduced. Pesticides and chemical fertilizers decreased the fertility of the soil. Wayanad

---

<sup>71</sup> Philippe Cullet, 'The Global Warming Regime After 2012: Towards a New Focus', in Roshan D' Souza (Ed.), *Environment, Technology and Development: Critical and Subversive Essays*, Orient BlackSwan, New Delhi, 2013, p. 123.

<sup>72</sup> Roshan D' Souza (Ed.), *Op. Cit.*, p. 1.

<sup>73</sup> *Ibid.*



is no exception. K.P.Prabhakaran Nair, the renowned agronomist, said, “The Green Revolution helped us produce enough food. But at what environmental cost? It ruined the soil all over South Asia and Latin America.<sup>74</sup> It was like throwing the baby with the bathwater. It failed because it was not agriculture but agribusiness’’.<sup>75</sup> The high yielding varieties and chemical fertilizers used during this period ruined the inherent soil fertility. They were identifying low natural fertilizers of soil and the inability of the crops to face global warming as what ails Indian agriculture now.<sup>76</sup> He pointed out that every indigenous species has a wild relative.<sup>77</sup> We need to track down the wild relative of each crop. The genes that make them more resistant and immune to the climatic changes have to be transferred into the crops.<sup>78</sup> The process is known as genetic introgression.<sup>79</sup>

Several alternative experiments have been started in order to regain the fertility of the soil. The agriculture scientists and experts highlight the importance of this turn. Archana Prasad points out that many historians and anthropologists argue for shifting cultivation as an ecologically viable and sustainable system of agriculture.<sup>80</sup> Once shifting cultivation turned into new farming techniques. Now the environment-friendly approach gained its significance. The *Fundamentals of Soil Science* says, “an agro-climatic region is a land unit in terms of major climate and growing period which is climatically suitable for certain range of crops and cultivars, whereas an agro-

---

<sup>74</sup> *The Hindu*, 21 June 2018, p. 2.

<sup>75</sup> The term agribusiness can be used to denote in two context. a) agriculture conducted on strictly commercial principle. b) the group of industries dealing with agricultural produce and services required in farming.

<sup>76</sup> *The Hindu*, *Op. Cit.*, p. 2.

<sup>77</sup> *Ibid.*

<sup>78</sup> *Ibid.*

<sup>79</sup> *Ibid.*

<sup>80</sup> Archana Prasad, ‘Tribal Livelihood and the Agrarian Crisis’, in Nandini Sundar (Ed.), *Op. Cit.*, p.496.

ecological region is characterized by distinct ecological responses to macroclimates as expressed in vegetation and reflected in soil, fauna and aquatic systems”.<sup>81</sup> Most of the human actions are related to the climate.<sup>82</sup> Meteorology occupies a prominent role in land use, water consumption, and crop calendar.<sup>83</sup> New methods of measuring past climates were invented during the second half of the twentieth century that enabled scientists to put recent global warming within the context of the past several hundred thousand years.<sup>84</sup> Climatic factors should be considered in the long-time planning of any sphere.<sup>85</sup> The soil quality, soil health, and soil condition are interchangeable as all describe the soil’s ability to support crop growth without becoming degraded or otherwise harming the environment.<sup>86</sup> Contrary to the perspectives of scientists during the time of the Green Revolution, modern science realistically understands the profound impact of scientific farming.

Recently Organic farming and organic products get wide popularity all over the world. Masanobu Fukuoka says he is anxious that through human knowledge, the process of valuable food transforms into bad food, which results in the guilty man.<sup>87</sup> Natural farming is “do-nothing farming,” according to Masanobu Fukuoka.<sup>88</sup> He found it essential to apply nature’s principles in agriculture and developed a deep-rooted philosophy around the

---

<sup>81</sup> P. K. Sharma & Dipak Sarkar, ‘Soil Survey and Mapping’, in N.N.Goswami (Ed.), *Fundamentals of Soil Science*, Indian Society of Soil Science, New Delhi, 2012, p. 80.

<sup>82</sup> P. A. Menon & C. K. Rajan, *Keralathinte Kalavastha*, (Mal.), (Tr.) M. N. Sasi, *Climate of Kerala*, Kerala Sasthra Sahithya Parishath, Thrissur, 1985, p. 9.

<sup>83</sup> *Ibid.*

<sup>84</sup> J. Donald Hughes, *An Environmental History....*, *Op.Cit.*, p.258.

<sup>85</sup> P. A. Menon & C. K. Rajan, *Op. Cit.*, p. 9.

<sup>86</sup> S. D. More, “Soil Quality Indicators for Sustainable Crop Productivity”, *Journal of Indian Society of Soil Science (JISS)*, Vol. 58, No. 1, March 2010, Indian Society of Soil Science, New Delhi, p. 5.

<sup>87</sup> Masanobu Fukuoka, *Prakrthiyilekku Madangan* (Mal.), (Tr.) K. M. R. Mohan, *The Road Back to Nature: Regaining the Paradise Lost*, D.C.Books, Kottayam, 2004, p. 26.

<sup>88</sup> Sujatha Byravan, ‘The Seeds of Sustainability’, *The Hindu*, 21 June 2018, p.9.

process.<sup>89</sup> Masanobu Fukuoka, in his *The One Straw Revolution*, says if chemical fertilizers, pesticides, and machinery are used in agriculture, we should not avoid it.<sup>90</sup> By covering the paddy field with straw, we can restrict (Kala) without the use of pesticides.<sup>91</sup>

There are several streams of organic farming. Organic products need an organic certification. Hundreds of countries, including India, are the members of the International Agricultural Movement, which approves Organic Farming.<sup>92</sup> The certification of Organic Farming needs three years. In the first year is conversion, the second year is the transition, and the third year is certifications are the three stages.<sup>93</sup> There are several attempts in Wayanad for Organic farming. Cheruvayal Raman, the traditional farmer of Wayanad is practicing organic farming for many years. But the modern style of organic farming requires huge investment.

Due to the decline of the agriculture sector in Wayanad, some farmers have experimented with alternative methods of farming. Agriculture was transformed from one that is based on internal inputs that are readily available at no cost, to one that is dependent on external inputs for which credits became necessary.<sup>94</sup> The average cultivator in Indian villages cannot afford these. At this juncture, Subash Palekar initiated Zero Budget Farming. Palekar developed the Zero Budget Natural Farming (ZBNF) after his own efforts at

---

<sup>89</sup> *Ibid.*

<sup>90</sup> Masanobu Fukuoka, *Otta Vaikol Viplavam* (Mal.), (Tr.) C. P. Ganagadharan, *The One Straw Revolution*, Alter Media, Thrissur, 5<sup>th</sup> Edition, 2004, p.137.

<sup>91</sup> *Ibid.*, p. 57.

<sup>92</sup> K. B. Sheela, et. al., *Sugandhavyanjanangal: Samskaranavum Ulpana Vyvidhyavalkaranavum* (Mal.), Kerala Agriculture University Press, Mannuthy, 2011, p. 61.

<sup>93</sup> *Ibid.*

<sup>94</sup> Vandana Shiva, *The Violence of the Green Revolution: Agriculture, Ecology and Politics in the South*, Other India Press, New Delhi, 2001, p. 35.

chemical farming failed.<sup>95</sup> He identified four aspects that are now integral to his process and which require locally available materials: seeds treated with cow dung, cow urine and other local materials to increase microbes; cover crops, raw and other organic matter to retain soil moisture and build humus<sup>96</sup>; and soil aeration for favourable soil conditions.<sup>97</sup> These methods are combined with natural insect management methods when required.<sup>98</sup> Some cultivators in different parts of Wayanad actively involved in these farming practices. The native cow is an essential factor in this venture. Babu Joseph, a merchant of chemical fertilizers in Kenichira, applied these products lavishly in his field.<sup>99</sup> The yield was better, and he narrated his experiences to his farming friends and neighbours, who, in turn, without knowing the impacts of excessive use of these chemical fertilizers used them. In the course of time, he noticed a severe decline in productivity and the soil structure. This made him turn into organic farming. But the high cost of organic manure and risk to maintain vermin composite and a long period to get the result forced him to retreat from organic farming. Now he is a successful farmer through Zero Budget Farming. He says with the low cost of the investment, and he earns good results from his fields. *Jeevamrutham*<sup>100</sup> accelerates the development of plants and makes better results in his paddy. Now, this method of farming got wide popularity. In early 2016, Sikkim was declared India's first fully organic State.<sup>101</sup>

---

<sup>95</sup> Sujatha Byravan, *Op. Cit.*, p. 9.

<sup>96</sup> Humus is the dark, organic material that forms in soil when plant and animal matter decay.

<sup>97</sup> Sujatha Byravan, *Op. Cit.*, p. 9.

<sup>98</sup> *Ibid.*

<sup>99</sup> *Interview*, Babu Joseph in his residence near Kenichira, 13 January 2018.

<sup>100</sup> A bio fertilizer made out of the urine of native cow.

<sup>101</sup> Sujatha Byravan, *Op. Cit.*, p. 9.

The sustainable agricultural development in Wayanad can be achieved through an integrated approach to maintain the quality of the ecosystem where the technological advancements are adopted.<sup>102</sup>

The Gross cropped area in Wayanad District is mainly dominated by the cash crops.<sup>103</sup> The major plantation crops like tea, coffee, pepper, and arecanut together constitute 38 percent of the cropped area<sup>104</sup>. India is the second-largest producer of tea next after China. Its share in the World market (average of 2010 to 2015) is 22.9%.<sup>105</sup> Its export share is (average of 2010 to 2015)13%.<sup>106</sup> There has been a steady increase in the cost of production on account of an increase in wage, hike in the prices of fertilizers, coal, firewood, petroleum products, and interest charge.<sup>107</sup> The practices followed by the British tea multinationals have a strong bearing on the present crisis affecting the industry.<sup>108</sup> The world economy can only be understood as a mode of unequal connection between places.<sup>109</sup> India is the sixth-largest coffee producing country, and its share is 4%.<sup>110</sup> Coffee, with a total area of 67,386 ha, is grown as a mono crop in the homesteads by more than 80 percent of small and marginal farmers in Wayanad district.<sup>111</sup> India is the 6<sup>th</sup> largest producer of natural rubber, and its share in the world market is 4.7%.<sup>112</sup> In 2013, China overcame India, and now its rank is 5. But it is the second-largest

---

<sup>102</sup> P. Indira Devi, *Op. Cit.*, p. 14.

<sup>103</sup> *Ibid.*, p. 38.

<sup>104</sup> *Ibid.*

<sup>105</sup> *Planters Chronicle*, August 2016, p. 5, Achoor Tea Museum, Wayanad.

<sup>106</sup> *Ibid.*, p. 6.

<sup>107</sup> Tharian George K., *The Crisis of the South Indian Tea Industry: Legacy of the control by British Tea Multinationals*, Working Paper No.191, CDS, 1984, p. 2.

<sup>108</sup> *Ibid.*, p. 27.

<sup>109</sup> Mythri Prasad, 'Migration and Production of Space: Labour, Capital and the State in Kerala, India', *Unpublished Ph.D.Thesis*, CDS, 2016, p. 12.

<sup>110</sup> *Planters Chronicle*, *Op. Cit.*, p. 13.

<sup>111</sup> P. Indira Devi, et. al., *Op. Cit.*, p. 38.

<sup>112</sup> *Planters Chronicle*, *Op. Cit.*, p. 18.

rubber consuming country.<sup>113</sup> Kerala is the largest producer of Cardamom.<sup>114</sup> India is the third largest producer of Pepper. India's production in recent years had been stagnant at around 50000 tonnes and hence was fast losing its status as a leading producer and exporter of pepper.<sup>115</sup> Grown mostly on the slopes of Western Ghats in Kerala, Karnataka and Tamil Nadu, the cultivation base of pepper has come down sharply in the last decade hitting production and export.<sup>116</sup> Wayanad grows black pepper in 36,488 ha.<sup>117</sup> Out of the total estimated 1,55,855 holdings in the district, 83 percent belong to either small or marginal farmers.<sup>118</sup> A survey report of Kerala Agricultural University, says the main reasons for the low productivity of commercial crops of the district are unproductive and senile plantations, local varieties, the incidence of pest and diseases, natural calamities, changes in climate, etc.<sup>119</sup> They suggest an integrated approach to address the above areas in a mixed farming approach can solve the problem.<sup>120</sup>

The spices which are produced in India have good quality in the international market at all times. The criteria for determining the quality of spices are its fragrance, taste, colour, weight, hygiene, pungency, pollution-free, pest-free, etc.<sup>121</sup> To maintain the quality of spices in the internal market, many agencies exist like Bureau of Indian Standard, Agmark,<sup>122</sup> and P.F.A.(Prevention of Food Adulteration). In the International market, one

---

<sup>113</sup> *Ibid.*, p. 19.

<sup>114</sup> *Ibid.*, p. 22.

<sup>115</sup> *Ibid.*, p. 24.

<sup>116</sup> *Ibid.*

<sup>117</sup> P. Indira Devi, et. al., *Op. Cit.*, p. 38.

<sup>118</sup> *Ibid.*

<sup>119</sup> *Ibid.*, p. 13.

<sup>120</sup> *Ibid.*

<sup>121</sup> K. B. Sheela, et. al., *Op. Cit.*, p. 63.

<sup>122</sup> Agmark is a certification mark employed on agricultural products in India, assuring that they conform to set a standards approved by the Directorate of Markeeting and Inspection, an agency of the Government of India.

such agency is the International Standard Organisation (I.S.O.). It ensures the quality of the product at all stages. For example, as per agmark grading, ginger (chukku) is classified into 16 types.<sup>123</sup> To find better markets for our unique spices is one of the solutions to overcome the agrarian crisis in Wayanad. Recently some efforts are made by the government to market Wayanad Robusta coffee.

### **Changes in the agricultural pattern**

Drastic changes have been taken place in the agrarian sector of Wayanad during the period 1980 to 2013. During this period, a remarkable change is observed in the usage of land. The Economics and Statistical Department of the Government of Kerala has published Agricultural Statistics annually. The analysis given below is based on Agricultural Statistics from 1981 to 2013. Through exponential trend analysis, we get a clear picture of this transformation. Here we compare the data of all Kerala with that of Wayanad. The trend, in all Kerala, has its impact in Wayanad district too.

During the time period under consideration, the growth rate of Land put on non-agricultural use in Kerala has been estimated as 1.47 %, whereas it was 2.95 % for the Wayanad District during the same period. The Barren Uncultivated land<sup>124</sup> for the entire state exhibits a negative growth rate of -5.38 % during the time period under consideration, and it also displays a negative growth rate for the District of Wayanad (-10.25 %). The Land under miscellaneous tree crops<sup>125</sup> not included in the net area of the state has been

---

<sup>123</sup> K. B. Sheela, et. al., *Op. Cit.*, p. 63.

<sup>124</sup> This includes all land covered by mountains, deserts, etc. Land which cannot be brought under cultivation except at an exorbitant cost is classified as unculturable whether such land is in isolated blocks or within cultivated holdings.

<sup>125</sup> This includes all cultivable land which is not included in 'Net area sown' but is put to some agricultural use. Land under casuring trees, thatching grasses, bamboo bushes and other groves for fuel, etc. which are not included under 'Orchards' are classified under this category.

estimated as a negative growth rate (-12.72 %), whereas it was -10.3 % for the Wayanad District during the same period. The Cultivable wasteland<sup>126</sup> of Kerala exhibits negative growth (-1.51%), whereas it was -6.51 % for the Wayanad District during the same period. While the Fallow other than current fallow<sup>127</sup> for the entire state exhibits positive growth (2.48 %), during the time period under consideration, it exhibits negative growth for the District of Wayanad (-4.41 %). The growth rate of the current fallow<sup>128</sup> area in Kerala has been estimated as a positive growth (2.47 %), whereas it was negative growth rate (-0.87 % ) in Wayanad District during the same period. While the net area sown<sup>129</sup> in Kerala exhibits negative growth (-0.22 %), during the time period under consideration, it presents 0 % in the District of Wayanad. The area sown more than once<sup>130</sup> in the entire state exhibits negative growth (-0.3 %), during the time period under consideration, it shows positive growth for the District of Wayanad (4.08 %). One of the exciting things is that the total cropped area<sup>131</sup> of the entire state presents negative growth (-0.23 %), during the time period under consideration, it exhibits positive growth for the District of Wayanad (1.15 %). These figures show that in some cases, the District of

---

<sup>126</sup> This includes land available for cultivation, whether taken up or not taken up for cultivation once, but not cultivated during the last five years or more in succession including the current year for some reason or the other . Such land may be either fallow or covered with shrubs and jungles which are not put to any use. They may be accessible or inaccessible and may lie in isolated blocks or within cultivated holdings.

<sup>127</sup> This includes all land which was taken up for cultivation but is temporarily out of cultivation for a period of not less than one year and not more than five years.

<sup>128</sup> This represents cropped area which is kept fallow during the current year.

<sup>129</sup> This represents the total area sown with crops and orchards. Area sown more than once in the same year is counted only once.

<sup>130</sup> This represents the areas on which crops are cultivated more than once during the agricultural year. This is obtained by deducting Net Area Sown from Gross Cropped Area.

<sup>131</sup> This represents the total area sown once and/or more than once in a particular year, i.e.; the area counted as many times as there are sowings in a year. This total area is also known as total cropped area or total area sown.



Wayanad has the same trend to the state. But in some other cases, Wayanad has a different tendency when compared to the state.

We have the trend of each agricultural crop in the entire state and Wayanad. The growth rate of area under crops of rice in Kerala exhibits negative growth (-4.56 %), during the time period under consideration, it also exhibits negative growth for the District of Wayanad (-3.70 %). The area under rice crop is decreasing year after year. While the total area of cereals in Kerala exhibits negative growth (-4.56 %), during the time period under consideration, it also exhibits negative growth for the District of Wayanad (-3.70 %). The area of pulses, including tur for the entire state, exhibits negative growth (-7.66 %), during the time period under consideration, it exhibits positive growth for the District of Wayanad (2.23 %). While the total area of food grains of Kerala exhibits negative growth (-4.73 %), during the time period under consideration, it also exhibits negative growth for the District of Wayanad (-3.53 %). The total area of sugar crops of Kerala exhibits negative growth (-4.97 %), during the time period under consideration; it also exhibits negative growth for the District of Wayanad (-4.70 %). Except for the area of pulses, including tur in Wayanad, the region of all other food crop shows a negative growth rate.

When we take the case of spices, it has a different trend. During the time period under consideration, the growth rate of the area of pepper in Kerala has been estimated as 0.91 %, whereas it was 2.12 % for the Wayanad District during the same period. While the total area of ginger in Kerala exhibits negative growth (-2.90 %), during the time period under consideration, it exhibits positive growth for the District of Wayanad (1.15 %). The total area of turmeric in Kerala exhibits negative growth (-0.16 %), during the time period under consideration, it also exhibits negative growth for the District of Wayanad (-0.56 %). During the time period under review,

the cultivation of ginger of the entire state exhibits negative growth (-2.9 %), it shows positive growth for the district of Wayanad (1.15 %).

While the cultivation of turmeric for the entire state exhibits negative growth (-0.16 %), during the period under consideration, it also presents the negative growth for the district of Wayanad (-0.56 %). The area of cultivation of cardamom for the entire state exhibits negative growth (-1.38 %); it also displays the negative growth for the district of Wayanad (-0.14 %). During the time period under consideration, the growth rate of the area of cultivation of betelnut in Kerala has been estimated at 2.34 %, whereas it was 9.38 % for the Wayanad district during the same period. While the area of cultivation of tamarind for the entire state exhibits positive growth (0.99 %), during the time period under consideration, it exhibits negative growth for the district of Wayanad (-0.31 %). The growth rate of the area of cultivation of cloves in Kerala has been estimated at 0.72 %, whereas it was 5.72 % for the district of Wayanad during the same period. The growth rate of the area of cultivation of nutmeg in Kerala has been estimated as 7.07 %, whereas it was 8.82 % for the district of Wayanad during the same period. While the area of cultivation of Cinnamon for the entire state exhibits negative growth (-3.73 %), during the time period under consideration, it shows positive growth for the district of Wayanad (1 %). During the time period under review, the growth rate of the area of whole spices and condiments in Kerala has been estimated as 0.68 %, whereas it was 1.48 % for Wayanad district during the same period.

The growth rate of the area of cultivation of Jack in Kerala has been estimated at 1.52 %, whereas it was 1.91 % for the Wayanad district during the same period. During the time period under consideration, the growth rate of the area of cultivation of Mangoe in Kerala has been estimated at 0.67 %, whereas it was 1.95 % for the Wayanad district during the same period. The growth rate of the area of cultivation of Banana in Kerala has been estimated

at 5.62 %, whereas it was 13.16 % for the Wayanad district during the same period. The growth rate of the area of cultivation of other plantains in Kerala has been estimated at 1.46 %, whereas it was 0.76 % for the Wayanad district during the same period. While the area of cultivation of pineapple for the entire state exhibits positive growth (3.72 %), during the time period under consideration, it exhibits negative growth for the district of Wayanad (-4.38 %). The growth rate of the area of cultivation of Pappaya in Kerala has been estimated at 2.12 %, whereas it was 4.8 % for the Wayanad district during the same period.

During the time period under consideration, the growth rate of the area of whole fresh fruits in Kerala has been estimated as 1.76 %, whereas it was 4.03 % for Wayanad district during the same period. While the area of cultivation of Cashew nuts for the entire state exhibits negative growth (-3.43 %), during the time period under consideration, it exhibits positive growth for the district of Wayanad (0.39%). During the time period under consideration, the growth rate of the area of the total fruit tree in Kerala has been estimated as 0.39 %, whereas it was 3.85 % for Wayanad district during the same period.

The growth rate of the area of cultivation of Drumstick in Kerala has been estimated at 0.88 %, whereas it was 5.04 % for the Wayanad district during the same period. While the area of cultivation of Tubers for the entire state exhibits negative growth (-1.34%), during the time period under consideration, it shows positive growth for the district of Wayanad (3.43 %). While the area of cultivation of Sweet potatoe for the entire state exhibits negative growth (- 9.49 %), during the time period under consideration, it also exhibits negative growth for the district of Wayanad (-1.69 %). The area of cultivation of Tapioca for the entire state exhibits negative growth (-3.8 %),

during the time period under consideration, it also presents negative growth for the district of Wayanad (-0.17%).

The growth rate of the area of cultivation of Vegetables in Kerala has been estimated at 1.59 %, whereas it was 3.79 % for the Wayanad district during the same period. While the area of cultivation of total food crops for the entire state exhibits negative growth (-1.62 %), during the time period under consideration, it exhibits positive growth for the district of Wayanad (0.83 %). While the area of cultivation of Oilseed crops- Sesame for the entire state exhibits negative growth (- 13.54 %), during the time period under consideration, it also exhibits negative growth for the district of Wayanad (- 14.96 %). The growth rate of the area of cultivation of Oilseeds- Coconut in Kerala has been estimated as 0.55 %, whereas it was 4.8 % for the Wayanad district during the same period. While the area of cultivation of Oilseeds- others for the entire state exhibits negative growth (-0.52%), during the time period under consideration, it also exhibits negative growth for the district of Wayanad (-7.01%). The growth rate of the area of cultivation of Oilseeds crops- Total in Kerala has been estimated as 0.11 %, whereas it was 4.54 % for the Wayanad district during the same period.

While the area of cultivation of Lemon Grass for the entire state exhibits negative growth (- 9.64 %), during the time period under consideration, it also exhibits negative growth for the district of Wayanad (- 12.47 %). The area of cultivation of Total Fibre Drugs and narcotics for the entire state exhibits negative growth (-5.47 %), during the time period under consideration, it also exhibits negative growth for the district of Wayanad (- 13.03 %).

The increase in the area of plantation crops is common phenomenon in Kerala during the twentieth century. During the time period under consideration (1980-2013), the growth rate of the area of tea in Kerala has

been estimated at 0.1 %, whereas it was 0.52 % for Wayanad district during the same period. The growth rate of the area of Coffee in Kerala has been estimated at 1.14 %, whereas it was 0.89 % for Wayanad district during the same period. At the same time, the growth rate of the area of rubber in Kerala has been estimated at 2.14 %, whereas it was 3.81 % for Wayanad district during the same period. While the field of cultivation of Cocoa for the entire state exhibits negative growth (-1.27 %), during the time period under consideration, it also exhibits negative growth for the district of Wayanad (-2.54 %). During the time period under review, the growth rate of the area of Plantation crops in Kerala has been estimated as 1.38 %, whereas it was 0.84 % for Wayanad district during the same period.

The growth rate of the area of fodder crops in Kerala has been estimated at 3.8 %, whereas it was 7.68 % for Wayanad district during the same period. The growth rate of the area of Green manure crops in the entire state has been estimated at 3.45 %, whereas it was 1.55 % for Wayanad district during the same period. While the growth rate of the area of other non-food crops in Kerala has been estimated at 3.41 % whereas it was 0.23 % for Wayanad district during the same period. During the time period under consideration, the growth rate of the area of total nonfood crops in Kerala has been estimated at 0.82 %, whereas it was 1.08 % for Wayanad district during the same period.

The growth rate of the total net area irrigated in the entire state has been estimated at 1.48 %, whereas it was 3.03 % for Wayanad district during the same period. While the Gross area irrigated-Paddy for the state as the whole exhibits negative growth (-2.28 %), during the time period under consideration, it exhibits positive growth for the district of Wayanad (1.73 %). During the time period under consideration, the growth rate of the Gross area

irrigated-vegetables in Kerala has been estimated as 5.84 %, whereas it was 9.93 % for Wayanad district during the same period.

The growth rate of the Gross area irrigated-Coconut in the entire state has been estimated as 3.23 %, whereas it was 8.65 % for Wayanad district during the same period. The growth rate of the Gross area irrigated- Arecanut in Kerala has been estimated at 3.7 %, whereas it was 19.9 % for Wayanad district during the same period. During the time period under consideration, the growth rate of the Gross area irrigated- Banana in Kerala has been estimated as 7.92 %, whereas it was very high, i.e., 26.89 % for Wayanad district during the same period. During the time period under consideration, the growth rate of the Gross area irrigated-Others in the entire state has been estimated as 1.03 %, whereas it was 0.51 % for Wayanad district during the same period.

The above facts and figures are the real picture of the pattern of agricultural differences between Kerala and Wayanad. From these facts, we come to the conclusion that for the last three decades far-reaching changes took place in the agriculture sector of the state and Wayanad. So the case of Wayanad is not an isolated development.

The baseline survey report of the experts of Kerala Agriculture University throws light on the current socio-economic status of Wayanad. The general socio and economic background in Wayanad are weak compared to the rest of Kerala and the gender development index and Human development index for Wayanad is occupying the 12<sup>th</sup> and 13<sup>th</sup> position among 14 districts in Kerala.<sup>132</sup> The lack of infrastructure facility and the inherent backwardness of the agriculture sector contribute to this situation. Among the 150 districts in India categorized as backward by the Planning Commission, Wayanad is

---

<sup>132</sup> P. Indira Devi, et. al., *Op. Cit.*, p. 93.

the only one in Kerala.<sup>133</sup> A study report of Kerala Agricultural University says the significant reasons for the poor performance of the agricultural sector in the district are both micro and macro-level factors<sup>134</sup> like,

1. Policy changes (Free Trade Agreement and Preferential Trade Agreements favouring large scale imports)
2. Socio-economic factors (a large proportion of the tribal population, low literacy and resultant barriers to technology adoption)
3. Geographical peculiarities
4. Climate change effects
5. Inadequate investment in agriculture (both private and public sector)
6. Poor infrastructural facilities

### **Conclusion**

The problems discussed in this chapter need special attention. Otherwise, it will lead to the natural depletion of the most sensitive part of the Western Ghats. To affirm the participation of the people is very important if we implement any programme. The Gadgil committee report and Kasturi Rangan committee reports faced severe protests in Wayanad. It is another topic of discussion the environmentalists and scientists can do. However, it is the responsibility of the experts and the Government to bring a suitable solution to this problem. Programmes and policies should frame without harming the livelihood of the people.

From the very beginning, when man started cultivation in Wayanad till today, the main livelihood of the people of Wayanad has been agriculture.

---

<sup>133</sup> *Ibid.*, p. 16

<sup>134</sup> *Ibid.*

Though the dependency in agriculture is decreasing day by day, we are living in basically an agrarian community. Kerala society is far ahead in the number of emigrants and people who work in the secondary and tertiary sectors. The majority of people never consider agriculture as their primary source of income. The area of cultivation is decreasing day by day. In their place, new enterprises emerge. It is no exception in Wayanad. Though the density of the population is very low in Wayanad when compared to the rest of Kerala, people withdraw from the agriculture sector. The majority of the people are small scale holders. The secondary and tertiary sector are not developed much in Wayanad. So a weakness in the agriculture sector severely affects the livelihood of the people. During the first decade of the twenty-first-century, farmers' suicide was a daily event in Wayanad. People give up agricultural activities due to several reasons which we already discussed. On the other hand, forest depletion and mining made severe changes in the environment. Therefore, the collective efforts of the government and the people are required to maintain the natural environment of Wayanad.



## CONCLUSION

The present study is an enquiry into the changes of the environment and agriculture of Wayanad in nearly one and half century. There are several assumptions about the prominent transformation that took place in Wayanad during the period under discussion. It is a fact that a tremendous demographic change has happened during this period. However it is an ongoing process from the Colonial period itself.

The topography and early history of Wayanad is mainly discussed in the beginning of the thesis. It is based on the general history written by historians, government records and oral traditions. Due to its peculiar geographical features, Wayanad earned its name as Wayanad and due to the same reasons, it is isolated from the other parts of the state. It has many rivers and streams as sources of water. The various groups of adivasis have different myths about their origin and spread in Wayanad. Earlier records depict that from pre-colonial period itself, Wayanad was a region of thick forests with lush green vegetation and this fertile, cultivable land attracted many outsiders. The climate of Wayanad is entirely different from the low land. This is a highly rain-fed area when compared to the rest of Malabar. The Jains, the Nairs, and the Chettis came to Wayanad, understood the fertility of the soil and gradually occupied the land. Therefore landlordism influenced the socio-economic and political fields of Wayanad. Their main crop of cultivation was paddy. Many marshy lands were transformed into paddy fields. At the same time, the forest produce of Wayanad had a market in other places. The timber from Wayanad jungles was exported to other regions. The indigenous species like pepper was mainly harvested in the jungles, which attracted even the foreigners. The owners of the land were the main beneficiaries of this business. The *adivasis* began to be sidelined due to the

arrival of these people. But they had freedom in the jungles to gather food and survive on subsistence agriculture. The earlier inhabitants became the agricultural labourers of these migrants. Though these developments happened, the density of population was very less compared to the other areas of Kerala. They practised the traditional method of cultivation and used local varieties of seeds. So it did not adversely affect the environment. The earlier inhabitants ie, the *adivasis* had their own culture and it differentiated them from others. Though each indigenous group had its own identity, there were no references to an open conflict between these groups. But the socio economic status of the *adivasis* worsened in course of time.

A common assumption is that the environment of Wayanad began to undergo a drastic change with the settling of Wayanad by migrants from southern parts of Kerala in the 1930's. This study found that the changes that culminate in the present environmental crisis began not in the 1930's but with the systematic change in the agriculture and business. This was introduced with the advent of the British in the area in early part of the nineteenth century.

The environment of Wayanad underwent severe changes due to the intervention of colonialism. The British specially noticed the geographical peculiarity and climate of Wayanad. They introduced and popularised plantation crops like coffee, cinchona and tea in Wayanad. It altered the existing landscape of Wayanad. The agriculture of Wayanad became commercialized due to the development of these plantations. It also led to the flow of agricultural labourers from different regions. The rise of estate *padis* and the life of the labourers in it was a remarkable development in the socio economic structure of Wayanad. Though some of the Europeans settled in Wayanad, they never considered it as a hill station like Ooty.

The colonial approach towards forests was fundamentally capitalistic. Though the British were aware of the ill effects of the scarcity of forests in their homeland, they were over enthusiastic to exploit the forests in India for their own benefits. Their forest management alienated the *adivasis* from forest lands and it became colonial property. The vast timber and forest produce were used not only for export to Britain, but also for the infrastructure development of the urban areas. Rail transportation developed with the use of plenty of rail sleepers with timber from Wayanad. The development of urban centres with the use of rural resources and forest depletion were a colonial phenomenon. On one hand, they introduced monoculture crops in the estates and on the other they fostered Teak and Eucalyptus plantations in the forests. The organized efforts of the forest department reflected in the working plans. So the natural forest and diverse crops in the fields gave way to monoculture. The elephant capturing operations and hunting along with the depletion of natural forest disturbed the wild life. The exploitation of the natural resources led to ecological imperialism in Wayanad region. For the first time in the history of Wayanad, both the natural forest and the hilly slopes began to change, which resulted in the environmental degradation of Wayanad.

The intrusion of British in the forest and hilly areas of Wayanad, restricted the movement of *adivasis*. The British rule had made no significant changes in the material condition of the *adivasis*. They remained as food gatherers and agricultural labourers of the land lords. They were bonded labourers, so the agricultural expansion before twentieth century adversely affected the *adivasis*. But the Kurichyas had small scale holdings where they used to cultivate. The Nairs and the Chettis practiced the traditional paddy cultivation. No drastic change happened in the rural agricultural life of the natives, though several estates and forest plantations were formed by the British. The remuneration of the agricultural labourers were in the form of food items. So no improvement happened in the material condition of the

agricultural labourers, ie., the indigenous people. Modern farming practices like mechanization were not yet developed in the agricultural fields of Wayanad.

During 1930's, mass migration from Central Travancore completely changed the demography of Wayanad. These migrants had arrived in Wayanad for cultivable land. Agriculture was the principal means of livelihood of the people. The early migrants mainly bought the land from the native *janmis*. They were mainly interested in paddy cultivation. But, in due course, they started cultivating lemon grass and tapioca in the upland areas. During later periods, many Dewaswam and revenue lands began to be occupied by the new migrants. More and more land was encroached and converted into cultivable land. It created many disputes between the migrants and the government. It drastically changed the land relations in Wayanad. It resulted in eviction threats in many parts of Wayanad. But main stream political parties supported the demands of the small scale peasants. A side effect of this venture was that the *adivasis* were alienated from their land. Indigenous people like Kurumbas had lost their cultivable land due to that the migration. Though the Kurichiyas maintained their landed property, the Paniyas and Adiyas did not have such property. And a minority among the migrants intensively encroached the *adivasi* land. Due to the absence of the legal ownership right of the *adivasis* over their land, the encroaching process became easier for the migrants. A remarkable feature is that the Adivasis received wages in the form of cash. During the British period, though cash crops dominated in the plantation field, this change did not happen. In fact, as a result of the migration, infrastructural development of Wayanad, like new roads, educational institutions, government institutions and hospitals attained appreciable levels, which in turn , was a great help to the *adivasis* too. Therefore migration, affected the life of the *adivasis* in Wayanad both negatively and positively. The estate owners maintained their landed property even after the arrival of migrant farmers.

According to the forest statistics, no reserved forest area was lost due to the migration. Though the Government promoted migration through various schemes like the Grow More Food Programme, the authorities were very cautious to protect the forest areas. This was continued even after independence. At the same time the commercial attitude of the British Government towards forests was continued by the post independent Governments too. Various Working Plans of the forest department put forward intensive action to introduce forest plantations. Teak and Eucalyptus were widely planted in the forests of Wayanad. The depletion of the natural forest continued after independence. The forest based industries, emerged in different parts of the state, receiving raw materials from the forests of Wayanad. Wood and bamboo were extensively supplied to Grasim industries in Mavoor which ultimately ruined the forest. The environment of Wayanad suffered a lot due to the export of these commodities. It also was reflected in the climate of Wayanad. On the one hand the migrant farmers destroyed the natural eco system and planted cash crops, and on the other hand, the forest department took keen interest in forest plantations. The double sided attack on the environment made far reaching changes. But more areas were controlled by the forest department. The Green revolution strategies changed the traditional agricultural practices. The use of more chemical fertilizers and high yielding varieties of seeds transformed the agricultural land. This was the first time that the agricultural land of Wayanad underwent a drastic change within a short span of time. More and more cash crops were cultivated and it led to the semi capitalist agricultural economy in Wayanad.

From 1980 onwards the agrarian economy of Wayanad lost its earlier strength. Several paddy fields began to disappear, giving space to either plantain, arecanut and coconut crops or to new buildings or structures. Agriculture became an unprofitable enterprise. The earlier changes were the basic reasons behind this. Therefore, new areas were explored by the people

who had sufficient money. With the inflow of money from outside, the real estate sector has been developed in Wayanad. The price of land increased steeply due to the development in the Tourism industry in Wayanad. More and more buildings were constructed as a result of this development. At the same time the number of quarries increased in different parts of Wayanad. The environmental fragile zones also became the nerve centres of this activity. The massive collection of sand from the rivers and streams destroyed the water sources. The number of motor vehicles increased greatly in the last eighty years. The emission of carbon gases led to the Global Warming all over the world and this did not leave Wayanad unaffected. The huge flow of motor vehicles with the tourists created additional burden to the environment of Wayanad. The waste management system was not much developed in this region. There were several occasions when loads of garbage from other areas were deposited in the hinterlands of Wayanad. The semi urban development of Wayanad ultimately changed the agrarian face of this region. If these conditions continue it will ruin the environmentally sensitive zone of the Western Ghats.

Climate change is a worldwide phenomenon. Each nation faces the challenges of Global Warming. The environmental challenges are the significant factors which make the world aware of the misuse of contemporary technology to further a certain model of economic development.

It is clear that, from the colonial period itself Wayanad has gone through an unscrupulous exploitation of the environment. Both the government and the migrants of the different periods are responsible for this process. Due to these developments, people lost their touch with the nature. The early inhabitants of Wayanad can very well claim the natural bond with the nature. During the last three decades, the Agrarian nature of Wayanad was

destroyed due to several non agricultural activities in Wayanad. The inhuman practices like evicting the people from their locality in order to preserve nature may not be a practical procedure. Therefore, through eco friendly methods, the lost agrarian heritage can be brought back and a smooth, proper environment can be regained in Wayanad. The world is now looking for sustainable development. The society as a whole, including the Government should provide ways and means and financial assistance to succeed in this endeavour. Otherwise, the people of this terrain might be in peril. It is the responsibility of both the people and the government to sustain the natural environment.

A distinguishing mark of 'modernity' is the difference in approach to the environment. While the indigenous people lived in harmony with nature, never approaching it with a view to 'exploit' it and acquire profit, colonial authorities and later migrants viewed nature differently. This in due course led to a debate between 'development' and environment protection. While extreme environmental activists wanted all other 'interventions' to be stopped, developmental activist stressed the need for foreign exchange returns and the like. The ideal solution lies in between what is known as sustainable development.

The time span of the present study comes to an end in 2013, and many things have occurred since then, including the publication of Gadgil committee and Kasturirangan committee reports. These have not been made use of this study as it is designed with a limited time schedule and framework. Moreover, the remote sensing data and methods, have not been used in this study. Such issues should be undertaken in the future and supposedly can find answers to the environmental degradation in the region.

## GLOSSARY

<i>Adhikari</i>	: The head of revenue unit, amsam.
<i>Adivasi</i>	: member of any aboriginal peoples of India.
<i>Amsam</i>	: A Revenue Unit of Colonial time.
<i>Attipper</i>	: Absolute Holding Right.
<i>Bhagavathi</i>	: Female diety/mother goddess.
<i>Brahmaswam</i>	: The land controlled by the corporate body of Brahmins.
<i>Chalidal</i>	: Make Furrows.
<i>Desam</i>	: A settlement unit.
<i>Devaswam</i>	: The land under the sway of temple.
<i>Dweep</i>	: Island.
<i>Edangazhi</i>	: A measuring system of paddy.
<i>Estate Paadi</i>	: Residential apartments of estate labourers.
<i>Fanam</i>	: A coin as well as the common term for money from which panam was derived.
<i>Fasli year</i>	: period of 12 months from July to June. Adding 590 to Fasli year comes to Gregorian year.
<i>Gramanattam</i>	: Village house site. Gramanattam or Grama Natham land can only be used for residential purposes and not commercial.
<i>Inam</i>	: a gift of land or land revenue
<i>Janmakaran</i>	: The Janmam land holder.



<i>Janmam</i>	: The hereditary right over the land.
<i>Janmi</i>	: Land lord.
<i>Jeevamrutham</i>	: A bio fertilizer made out of the urine of native cow.
<i>Kankanis</i>	: The labour contractors or labour recruiting agents brought the labourers from outside
<i>Kanam</i>	: Purchase of janmam, by mortgage/credit.
<i>Kathirukettal</i>	: Tying unbraided palm leaf.
<i>Kathiruoaja</i>	: Shoot into a spike.
<i>Kavu</i>	: Sacred grove.
<i>Keni</i>	: a community drinking water source of <i>Adivasis</i> of Wayanad.
<i>Khabarsthan</i>	: Cemetery.
<i>Khedda</i>	: A Khedda system was a stockade trap for the capture of full herd of elephants that was used in India.
<i>Kovilakam</i>	: Principal Manor Estate or Palace of a Princely Lineages of Kerala.
<i>Koythupidikkal</i>	: Reap.
<i>Koythutheerkkal</i>	: End of harvest.
<i>Kudi</i>	: Residence/ settlement.
<i>Kudiyam</i>	: Tenant.
<i>Kumari cultivation</i>	: Local name of shifting cultivation in the hilly region of the Western Ghats.
<i>Kunnu</i>	: Hillocks.
<i>Kurinji</i>	: The geographical eco-zones representing the hilly tracts.

<i>Makkathay or Makkattay</i>	:	Patrilineal lineage
<i>Maram</i>	:	Tree.
<i>Mazdoors</i>	:	An Unskilled Labourer.
<i>Nadu</i>	:	The grouping of agrarian settlement, a settlement unit and territorial division.
<i>Nazhi</i>	:	A Measure of Paddy.
<i>Nellu</i>	:	Paddy.
<i>Njaruparikkal</i>	:	Uproot Seedling.
<i>Ooru</i>	:	The traditional agrarian unit and the basic settlement unit of the early time.
<i>Otti</i>	:	Mortgage
<i>Palapulinthakari</i>	:	A title of the King.
<i>Panayam</i>	:	Mortgage.
<i>Panikkodal</i>	:	Go to work
<i>Para</i>	:	Measuring vessel from Kerala. One <i>para</i> is around eight kg.
<i>Parambu</i>	:	Garden land.
<i>Pattadars</i>	:	Lease-Holder or Tenants
<i>Pattam</i>	:	Land Rent (single rent or lease).
<i>Poromboke</i>	:	Unassessed Lands which are the property of government used or reserved for public or waste land unfit for cultivation.
<i>Punam</i>	:	Shifting cultivation in forest.
<i>Putharikettal</i>	:	Ceremony connected with the beginning of the first harvest.

<i>Ravuthar</i>	: Rowthar or Ravuthar is a Muslim community from the Indian states of Tamil Nadu and Kerala.
<i>Serambi</i>	: Old Forest Inspection Bungalow.
<i>Shikkar</i>	: Hunting.
<i>Sivaijama</i>	: The lands were assessed as waste under Sivaijama occupation.
<i>Sowcars</i>	: A Hindu banker.
<i>Swaroopam</i>	: Small kingdoms and principalities.
<i>Tharavadu</i>	: Ancestral home usually used in Kerala.
<i>Vandi Nellu</i>	: One Bullock Cart Paddy.
<i>Vayal</i>	: Paddy land.
<i>Verumpattam</i>	: Simple Lease.
<i>Vilanatty</i>	: Ripeness.
<i>Vittirakkal</i>	: Sow Seeds.
<i>Yavanas</i>	: The Romans commonly known in South India.

# APPENDIX I

## TABLES

**Table No.1**

Rainfall							
Name of rain-gangs stations	Average rainfall (1870-1909)						
	January	February	March	April	May	June	July
Manantoddy	0.25	0.34	1.09	3.31	5.03	24.43	37.38
Vythiri	0.34	0.48	1.17	4.42	6.69	45.34	55.7
Malabar District Average	0.3	0.3	0.74	3.58	7.91	31.88	32.48

Rainfall						
Name of rain-gangs stations	Average rainfall (1870-1909)					
	August	September	October	November	December	Whole Year
Manantoddy	19.24	7.15	5.98	2.44	0.57	107.21
Vythiri	28.41	11.12	1.35	4.31	1.16	160.49
Malabar District Average	16.83	8.04	9.47	4.18	0.98	116.69

Source: *Madras District Gazetteers: Statistical Appendix for Malabar District*, Govt. Press, Madras, 1915, p. 34.

**Table No. 2**

Classification of area and principal crops in Fasli 1322 (1912-13) in acres					
	Government (Ryotwari) land	Minor Inam	Whole Inam	Zamindari	Total area by survey
Wayana d Taluk	525169	399	—	—	525568

Malabar District	3694880	13530	—	—	3708410	
	Forests	Not available for cultivation	Cultivable waste other than fallow	Current fallows	Net area cropped	Area shown in village account
Wayanad Taluk	134214	7397	264722	50019	69216	525568
Malabar District	360572	979750	974910	69417	1323761	3708410

Source: *Madras District Gazetteers: Statistical Appendix for Malabar District*, Govt. Press, Madras, 1915, p. 23.

**Table No. 3**

Net revenue realized under forests during (in Rupees)	1903-04	1904-05	1905-06	1906-07	1907-08
North Malabar Division	3752	15234	55765	52191	79446
South Malabar Division	6975	5782	5277	89812	48656
Net revenue realized under forests during (in Rupees)	1908-09	1909-10	1910-11	1911-12	1912-13
North Malabar Division	16794	42580	62541	25575	19064
South Malabar Division	70783	21383	21403	25671	58448

Source: *Madras District Gazetteers: Statistical Appendix for Malabar District*, Govt. Press, Madras, 1915, p. 26.

**Table No. 4**

Area of reserved forests and reserved lands during 1923-24						
Area of reserved forests						
	Area on 1st April 1923		Added during the year	Excluded during the year	Area on 31st March 1924	
	Areas	Equivalent in square miles	Acres	Acres	Acres	Equivalent in square miles
Wayanad	168424	263	-	(a) 11	168423	263

Area of reserved lands						Total area of reserved forests and reserved lands in square miles
Area on 1st April 1923		Added during the year	Excluded during the year	Area on 31st March 1924		
Areas	Equivalent in square miles	Acres	Acres	Acres	Equivalent in square miles	
22	-	-	-	(d) 22	-	263

Sources: *Administration Report of the Forest Department of the Madras Presidency for the year ending 31st March 1924, 1923-1924, Vol.I, Govt. Press, Madras, 1926, pp. 10-11.*

**Table No. 5**

STATEMENT SHOWING THE EXTENT OF EACH PLANTATION UNDER DIFFERENT ALL INDIA QUALITY CLASSES IN WAYANAD DIVISION			
Sl.No.	Name and Year of plantation		Total area in acres of Teak
	Year	Locality	
1	1892-94	Alathur	12
2	1894	„	5
3	1895	Chamundipara	2
4	1896	„	6
5	1897	Alathur	7

6	1898	„	11
7	1899	„	5
8	1900	„	30
9	1901	„	30
10	1902	„	15
11	1904	Unjavayal	41
12	1906	Punjavail	150
13	1917	Cherunellur	7
14	1917	Tholpatty	16
15	1918	Kuvarhadi	7
16	1919	Naikatty	8
17	1921-22	Kuvarhadi	21
18	1922	Boothakal	21
19	1923	„	15
20	1923	Neduthana	17
21	1923	Kuvarhadi	9
22	1924	„	9
23	1924	Neduthana	5
24	1924	Boothakal	36
25	1925	„	35
26	1926	„	90
27	1926	Chamundipara	10
28	1926	Neduthana	9
29	1927	Boothakal	17
30	1928	„	86
31	1929	„	35
32	1930	„	76
33	1930	Belagole	24
34	1931	Compartment III	71.5
35	1932	Compartment VI	43.5
36	1933	Compartment VII	51
37	1933	Neduthana	5

38	1934	„	7.2
39	1935	„	75
40	1936	Compartment VIII	76.8
41	1936	„	9
42	1937	Compartment XV	67
43	1937	Tholpatty	12.5
44	1937	Belagole	9.5
45	1938	Compartment XIV	70
46	1938	Kuvarhadi	10
47	1939	Compartment XIX	106.75
48	1939	Kuvarhadi	25
49	1940	Compartment XXI	85.5
50	1941	„	100
51	1941	Tholpatty	49
52	1942	Compartment XXXII	95
53	1942	Tholpatty	50
54	1943	Compartment XIV	86
55	1943	Compartment XXVI	91.5
56	1943	Shanamangalam	33
57	1944	„	95
58	1944	Compartment XVIII	85.5
59	1945	Compartment XIX	65
60	1945	Compartment XXII	97
61	1946	Compartment XIX	60
62	1946	Compartment XXII	114
63	1947	Davanketta	96
64	1947	„	63

Sources: I. Natatarajan Chettiar, *Revised Working Plan for the Wayanad Forest Division, 1962-63 to 1971-72*, Govt. Press, Trivandrum, 1965, pp. 188-189.



**Table No. 6**

<b>Abstract of the History of Plantations in Wayanad Division</b>										
Sl. No.	Name of plantations and species planted	Year of formation	Extent in acres	Expenditure		Year of thinning	Yield			
				Formation up to the thinning	After first thinning up to 1948-49 excluding cost of thinning		Number of items	Volume in cubic feet	Net value realized	
1	Begur camp teak	1892-94-95	12	711	181	1912	2000	—	171	
						1913	2011		323	
						1921	1258		1587	
							1922	391		746
							1923	334		
							1925	57		40
							1934	463	44.87	705
							1936	10	102	20
							1938	219	946	—
					1945	335	3328	NA		
2	Alathur teak	1894	5	400	75	1912	2141	—	374	
						1924	135	—	22	
						1932	98	—	131	
						1935	337	—	263	
						1936	54	463	11	
						1937	9	36	—	
3	Chamundipars teak	1895	2	98	10	1925	—	233	87	
						1930	66	830	229	
						1934	57	513	20	
						1945	18	43.5	22	
4	Do	1896	58	831	35	1925	—	435	56	
						1932	225	1652	453	
						1930	5	101	3	
						1937	93+5	581+58	—	
						1944	227	1277.5	—	

5	Alathur teak	1897	7	555	41	1925	–	803	
						1934	200	1373	218
						1936	135	1148	
						Rosewood	5	71	
						Vengai	1	11	
				1948	–	993.5	9		
6	Begur Camp teak	1898	11	773	33	1934	154	1031	161
						1946	111	385	193
7	Alathur teak	1899	5	402	75	1919	1951	–	725
						1923	470	3168	
						Rosewood	2	35	
						Vengai	1	15	170
						1925	235	728	273
						1934	182	912	141
						1936	199	1707	34
				1938	245	1369.5	–		
8	Belagola teak	1899-1900	30	2203	508	1914	904	–	360
						1915	21	–	–
						1919	3101	–	1122
						1923	2314	11510	1010
						1925	204	523	130
						1932	774	6665	1708
						Rosewood	4	–	–
						1936	1023	9080	–
						Teak	116	1091	964
						Squard	2	30	10
						Vengai			
						Rosewood	6	73	22
						1937	19	73	–
				1941	694	1000.5	1997		
9	Begur teak and miscellaneous species	1901	30	1475	418	1919	6573	–	2370
						1923	2723	–	–
						1925	1552	2920	570
						1932	643	4498	1301
						1936	15	60	44
						1937	1748	10988	
							64	254	2520

						1944	780	4098.5	666
10	Alathur teak	1903	15	1278	223	–	–	–	–
						1917	3500	–	766
						1921	2940	–	535
						1926	644	–	–
						1931	464	–	394
						1936	606	3874	248
						1941	930	2454	413
11	Unjaball teak	1904	41	1580	250	–	–	–	–
						1919	7225	–	2561
						1924	1183	–	–
						1925	2584	2511	–
						1930	2884	–	3252
						1934	3292	15303	2402
						1936	134	519	9
						1937	46	75	–
						1940	3014	13733.5	2674
12	Gregory Teak	1906-07	150	5676					
						1916			
						1920	9010	106	2400
						1924	79		
						1925	5		
						1936	7	36	9
						1937	40	106	
					840	1938-39			
				1944	4067	16554	1176		
13	Cherunallur-teak	1917	7	103					
						1925	105		
						1931	70	70	30
						1935	240	478	30
						1937	22	69	
			201.5	1953		132	437.25		
14	Tholpetty-teak	1917	16	138					
						1925	103		
						1931	70	241	2
						1936	1114		23
						1942	240	1922	564

					62.75	1953	309	243	548
15	Kuarhadi-teak	1918	7	110					
						1925	312		
						1936	268	795	148
						1940	95	300	24
					26.6	1954		462	1215.33
16	Naikatty-teak	1919	8	159					
						1931	303	303	56
						1935			111
						1936	15	48	5
						1937	144	555	
						1940	94	304	55
						1935	311	8395	5489
17	Kudrakodi-teak	1921-22	21	1614					
						1929	1823		20
						1932	328	332	
						1934	1346	1316	85
						1936	31	104	11
						1937	773	1861	
						1941	829	2652.5	503
					359.13	1952		4597	
					5.37	1953	26		
					176.12	1956		602	
18	Boothakkal-teak				50	1957	234		
		1922	21	1564					
						1934	730	230	
						1944	321	309	59
19	Boothakkal-teak				197	1957	5038		
		1923	15	732					
						1934	443	443	8
						1945	295	1180	738
					117	1952		1472.5	1952.74
20	Neduthana-teak				94	1959	205		
		1923	17	581					
					108	1934	1303	1694	50
						1940	338	868	424
			233.81	1952		2562	5369.36		

					133.25	1959		5 logs of 39.8 cft.116 poles	2105
21	Kuvurhadi-teak	1923	9	282					
						1935	285	369	27
						1941	331	790	395
						1945	91	216.5	89
					145.5	1952		1542	4029.93
					95.5	1959		277.65	307
22	Kuvarhadi- Teak	1924	9	259	54				
						1936	213		
						1940	81	207.5	104
						1946	234	147.5	252
					154	1952		1684.5	3512.5
23	Tholpatty tuckle-teak	1924	5						
					30	1939		454	
						1945	319	949	475
					107.75	1952		1482.5	2798.28
24	Boothakkal- teak	1924	36		3811				
						1934	3474		47
						1941	2767	6913	3332
						1946	1843	7312.5	3343
					720.5	1952		7637.5	11644.9
					8.06	1953	49		
					95	1959	203		
25	Boothakkal- teak	1925	35	2619					
					70	1935	200		
					30	1936	361	414	
						1941	1832	4507	1795
						1947	1629	5132	4267
					40.31		305		
					627.75	1959		11069.7	23135.2
26	Boothakkal teak and Miscellaneous species	1926	90	7845	372				
						1937	25	27	
						1942	2600	6500	1381
						1948		2082.5	
					551.5	1951		2700.5	1513.22

					9.44	1953		61	
27	Chamundipara-teak	1926	103	103					
						1937	79	128	
						1948		455	
					81.5	1951		708	611.39
28	Neduthana-teak	1926	9	227					
						1936	101	128	7
						1942	456	1019.5	420
					129	1950		1205.5	749.12
					4.5	1954			
29	Boothakkal, miscellaneous	1927	29	1942					
					43	1945	264		401
					107	1952	312		
30	Boothakkal teak	1927	17	398					
						1945	264	401	142
					227	1952		717.5	1038.85
31	Boothakkal-teak and miscellaneous	1928	86	4386					
						1946	765	2256	1121
					326	1950		650	332
					159.19	1953	1767	666	1834
32	Boothakkal-teak and Rosewood	1929	35	3197					
						1945	550	1397.5	699
					141.5	1953	1269		5517.87

Source: I. Natatarajan Chettiar, *Revised Working Plan for the Wayanad Forest Division, 1962-63 to 1971-72*, Government Press, Trivandrum, 1965, pp. 127-151; P.N.Adiyidi, *Seventh Working Plan for the Wayanad Forest Division(1974-75 to 1983-84)*, Govt. Press, Trivandrum, 1977, pp. 112 -114, KFHT.

**Table No. 7**

<b>Summary of revenue for the year 1923-24 Wayanad Division</b>				
<b>Timber and other produce removed from the forests by Government Agency</b>				
<b>Timber</b>	<b>Firewood and Charcol</b>	<b>Bamboos</b>	<b>Sandalwood</b>	<b>Grass and other minor produce</b>
<b>RS.</b>	<b>Rs.</b>	<b>Rs.</b>	<b>RS.</b>	<b>Rs.</b>
101466	-	2086	-	114

<b>Timber and other produce removed from the forests by consumers or purchasers</b>							
<b>Timber</b>	<b>Firewood and Charcol</b>	<b>Bamboos</b>	<b>Grazing and fodder grass</b>	<b>Other produce</b>	<b>Other items</b>	<b>Rents for trees tapped</b>	<b>Commutation fees</b>
<b>Rs.</b>	<b>RS.</b>	<b>Rs.</b>	<b>Rs.</b>	<b>RS.</b>	<b>Rs.</b>	<b>Rs.</b>	<b>RS.</b>
7432	389	925	4728	2997	-	-	-

<b>Confiscated drift and waif-wood</b>	<b>Revenue from forest not managed by Government-Revenue from shared and private forests</b>	<b>Miscellaneous</b>		<b>Total receipts</b>	<b>Deduct 'Refunds' -Voted</b>	<b>Net Revenue Receipts</b>
		<b>Fines and forfeitures</b>	<b>Other sources</b>			
<b>Rs.</b>		<b>RS.</b>	<b>Rs.</b>	<b>Rs.</b>	<b>RS.</b>	<b>Rs.</b>
19	-	1307	15442	136905	12	136893

Source: *Administration report of the Forest Department of the Madras Presidency for the year ending 31st March 1924, 1923-1924, Vol.I, Govt. Press, Madras, 1926, pp. 98-99.*





**Table No.8**

<b>Statement of elephants gone off the list during the year 1923-24 in Wayanad Division</b>				
Sl. No	Names	When purchased or otherwise obtained by Government	Age	How disposed of
1	Peri	Captured on 11th April 1889	58	Transferred to North Mangalore
2	Chamundi	Captured on 4th February 1900	30	Transferred to North Mangalore
3	Bomma	Captured on 27th February 1913	35	Transferred to North Nilambur
4	Bhima	Captured on 21st January 1919	21	Transferred to North Nilambur
5	Emily	Captured on 22nd June 1899	44	Transferred to North Mangalore
6	Cesar	Captured on 12th February 1920	22	Transferred to North Mangalore
7	Gouri	Captured on 12th February 1923	1	Sold
8	Ruslom	Captured on 21st February 1923	4	Sold
9	Goolshan	Captured on 26th February 1923	5	Sold
10	Krishnave ni	Captured on 27th February 1923	3	Sold
11	Yuvaraj	Captured on 7th March 1923	1	Sold
12	Yuvarani	Captured on 8th March 1923	11	Sold
13	Tippu	Captured on 13th March 1923	6	Sold
14	Sivaji	Captured on 13th March 1923	3	Sold
15	Sumthira	Captured on 27th February 1923	22	Died on 13th May 1923

16	Rugmini	Captured on 7th March 1923	50	Died on 8th September 1923
----	---------	-------------------------------	----	-------------------------------

Source: *Administration Report of the Forest Department of the Madras Presidency for the year ending 31st March 1924, 1923-1924, Vol.I,* Govt. Press, Madras, 1926, p. 127.

**Table No. 9****Population of the Desam ascertained at the Census of 1921**

Sl.No.	Desam	Number of occupied houses	Total Population			Religion			Population per 100 acres	
			Male	Female	Total	Hindu	Mohammadens	Others	Cultivable land	Occupied land
1	Periya	114	501	320	821	530	286	5	11	98
2	Vararyal	39	185	121	306	245	60	1	7	83
3	Irimanathur	12	55	45	100	100			9	112
4	Alattil	20	76	81	157	157			10	137
5	Kunnom	172	490	468	958	556	402		20	140
6	Tondar	455	1338	1229	2567	1762	769	36	16	141
7	Thindummal	148	733	208	941	683	155	103	14	20
8	Thavinhal	133	430	366	796	742	36	18	13	104
9	Valat	124	387	394	781	513	268		18	149
10	Porur	63	225	208	433	433			19	118
11	Edavaka	100	467	436	903	723	180		32	155
12	Olakkodi	196	764	686	1450	967	442	41	33	137
13	Payingattiri	110	254	273	527	492	35		88	128
14	Edachana	70	246	246	492	225	267		34	137

15	Kunnamangalam	46	163	160	323	316	7		28	90
16	Pulikkad	76	260	210	470	361	105	4	24	97
17	Kanmana	45	170	146	316	312		4	20	121
18	Vemom	730	2681	1788	4469	3221	721	527	36	113
19	Arattuthara	126	381	349	730	593	33	104	32	125
20	Thirunelli	473	1254	1076	2330	2239	70	21	31	39
21	Thrissaleri	413	1217	920	2137	2015	113	9	34	68
22	Mangallasseri	106	301	273	574	189	385		41	187
23	Vellamunda	294	857	782	1639	748	891		22	132
24	Changadam	149	433	371	804	390	414		50	126
25	Kommayad	105	362	330	692	251	441		45	119
26	Karingari	150	533	456	989	597	392		49	102
27	Cherukara	73	268	249	517	376	141		30	101
28	Anchkunnu	260	775	791	1566	860	698	8	44	130
29	Vilambukandam	79	276	240	516	465	47	4	34	105
30	Echchom	126	370	339	709	500	50	159	31	103
31	Kuppathod	520	1735	1457	3192	2589	544	59	30	108
32	Pakkam	295	753	715	1468	1443	14	11	43	126
33	Pulpalli	327	862	799	1561	1649	12		9	165
34	Veliyambam	150	340	302	642	636	6		33	140

35	Pudadi	554	1281	1178	2459	2396	14	49	12	108
36	Pulpadi	397	1055	999	2054	1338	544	172	34	92
37	Ponginichikkallur	178	547	463	1010	751	259		32	109
38	Purakkadi	445	1071	1011	2082	1938	144		21	96
39	Padinnarattara	312	777	709	1486	849	636	1	15	113
40	Kuppaddittara	237	614	608	1222	781	441		33	96
41	Kottattara	363	1132	973	2105	1617	374	114	28	97
42	Thekkuntara	49	148	122	270	270			18	82
43	Tariyod	238	722	628	1350	980	370		9	104
44	Vengapalli	155	486	362	848	758	88	2	24	68
45	Kalpetta	415	1591	878	2469	1913	440	116	30	90
46	Pinangod	92	343	250	593	488	103	2	27	52
47	Achchuranom	400	1091	622	1713	1315	203	195	11	54
48	Kunnattidvaga	428	1093	612	1705	1115	335	255	15	170
49	Kottappadi	794	2299	1106	3405	2691	377	337	21	106
50	Triikkaipatta	242	566	465	1031	1015	10	6	22	75
51	Muppaiyinad	1097	3403	1905	5308	4701	392	215	14	77
52	Muttil	778	2175	1723	3898	3199	678	21	33	93
53	Chingeri	252	642	475	1117	1060	35	22	14	46
54	Nenmeni	1043	2685	2378	5063	4852	180	31	28	74

55	Kidanganad	452	1272	923	2195	1724	453	18	25	87
56	Vadakkanad	171	372	318	690	676	13	1	39	133
57	Chenad	77	214	178	392	383	9		39	151
58	Nulpuzha	666	1752	1578	3330	3157	170	3	44	104

Source: *Resurvey Settlement Register of 58 Desams of Wayanad Taluk in 1928*, RAK.

**Table No. 10**

<b>Areas under each description of land as on resurvey 1928 according to the revenue accounts in acres and cent</b>								
Sl. No.	Desam	Wet	Dry	Total	Inam	Unassessed	Poramboke	Grand Total
1	Periya	420.04	6910.17	7330.21		165.17	520.26	8015.64
2	Vararyal	221.13	4345.88	4567.01		19.41	31.07	4617.49
3	Irimanathur	112.43	1011.91	1124.34		9.74		1134.08
4	Alattil	159.79	1398.49	1558.28		6.86	49.08	1614.22
5	Kunnom	673.35	4999.83	5673.18		53.94	10813.86	16540.98
6	Tondar	1404.24	14106.43	15510.67	13.95	186.03	206.42	15917.07
7	Thindummal	210.86	6325.28	6536.14		58.48	62.8	6657.42
8	Thavinhal	779.39	5436.99	3216.38		21.15	66.64	6304.17
9	Valat	542.66	3781.53	4324.19		26.93	41.78	4392.9
10	Porur	407.29	1824.46	2231.75		21.94	86.05	233.74
11	Edavaka	606.12	2224.63	2830.75		46.54	6.81	2884.1
12	Olakkodi	917.18	3347.36	4264.54		63.32	209.45	4537.31
13	Payingattiri	198.25	391.1	589.35		16.43	4.44	610.22
14	Edachana	283.43	1163.95	1447.38		12.23	4.03	1463.64
15	Kunnamangalam	274.05	881.2	1155.25		4.22	0.23	1159.7
16	Pulikkad	434.03	1496.39	1930.42		13.11	58.47	2002
17	Kanmana	327.85	1131.7	1459.55		55.81	98.34	1613.7
18	Vemom	1934.07	10661.63	12595.7		123.93	2117.41	14837.04
19	Arattuthara	470.92	1838.35	2309.27		10.1	89.01	2408.38
20	Thirunelli	1424.37	5976.78	7401.15		92.73	29188.67	36682.55
21	Thrissaleri	1625.92	4619.97	6245.89		47.46	6729.75	13023.1
22	Mangallasseri	208.92	1191.46	1400.38		19.82	9.01	1429.21
23	Vellamunda	1110.03	6213.33	7323.36		88.35	13.77	7425.48
24	Changadam	502.03	1074.02	1576.05		20.73	17.84	1614.62
25	Kommayad	472.28	1069.5	1541.78		17.64	64.53	1623.95
26	Karingari	727.18	1263.48	1990.66		22.78	66.79	2080.23
27	Cherukara	474.46	1211.02	1685.48		13.9	72.43	1771.81
28	Anchkunnu	956.42	2624.31	3580.93		24.62	11.35	3616.9

29	Vilambukandam	455.9	1185.81	1641.71		6.67	146.33	1794.71
30	Echchom	685.19	1567.18	2252.37		16.17	34.82	2303.36
31	Kuppathod	2796	6616.15	9412.15		205.81	2796.45	12414.41
32	Pakkam	1058.87	1451.71	2510.58		30.15	9219.6	11760.33
33	Pulpalli	1131.29	18022.46	19153.75		72.01	235.08	19461.74
34	Veliyambam	465.63	201.68	667.31		38.28	5518.13	6223.72
35	Pudadi	2267.31	17647.61	19914.92		128.87	20.36	20064.15
36	Pulpadi	1964.45	4087.16	6051.61		68.62	103.73	6223.96
37	Ponginichikkallur	853.33	2236.05	3089.38		31.86	15.09	3136.33
38	Purakkadi	1613.24	7686.46	9299.7	112.16	118.23	20.06	9550.15
39	Padinnarattara	1049.18	8499	9548.18		96.52	96.41	9741.11
40	Kuppadittara	1203.03	2315.38	3518.41		44.49	69.79	3632.69
41	Kottattara	1878.1	5601.56	7479.66		162.6	200.95	7843.21
42	Thekkuntara	417.9	1083.17	1501.07		37.01	84.1	1622.18
43	Tariyod	924.01	13025.34	13949.35		202.89	3436.22	17588.46
44	Vengapalli	811.39	2733.84	3545.23		44.19	15.41	3604.83
45	Kalpetta	1070.17	7151.25	8221.42		108.7	88.43	8418.55
46	Pinangod	533.33	1610.8	2144.13		36.76		2180.89
47	Achchuranom	191.96	14952.75	15144.71		269.98	28.27	1544.96
48	Kunnattidvaga	221.82	11201.6	11423.42		183.01	99.17	11705.6
49	Kottappadi	650.11	15316.32	15966.43		241.42	55.83	16263.08
50	Trikkaiapatta	939.53	4339.43	5278.96		29.97		5308.93
51	Muppaiyinad	2420.1	34019.64	36439.74		662.16	70.04	37171.94
52	Muttil	3333.48	10454.55	13788.03		147.79	61.42	13997.24
53	Chingeri	974.1	5176.7	6150.8	23.49	66.95	8.51	6249.75
54	Nenmeni	5288.96	12193.17	17482.13		64.64	994.88	18541.65
55	Kidanganad	1589.92	6929.56	8519.48	80.6	178.54	5391.5	14170.12
56	Vadakkanad	524.28	1133.69	1657.97	35.12	4.4	23182.77	24880.26
57	Chenad	298.22	718.62	1016.84		2.5	12582.96	13602.3
58	Nulpuzha	3630.66	3962.81	7593.47	71.85	42.51	24675.99	32383.82

Source: *Resurvey Settlement Register of 58 Desams in Wayand, 1928*, RAK.



**Table No. 11**

<b>Holdings, Cultivation and Demand in Fasli 1322 (1912-13)</b>						
	Total holdings					
	Dry		Wet		Total	
	Extent	Assessment	Extent	Assessment	Extent	Assessment
	ACS.	RS.	ACS.	RS.	ACS.	RS.
Wayanad Taluk	69248	47955	43469	74686	112717	122641
Malabar District	727076	1441433	539135	1839192	1266211	3280625

<b>Holdings, Cultivation and Demand in Fasli 1322 (1912-13)</b>								
	Cultivation including waste charged				Miscellaneous revenue	Total Ryotwar Demand	Cesses	Total Demand of Land Revenue Ryotwar Miscellaneous Cesses
	Dry		Wet					
	Extent	Assessment including water-rate	Extent	Assessment including second crop charge				
	ACS.	RS.	ACS.	RS.				

Wayanad Taluk	69248	47955	43469	74686	24089	143562	16622	160184
Malabar District	727076	1441433	539135	1879349	217887	3498497	276015	3774512

Source: *Madras District Gazetteers: Statistical Appendix for Malabar District*, Govt. Press, Madras, 1915, p. 35.

**Table No.12**

<b>Demand, Collection and Balance of Current Land Revenue and Cesses (in thousands of Rupees)</b>										
	Demand									
	Fasli 1313	Fasli 1314	Fasli 1315	Fasli 1316	Fasli 1317	Fasli 1318	Fasli 1319	Fasli 1320	Fasli 1321	Fasli 1322
Wayanad Taluk	160	160	158	157	158	160	162	163	160	160
Malabar District Total	3086	3257	3339	3314	3456	3504	3586	3657	3684	3737

	<b>Collected or written off</b>									
	Fasli 1313	Fasli 1314	Fasli 1315	Fasli 1316	Fasli 1317	Fasli 1318	Fasli 1319	Fasli 1320	Fasli 1321	Fasli 1322
Wayanad Taluk	157	156	154	153	149	155	156	157	156	158
Malabar District Total	3070	3253	3335	3310	3447	3499	3577	3651	3680	3735

	<b>Balance</b>									
	Fasli 1313	Fasli 1314	Fasli 1315	Fasli 1316	Fasli 1317	Fasli 1318	Fasli 1319	Fasli 1320	Fasli 1321	Fasli 1322
Wayanad Taluk	3	4	4	4	9	5	6	6	4	2
Malabar District Total	16	4	4	4	9	5	9	6	4	2

Source: *Madras District Gazetteers: Statistical Appendix for Malabar District*, Govt. Press, Madras, 1915, p. 36.

**Table No. 13**

**Table shows the average size of holdings of Wayanad taluk and Malabar district and classification of pattas according to the assessment payable**

	Total number of holding	Average size of holdings				Percentage and revenue paid on pattas of				Percentage of total number of pattas on which assessment is			
		Area (ACS.)	Assessment			Rs.10 and undue	Rs.30 and less but over Rs.10	Rs. 100 and less but over 30	Over Rs.100	Rs.10 and undue	Rs.30 and less but over Rs.10	Rs. 100 and less but over 30	Over Rs.100
			Rs.	A.	P.								
Wayanad Taluk	5704	20.51	22	14	6	9	18	26	47	62	23	12	3
Malabar District	220650	6	15	1	9	13	13	20	54	76	14	7	3

Source: *A Statistical Atlas of the Madras Presidency, Statistical Atlas: Malabar*, Revised of Fasli 1330, Govt. Press, Madras, 1924, p. 11.

**Table No. 14**

Sl.No.	Desam	Cereals				Pulses		
		Paddy	Cholam	Ragi	Samais	Horse gram	Green gram	Black gram
1	Periya	253.44		71.28		0.05		
2	Vararyal	96		22.25				
3	Irimanathur	73.34		9.88				
4	Alattil	98		32.61				
5	Kunnom	477.54		25.98		0.17		
6	Tondar	963.74		201.04				
7	Thindummal	80		17.38				
8	Thavinhal	472.51		135.4				
9	Valat	339.3		98				
10	Porur	273.31		57.39		0.42		
11	Edavaka	346		85	0.5			
12	Olakkodi	465		175				
13	Payingattiri	131.87	0.04	6	0.63			
14	Edachana	185		50				
15	Kunnamangalam	230.6		40.5				
16	Pulikkad	268.75		88.5	0.25	0.78		
17	Kanmana	194		56				
18	Vemom	1518		193.18	4.01	6.46	0.1	0.15
19	Arattuthara	386.57		50.62	0.04			
20	Thirunelli	1305		50		8		
21	Thrissaleri	1235		70		10		
22	Mangallasseri	187.67		12.77				
23	Vellamunda	889.19		108.26		0.52		
24	Changadam	380		46				
25	Kommayad	480		20		0.5		
26	Karingari	646		46		0.53		

27	Cherukara	332		36				
28	Anchkunnu	800		97				
29	Vilambukandam	365		65				
30	Echchom	427		69				
31	Kuppathod	2215		300	1	8	4	
32	Pakkam	878	1	50	1			
33	Pulpalli	608		150	1	3		
34	Veliyambam	344		21			0.1	
35	Pudadi	1727.5		214	6.25	0.15		
36	Pulpadi	1685		140	5.15			
37	Ponginichikkallur	715		50			0.04	
38	Purakkadi	1417.39	0.25	101.47	6.75	0.05	0.15	
39	Padinnnarattara	809.86		125.53				
40	Kuppaddittara	915.62		60.29				
41	Kottattara	1291		225				
42	Thekkuntara	184		28				
43	Tariyod	701.89	0.05	127.74				
44	Vengapalli	557.66		75.25		0.1		
45	Kalpetta	575		45				
46	Pinangod	385.68		18.07				
47	Achchuranom	109.03		16.37				
48	Kunnattidvaga	77.35						
49	Kottappadi	162.46		10.82				
50	Triikkaipatta	418.94		30.03	11.25			
51	Muppaiyinat	1370		160	14			
52	Muttil	2758	0.16	309	15		0.03	
53	Chingeri	706.32	0.5	40.49	2	0.65	0.1	
54	Nenmeni	3880.25	0.04	550.75	100	0.15		
55	Kidanganad	1119.35		113	3			
56	Vadakkanad	350.18		19	1			
57	Chenad	189.43		19.81				
58	Nulpuzha	2030		218.84	20	0.23		

Source: *Resurvey Settlement Register of 58 Desams of Wayanad Taluk in 1928*, RAK.

Table No. 14 (B)

Sl. No.	Desam	Oil seeds			Condiments and spices			
		Gingelli	Mustard	Castor	Chillies	Turmeric	Pepper	Others
1	Periya						12	
2	Vararyal						4.5	
3	Irimanathur						5.75	
4	Alattil						6	
5	Kunnom						6	
6	Tondar						22.31	
7	Thindummal						0.5	
8	Thavinhal						18	
9	Valat						10	
10	Porur						12	
11	Edavaka						79	
12	Olakkodi						165	
13	Payingattiri						110	
14	Edachana						77	
15	Kunnamangalam						56	
16	Pulikkad				0.1		68	
17	Kanmana						21	
18	Vemom				0.68		195	
19	Arattuthara				0.2		31	
20	Thirunelli				2		200	
21	Thrissaleri				4		200	
22	Mangallasseri						63.95	
23	Vellamunda						217.39	
24	Changadam						118	
25	Kommayad						111	
26	Karingari					0.06	202	
27	Cherukara						70	
28	Anchkunnu	0.4				0.25	213.58	
29	Vilambukandam						52.6	

30	Echchom						50.24	
31	Kuppathod						215	
32	Pakkam				2.5		20	
33	Pulpalli				4		15	
34	Veliyambam				0.1		5	
35	Pudadi				0.15		11	
36	Pulpadi						210	1.61
37	Ponginichikkallur				0.04		120	0.25
38	Purakkadi				1.52		185.59	0.25
39	Padinnnarattara						127	0.12
40	Kuppadittara						125	
41	Kottattara						348	
42	Thekkuntara						35	
43	Tariyod						1016.76	0.34
44	Vengapalli					0.03	695.35	
45	Kalpetta						1375	4
46	Pinangod						420	
47	Achchuranom						195	
48	Kunnattidvaga						80	
49	Kottappadi				0.01		520	
50	Triikkaipatta				0.08		100	
51	Muppaiyinad				6		300	
52	Muttil				0.6	0.08	400	0.04
53	Chingeri				1.08		465.57	0.1
54	Nenmeni				5		500	
55	Kidanganad				0.5		350	
56	Vadakkanad				0.1		5	
57	Chenad						5	
58	Nulpuzha				1.67		5	

Source: *Resurvey Settlement Register of 58 Desams of Wayanad Taluk in 1928*, RAK.



Table No. 14 (C)

Sl. No.	Desam	Sugar	Fibres	Drugs and narcotics				Fruits and Vegetables including root-crops		
		Sugar cane	Various	Coffee	Tea	Tobaco	Cinchona	Plantains	Cocanuts	Others
1	Periya				114.53			9		0.05
2	Vararyal				78.15			8.5		
3	Irimanathur					0.1		5.5		0.12
4	Alattil							5		
5	Kunnom			18		0.08		26.49		0.02
6	Tondar			25	480	0.02		47.09		
7	Thindummal			15	753.51			6		0.02
8	Thavinhal				302.73	0.11		76		
9	Valat							80		
10	Porur					0.11		44		
11	Edavaka					0.15		35		0.25
12	Olakkodi					0.1		120		0.3
13	Payingattiri							0.8		
14	Edachana							27		
15	Kunnamangalam							31		
16	Pulikkad					0.1		46		
17	Kanmana		0.06					32		
18	Vemom			75	1281.82	0.44		285		1.07
19	Arattuthara			12		0.1		62		0.65
20	Thirunelli			500				200		
21	Thrissaleri			200				200		
22	Mangallasseri			15				32.29		0.32
23	Vellamunda			30		0.4		116.23		1.02
24	Changadam			15				55		1
25	Kommayad		0.03	12				31		0.18
26	Karingari			25				55		0.1
27	Cherukara			12				39		1

28	Anchkunnu	2		22.48				63.11		
29	Vilambukandam			7				12.61		
30	Echchom			6				33.94		
31	Kuppathod			65		2		225		
32	Pakkam			8		1		51		2
33	Pulpalli			10		5		60		1
34	Veliyambam			2		0.1		82		
35	Pudadi	0.5		11		0.3		157		
36	Pulpadi	2		70		0.5		45		19.94
37	Ponginichikkallur			15		0.32		30		0.25
38	Purakkadi		0.5	50.56		2.18		192.54		2.9
39	Padinnnarattara							143.93		0.4
40	Kuppadittara							96.4		
41	Kottattara	4		50				125		
42	Thekkuntara							18		
43	Tariyod							29.35		0.16
44	Vengapalli							23.48	0.59	0.93
45	Kalpetta			108	610			30		4
46	Pinangod			0.84	199.07			75		
47	Achchuranom			29.1	1023			10		
48	Kunnattidvaga	5		200	1005			10		
49	Kottappadi			204	4265			16		
50	Triikkaipatta			65.93	520.97	0.17		35		
51	Muppaiyinad			100	3000	7		100		4.5
52	Muttill	5		550		5.1		140		11.3
53	Chingeri			400		0.78		159.8		2.1
54	Nenmeni			200	400.5	10		1000		8
55	Kidanganad			225	4	0.83		300.66		0.82
56	Vadakkanad		0.1	5		0.15		60		0.25
57	Chenad		0.1	5		0.1		30		0.25
58	Nulpuzha			100		3.5		200		1.66

Source: *Resurvey Settlement Register of 58 Desams of Wayanad Taluk in 1928*, RAK.

Table No. 14 (D)

Sl.No.	Desam	Miscellaneous non food crops		Total
		Babu, casuarina etc.	Rubber	
1	Periya			460.35
2	Vararyal			209.9
3	Irimanathur			94.69
4	Alattil			141.61
5	Kunnom			554.28
6	Tondar			1739.2
7	Thindummal			872.41
8	Thavinhall			1004.75
9	Valat			527.3
10	Porur			387.23
11	Edavaka			545.9
12	Olakkodi			925.4
13	Payingattiri			249.34
14	Edachana			339
15	Kunnamangalam			358.1
16	Pulikkad			472.48
17	Kanmana			303.06
18	Vemom			3561.71
19	Arattuthara			543.18
20	Thirunelli			2265
21	Thrissaleri			1919
22	Mangallasseri			312
23	Vellamunda			1362.65
24	Changadam			615
25	Kommayad			582.71
26	Karingari			971.69

27	Cherukara			490
28	Anchkunnu			1198.82
29	Vilambukandam			502.21
30	Echchom			586.18
31	Kuppathod			3035
32	Pakkam			1014.5
33	Pulpalli			857
34	Veliyambam			454.7
35	Pudadi			2127.85
36	Pulpadi			2179.2
37	Ponginichikkallur			930.9
38	Purakkadi			1961.65
39	Padinnnarattara			1206.84
40	Kuppadittara			1197.31
41	Kottattara			2043
42	Thekkuntara			265
43	Tariyod			1876.29
44	Vengapalli			1353.39
45	Kalpetta		50	2801
46	Pinangod			1098.66
47	Achchuranom			1382.5
48	Kunnattidvaga			1377.35
49	Kottappadi		20	5198.29
50	Triikkaipatta			1182.37
51	Muppaiyinad		25	5086.5
52	Muttil			4194.31
53	Chingeri		50	1829.59
54	Nenmeni	0.15	15	6669.94
55	Kidanganad			2117.76
56	Vadakkanad			440.68
57	Chenad			249.59
58	Nulpuzha			2580.9

Source: *Resurvey Settlement Register of 58 Desams of Wayanad Taluk in 1928*, RAK.

**Table No. 15**

<b>Agricultural stock of the Desam as on Census of fasli year 1334</b>								
<b>Sl. No.</b>	<b>Desam</b>	<b>Bullocks and he buffaloes</b>	<b>Cows</b>	<b>She buffaloes</b>	<b>Young stock</b>	<b>Sheep and goat</b>	<b>Carts</b>	<b>Ploughs</b>
1	Periya	270	180	101	106	12	2	72
2	Vararyal	92	64	20	24	Nil	Nil	24
3	Irimanathur	56	21	21	21	Nil	Nil	19
4	Alattil	70	54	23	53	Nil	Nil	29
5	Kunnom	251	181	90	296	26	Nil	113
6	Tondar	552	335	211	555	17	14	198

7	Thindummal	85	78	40	105	26	11	22
8	Thavinhal	248	157	140	265	3	1	100
9	Valat	170	133	96	180	18	Nil	59
10	Porur	119	85	62	136	Nil	Nil	50
11	Edavaka	219	156	83	192	3	Nil	112
12	Olakkodi	292	298	117	351	30	4	134
13	Payingattiri	24	99	9	87	Nil	Nil	11
14	Edachana	130	59	80	114	Nil	Nil	61
15	Kunnamangalam	97	83	50	95	Nil	Nil	35
16	Pulikkad	208	170	117	216	16	4	94
17	Kanmana	123	106	53	183	Nil	Nil	55
18	Vemom	836	610	286	861	188	44	343
19	Arattuthara	184	158	52	155	7	Nil	92
20	Thirunelli	764	466	51	190	20	20	337
21	Thrissaleri	726	459	178	496	4	9	380
22	Mangallasseri	149	107	49	112	17	2	58
23	Vellamunda	414	322	145	413	17	2	183
24	Changadam	288	143	83	191	22	6	116
25	Kommayad	251	135	82	165	43	5	79
26	Karingari	337	195	73	229	19	3	119
27	Cherukara	175	91	53	114	22	Nil	63
28	Anchkunnu	476	340	190	291	57	11	190
29	Vilambukandam	144	94	51	121	Nil	Nil	73
30	Echchom	271	236	130	160	44	1	115
31	Kuppathod	1131	713	533	840	135	16	495
32	Pakkam	461	268	156	339	22	Nil	222
33	Pulpalli	538	469	186	426	45	3	196
34	Veliyambam	207	99	120	143	Nil	Nil	88
35	Pudadi	928	432	516	640	Nil	Nil	407
36	Pulpadi	764	379	263	595	82	21	207
37	Ponginichikkallur	394	212	157	310	68	11	176
38	Purakkadi	963	561	643	483	66	6	381

39	Padinnnarattara	503	326	135	462	28	3	218
40	Kuppaddittara	322	155	64	284	37	Nil	153
41	Kottattara	660	389	213	629	28	3	315
42	Thekkuntara	106	55	31	95	Nil	Nil	51
43	Tariyod	378	236	122	303	3	Nil	173
44	Vengapalli	344	140	116	169	Nil	2	149
45	Kalpetta	524	308	241	253	48	35	163
46	Pinangod	189	125	74	92	Nil	2	82
47	Achchuranom	129	117	89	97	14	23	31
48	Kunnattidvaga	137	248	69	189	62	46	6
49	Kottappadi	329	390	122	229	87	33	50
50	Triikkaipatta	358	174	187	255	Nil	8	153
51	Muppaiyinad	1046	654	596	774	129	60	433
52	Muttill	1397	565	740	1102	63	36	712
53	Chingeri	382	232	195	313	46	4	168
54	Nenmeni	2809	1627	1170	875	139	16	1031
55	Kidanganad	869	605	367	252	36	36	310
56	Vadakkanad	256	137	100	94	Nil	Nil	108
57	Chenad	129	53	36	24	Nil	1	55
58	Nulpuzha	1940	1022	729	562	1	3	699

Source: *Resurvey Settlement Register of 58 Desams of Wayanad Taluk in 1928*, RAK.

**Table No. 16**

	Number and area of village exclusive of tributary states								
	Ryotwari			Inam		Zamindari		Total	
	Number	Area		Number	Area	Number	Area	Number	Area (ACS.)
		Government (ACS.)	Minor inamas (ACS.)						
Wayanad Taluk	58	525408	460	—	—	—	—	58	525668
Malabar District**	2223	3686404	13574	—	—	—	—	2223	3699978

\*\*including Cochin and Laccadives

Poramboke or land reserved for public or common purpose (ACS.)	Deduct area of			Remainder arable area (Government and Inam) (ACS.)	Area in occupation		Percentage of total arable area occupied	Total land revenue excluding asses (ACS.)	Population according to the revenue of 1921	Incidence of land revenue per head		
	Forest (ACS.)	Area for which returns are not available (ACS.)	Total (ACS.)		Cultivated (actually cropped) (ACS.)	Fallow (ACS.)				Rs.	A.	P.
	4231	13430 5	—		138636	387032				79955	46075	32.5 5
92062 1	35674 7	—	128196 7	241801 1	138628 7	56059	59.6 5	359890 6	309887 1	1	2	7

Source: *A Statistical Atlas of the Madras Presidency, Statistical Atlas:Malabar*, Revised of Fasli 1330, Govt. Press, Madras, 1924, pp. 14-15.



**Table No. 17**

<b>Rent-Roll of Government Land for Fasli 1330</b>											
<b>Total holdings</b>											
	Number	Extent	Assessment	Average extent		Average assessment					
				Dry	Wet	Dry			Wet		
		ACS.	Rs.	ACS.	ACS.	Rs.	A.	P.	Rs.	A.	P.
Wayanad Taluk	5704	117044	130682	12.08	7.66	9	12	1	13	2	6
Malabar District	220650	1322790	3343845	3.55	2.45	6	12	2	8	5	7

<b>RENT-ROLL OF GOVERNMENT LAND FOR FASLI 1330</b>					
<b>Pattas paying</b>					
	Rs.10 and less	Rs.30 and less but over Rs. 10	Rs.50 and less but over Rs. 30	Rs.100 and less but over Rs. 50	Over Rs.100



1313	1979	1151	3130	1348	2486	3834
1314	1272	336	1608	1238	392	1630
1315	1107	315	1422	1580	698	2278
Total	19207	12719	31926	16809	23108	39917

Source: *A Statistical Atlas of the Madras Presidency, Statistical Atlas: Malabar*, Revised of Fasli 1330, Govt. Press, Madras, 1924, pp. 14-15.

**Table No. 19**

**Density in terms of acreage per person in Travancore**

Year of Census	Acres per person
1881	2
1891	1.9
1901	1.7
1911	1.4
1921	1.2
1931	0.96

Source: *Report of the Census of Travancore 1931, Census of India 1931*, p. 16, 49623, CDS.

**Table No. 20**

	1920-21	1930-31	Increase	
			Actual	Percentage
	Acres	Acres	Acres	

Net area sown	2,008,960	2,201,295	192,335	9.6
Paddy	648,609	665,087	16,478	2.5
Tapioca	404,092	480,589	76,497	18.9
Coconut	455,970	563,048	107,078	23.5
Rubber	51,018	61,986	10,968	21.5
Tea	47,105	74,616	27,511	58.4

Source: *Report of the Census of Travancore 1931, Census of India 1931*, p.22, 49623, CDS.

**Table No. 21**

	1921	1930
Net cultivated area- acres	2,008,960	2,201,295
Total population	4,006,062	5,095,973
Cultivated area per head of population-acre	0.50	0.43
Population supported by agriculture	2,072,642	2,768,330
Cultivated area per head of population supported by agriculture- acre	0.97	0.80

Source: *Report of the Census of Travancore 1931, Census of India 1931*, p. 43, 49623, CDS.

**Table No. 22**

**Variation of Population (1881 to 1931) of Cochin**

1931	1921	1911	1901	1891	1881	1921 to 1931	1911 to 1921	1901 to 1911	1891 to 1901	1881 to 1891
1205016	979080	918110	812025	722906	600278	225936	60970	106085	89119	122628

Source: *T. K. Sankara Menon, Cochin State, Census of India, 1931 Vol. XXI, Cochin: Part I- Report, Part II-A & B -Tables*, Table II, Cochin Govt. Press, Ernakulam, 1933, p. vi, 26231, CDS.

**Table No. 23**  
**Variation in Population during fifty years of Malabar District.**

Year	Persons	Variation	Net variation 1901-51	Males	Variation	Females	Variation
1901	2,795,738	-	-	1,381,625	-	1,414,113	-
1911	3,015,099	219,361	-	1,482,608	100,983	1,532,491	118,378
1921	3,098,871	83,772	-	1,510,732	28,124	1,588,139	55,648
1931	3,533,944	435,073	-	1,715,138	2015,406	1,817,806	229,667
1941	3,929,425	395,481	-	1,901,404	185,266	2,018,021	210,215
1951	4,758,342	828,917	1,962,604	2,314,484	413,080	,443,858	415,837

Source: J. I. Arputhanathan, *Census Handbook 1951, Madras, Malabar District*, Govt. Press, Madras, 1953, p. 16.

**Table No. 24**  
**Agricultural Statistics of India, 1931-32**

	Thousand acres	Percent
Forests	16,891	11.8
Not available for cultivation	26,682	18.6
Cultivable waste other than fallow	17,975	12.5
Current fallows	12,028	8.4
Net area sown	69,805	48.7
Total	143,381	100

From the total area of all seventy reporting States (258,790,000 acres) deduction must be made of 115,373,000 acres, comprising chiefly unsurveyed acres and lands held on jagir, muafi, and other privileged tenures, for which statistics are not available. The net area actually covered by these statistics is, therefore, only 143,417,000 acres by professional survey or according to the village papers.

Source: *Agricultural Statistics of India, 1931-32, Volume II*, Department of Commercial Intelligence and Statistics, India, Forty Eighth Issue, Published by order of the Governor-General in Council, Delhi, Manager of Publications, 1934, p. iv.

Table No. 25

Forest Offences in The Waynad Division, 1939-1949-Begur Range												
Year	Grazing	Felling	Hunting	Fire	Cultivation	Removal of timber	Removal of minor forest products	Miscellaneous	Total	Compounding fees		
										Rs.	A.	P.
1939-40	5	-	-	-	-	4	1	1	11	42	12	0
1940-41	1	2	1	1	-	1	-	-	6	56	8	0
1941-42	5	-	-	-	-	-	-	1	6	13	0	0
1942-43	15	1	-	-	-	-	-	-	16	42	0	0
1943-44	4	-	-	-	-	1	-	-	5	63	0	0
1944-45	-	1	-	-	-	-	-	-	1	42	0	0
1945-46	-	1	-	-	-	-	-	-	1	55	0	0
1946-47	1	1	-	-	-	-	-	-	2	79	0	0
1947-48	-	-	-	-	-	6	-	-	6	393	7	0
1948-49	5	2	-	-	-	1	-	-	8	93	8	0

Source: B.A.Cariapa, *Revised Working Plan for The Waynad Forest Division 1950-51 to 1959-60*, Government Press, 1955, p.10; I. Natarajan Chettiar, *Revised Working Plan for The Wynad Forest Division 1962-63 to 1971-72*, Govt. Press, Trivandrum, 1965, p. 7, KFHT.

Table No.25 (B)

FOREST OFFENCES IN THE WYNAD DIVISION, 1939-1949, Chedlleth Range												
Year	Grazing	Felling	Hunting	Fire	Cultivation	Removal of timber	Removal of minor forest products	Miscellaneous	Total	Compounding fees		
										Rs.	A.	P.
1939-40	-	-	-	-	-	-	-	-	-	-	-	-
1940-41	1	-	-	-	-	-	-	3	4	12	8	0
1941-42	-	-	-	-	-	-	-	-	-	-	-	-
1942-43	-	-	-	-	-	-	-	-	-	-	-	-
1943-44	-	1	1	-	-	-	-	-	1	3	0	0
1944-45	-	1	1	-	-	-	-	-	2	515	0	0
1945-46	1	-	-	-	-	-	-	-	1	7	0	0



1946-47	-	-	-	-	-	1	-	-	2	62	0	0
1947-48	1	1	1	-	-	1	-	-	4	467	0	0
1948-49	1	-	-	-	-	6	-	-	7	802	0	0

Source: B.A.Cariapa, *Revised Working Plan for The Wynad Forest Division 1950-51 to 1959-60*, Govt. Press, 1955, p. 10, KFHT.

**Table No. 25 (C)**

<b>Forest Offences in The Wynad Division, 1939-1949-Sulthan Bathery Range</b>												
Year	Grazing	Felling	Hunting	Cultivation	Fire	Removal of timber	Removal of minor forest products	Miscellaneous	Total	Compounding fees		
										Rs.	A.	P.
1939-40	6	3	2	-	-	2	-	15	28	98	4	0
1940-41	-	-	-	-	-	1	-	-	1	5	0	0

1941-42	1	-	-	-	-	-	-	-	1	8	4	0
1942-43	-	-	-	-	-	-	-	-	-	-	-	-
1943-44	-	-	-	-	-	3	-	-	3	120	0	0
1944-45	-	-	-	-	-	1	-	-	1	20	0	0
1945-46	1	1	1	-	-	-	-	-	3	99	0	0
1946-47	1	-	-	1	-	-	-	-	2	40	0	0
1947-48	4	1	2	-	-	1	-	2	10	612	0	0
1948-49	4	1	-	-	-	-	-	-	5	90	0	0

Source: B.A.Cariapa, *Revised Working Plan for The Wayanad Forest Division 1950-51 to 1959-60*, Govt. Press, 1955, p.10, KFHT.

**Table No. 26**

Taluk (1)	Area in sq. miles (2)	Number of inhabited Villages Townships (3) (4)		Occupied Houses			Population (Persons)		
		Total (5)	Rural (6)	Urban (7)	Total (8)	Rural (9)	Urban (10)		
Wayanad	821	34	-	30,204	30,204	-	169,280	169,280	-
District Total	5,844 (5,802)	1,495	14	756,986	693,834	63,152	4,758,342	4,250,367	507,975

Taluk	Males			Females		
	Total (11)	Rural (12)	Urban (13)	Total (14)	Rural (15)	Urban (16)
Wayanad	92,099	92,099	-	77,181	77,181	-
District Total	2,314,484	2,063,040	251,444	2,443,858	2,187,327	256,531

Source: J. I. Arputhanathan, *Census Handbook, 1951, Madras, Malabar District*, Govt. Press, Madras, 1953, p.14.

**Table No. 27**

Village Directory, Amenities available within the village, Wayanad & North Wayanad											Taluks- South	
Sl.No	Name of the Village	Total are of the villag e (in km2)	Drinking water	Staple food	Fores t	Irrigate d	Unirrigate d	Cultivabl e waste	Aera not available for cultivatio n	Nearest town and distance (in km.)	Day or days of the market , if any , held in the village	
1	2	3	4	5	6	7	8	9	10	11	12	
					Land use (in km.square)							
1	Pulpalli	126.23	W R C	Rice Tapioc a	32.99	0.2	60.5	23.2	4.34	Kozhikod e (129)	–	
2	Poothadi	106.13	W R C	Rice Wheat Tapioc a	41.97	–	43.93	20.03	0.2	Kozhikod e (81)	–	
3	Kidanganad	175.2	W C	Rice Wheat	163.4	3.86	7.87	–	0.07	Kozhikod e (97)	–	

				Tapioca							
4	Noolpuzha	125.5	W R C	Rice	103.78	0.11	21.08	–	0.53	Kozhikode (104)	
5	Nenmeni	69.38	W C	Rice Wheat Tapioca	–	–	54.38	10.75	4.25	Kozhikode (107)	Saturday Tuesday
6	Sultan's Bathery	45.49	W T C	Rice Tapioca	–	39.33	–	5.12	1.04	Kozhikode (97)	Monday
7	Purakkadi	53.52	W	Rice	0.47	45.78	–	4.93	2.34	Kozhikode (87)	Sunday
8	Kaniambetta	37.93	W	Rice Tapioca	–	–	37.92	–	0.01	Kozhikode (80)	Sunday
9	Kottathara	31.7	W R	Rice Tapioca Ragi	2.43	–	26.42	1.01	1.84	Kozhikode (82)	–
10	Kuppadithara	15.59	W C R	Rice Wheat Tapioca	–	–	13.13	1.64	0.82	Kozhikode (90)	–

				a							
11	Padincharethara	39.65	W R	Rice Wheat Tapioca	14.6	13.19	4.98	5.5	1.38	Kozhikode (88)	–
12	Thariyode	70.98	W R	Rice Wheat Tapioca	38.92	–	17.16	14.7	0.2	Kozhikode (80)	–
13	Vengappally	21.11	W	Rice Wheat Tapioca	–	–	20	–	1.11	Kozhikode (85)	–
14	Kalpetta	34.03	W R T C	Rice	3.75	0.16	29.73	–	0.39	Kozhikode (72)	Sunday
15	Muttill	47.4	W	Rice Tapioca	1.73	0.33	14.16	29.93	1.25	Kozhikode (80)	–
16	Ambalavayal	60.65	W T	Rice	–	–	60.04	0.54	0.07	Kozhikode (100)	–
17	Muppainad	113.9	W	Rice Wheat Tapioca	42.93	–	56.96	6.47	7.54	Kozhikode (91)	–

				a							
18	Kottappadi	84.75	W T C	Rice Ragi	21.23	–	–	45.04	18.48	Kozhikode (79)	–
19	Kunnathidavaka	47.49	W T R	Rice Wheat Tapioca	14.84	–	23.46	3	6.19	Kozhikode (60)	–
20	Achooranam	71.14	W	Rice Wheat Tapioca	11.85	–	56.42	0.66	2.2	Kozhikode (69)	–
21	Periya	62.47	W	Rice Tapioca	13.17	3.52	28.15	17.03	0.6	Tellichery (55)	–
22	Thavinhal	79.58	W R C	Rice Tapioca	8.95	–	58.15	12.08	0.4	Tellichery (71)	–
23	Thirunelly	200.58	W R C	Rice Tapioca Ragi	149.89	11.09	35.4	2.08	2.12	Tellichery (90)	–
24	Vemom	80.4	W T R	Rice Wheat	16.22	0.87	55.16	8.05	0.1	Tellichery (80)	Monday

				Tapioca							
25	Edavaka	25.14	W R	Rice Tapioca	–	5.48	14.76	4.52	0.38	Tellichery (82)	Tuesday
26	Thondernd	131.19	W R	Rice Tapioca	89.13	9.6	4.8	11.2	16.46	Tellichery (106)	–
27	Vellamunda	35.78	W	Rice Tapioca	9.52	0.14	20.5	2.85	2.77	Tellichery (94)	–
28	Porunnanore	28.65	W R C	Rice Tapioca	0.21	6.2	16.14	5.2	0.9	Tellichery (90)	–
29	Nallornad	22.16	W R C	Rice Tapioca	–	–	16.3	5	0.85	Tellichery (85)	–
30	Kuppathode	50.42	W T R C TW	Rice Tapioca	5.88	12.14	24.1	6.17	2.13	Tellichery (96)	–
31	Anchukunnu	30.31	W R C	Rice Tapioca	–	–	29.2	–	1.11	Tellichery (91)	–



Note:-Serial Number 1 to 20 villages belongs to South Wayanad Taluk of Kozhikode District and Serial Number 21 to 31 villages included in North Wayanad Taluk of Cannanore District

W-Well water, T-Tap water, TW-Tube Well water, TK-Tank water, C-Canal water, R-River water, S-Spring water

Source: K.Narayanan, *District Census Handbook, Kozhikode, Census 1971, Series -9*, Kerala, Part X- A & X- B, Govt. Press, Ernakulam, 1974, pp. 28-31; K.Narayanan, *District Census Handbook, Cannanore, Census 1971, Series -9*, Kerala, Part X-A & X-B, Govt. Press, Ernakulam, , 1974, pp. 44-45.

**Table No. 28**

**Towns and Village classified by Population in Wayanad Taluk.**

Total number of inhabited towns and villages	Total population			Towns and villages less than 2,000 population				
	Persons	Males	Females	Number	Males	Females		
31	169,280	92,099	77,181	16	10,521	9,316		
Less than 500		500-1,000			1,000-2,000			
Number	Male	Female	Number	Male	Female	Number	Male	Female
1	258	235	5	1,968	1,771	10	8,295	7,310

Total			2,000-5,000			5,000-10,000		
Number	Male	Female	Number	Male	Female	Number	Male	Female
15	44,391	37,855	8	14,959	12,797	7	29,432	25,058

Total			10,000-20,000			20,000-50,000		
Number	Male	Female	Number	Male	Female	Number	Male	Female
3	37,187	30,010	1	10,627	8,585	2	26,560	21,425

50,000-100,000			100,000 and above		
Number	Male	Female	Number	Male	Female
-	-	-	-	-	-

Source: J. I. Arputhanathan, *Census Handbook 1951, Madras, Malabar District*, Govt. Press, Madras, 1953, p.17.



**Table No. 29**

<b>Forest Plantation Statistics (69-70)</b>			
<b>Species</b>	<b>Area (Hectare)</b>	<b>Revenue (Rs.)</b>	<b>Expenditure (Rs.)</b>
Teak	52156	5132867	914990
Miscellaneous	1423	–	–
Softwood	16425	172018	394958
Cashew	3226	158031	182
Rubber	6	–	–
Sandalwood	246	–	–
Pepper	1	–	–
Bamboo	534	–	29785
Mixed	1491	–	–
Eucalyptus	21951	25	1126398
Wattle	360	–	–
Pine	239	–	24923
Other plantations	428	–	36875
<b>Total</b>	<b>98486</b>	<b>5462941</b>	<b>2528111</b>

Source: *Forest Statistics, 1969-70 and for the decade 1960-70*, Forest Department, Kerala State, St. Joseph's Press, Trivandrum, 1972, p.14, KFHT.

**Table No. 30**

<b>Growth of Forest Plantation in Kerala from 1960-61 to 1974-75 (Area in Ha.)</b>								
<b>Years</b>	<b>Teak</b>	<b>Softwood</b>	<b>Junglewood</b>	<b>Cashew</b>	<b>Eucalyptus</b>	<b>Rubber</b>	<b>Other species</b>	<b>Total</b>
1960-61	33133	5571	1536	5047	–	66	2385	47738
1974-75	62044	19219	1533	3355	31342	1190	4583	123046

Source: *Kerala Forest Statistics, 1974-75*, Planning and Statistical Cell, Kerala, 1976, p. 13.

**Table No. 31**

<b>No. of Important Forest Based Industries in Kerala (69-70)</b>	
I	PAPER AND PAPER BOARD MILLS
1	Punalur Paper Mills Limited
II	RAYON GRADE PULP
1	M/s. Gwalior Rayon Silk Mfg.(Wvg)Co.Ltd.Kozhikode, Mavoor
II	PARTICLE BOARD
I	PLANT. Bharat Plywood and Timber products, Cannannore,
1	Balia Patanam
I	PLYWOOD
V	1 M/s. Bharat Plywood and Timber products, Cannannore
	2 M/s.Malabar Plywood works, Feroke
	3 M/s.Phoenix Plywood, Kottayam
	4 M/s.Purushotham Gokuldas Plywood Company, Pappinisseri
	5 M/s.South India Plywood Industries, Kottayam
	6 M/s.Swaraj Plywood Works, Kottayam
	7 M/s.Sylvan Plywood Mills, Kallettumkara
	8 M/s.Travancore Plywood Industries, Punalur
	9 M/s.Travancore Timber Products Ltd., Kottayam
	1
	0 M/s.Venus Plywood Company, Nenmara
	1
	1 M/s.Western India Plywood Limited, Baliapatanam.

Source: *Forest Statistics, 1969-70 and for the decade 1960-70*, Forest Department, Kerala State, St.Joseph's Press, Trivandrum, 1972, p.19, KFHT.

**Table No. 32**

<b>Sleepers supplied to Railways</b>			
Years	No.of sleepers supplied		
	Broad Gauge	Metre Gauge	Special

1960-61	23516		
1961-62	—		
1962-63	19545		
1963-64	46168		
1964-65	36363		
1965-66	59336		
1966-67	14664	11155	1289
1967-68	34363	—	
1968-69	65627	11620	
1969-70	46459	12150	
1970-71	54547	12530	
1971-72	56875	18661	
1972-73	6849	—	
1973-74	76865	16967	398
1974-75	160564	34817	5840

Source: *Kerala Forest Statistics, 1974-75*, Planning and Statistical Cell, Kerala, 1976, p. 15.

**Table No. 33**

<b>Eucalyptus Plantation Growth in Kerala Forests</b>	
<b>Year</b>	<b>Plantation Area (in Hectare)</b>
1955	0
1960	266
1965	6059
1970	21961
1975	31149
1980	30898
1985	31634
1990	31609
1995	28900
1998	29459

Source : Sridhar R., *Grasim Since 1963: The Burden on Our Heads : An Enquiry into what this industry did to our Forests*, Centre for Nature Studies, Thiruvananthapuram, 2000 & Administrative Reports, Forest Department, Govt. of Kerala.

**Table No. 34**

**The following are the fully functioning and non functioning quarries in Wayanad.**

Functioning quarries	
1.	Wayanad Metals, Vengappally, Vythiri
2.	Wayanad Granites, Vengappally, Vythiri
3.	MMT Constructions, Vengappally, Vythiri
4.	Sila Bricks and Granites, Vellamunda, Mananthavady
5.	Stone Crushes, Pulpally, Bathery.

Non functioning quarries (Even with the permission)	
1	Athani, Vellamunda
2	St. Mary's, Thondarnadu
3	Pulinjal, Vellamunda
4	Kolagappara, Krishnagiri, Bathery
5	Soorya Granites, Vengappally, Vythiri
6	MMT Granites, Vengappally, Vythiri.

Sources : *Information bulletin Mining and Geology Department, Meenanagadi, Wayanad on 23 December 2018.*

**Table No. 35**

**The following table shows the number of visitors (Tourists) to the important tourist spot in Wayanad and the income out of these.**

Name of Project	Year	Total Visitors	Total Income
Pookot Lake Tourist Resort	2008-09	406421	4226835
	2009-10	413803	5799920
	2010-11	456456	6729785
	2011-12	523498	12289115
	2012-13	593573	14015266
Pazhassi Tourist Resort	2008-09	16969	171406

	2009-10	9805	98675
	2010-11	12553	102040
	2011-12	9115	97490
	2012-13	13110	114010
Wayanad Heritage Museum	2008-09	29855	283700
	2009-10	43721	4168114
	2010-11	45817	444583
	2011-12	46524	657855
	2012-13	49723	669315
Edakkal Cave	2008-09	249987	2532539
	2009-10	307158	1630985
	2010-11	150689	1839635
	2011-12	408862	4997505
	2012-13	345191	5434430
Kuruva Dweep	2008-09	83089	932539
	2009-10	50569	1039310
	2010-11	196685	2216377
	2011-12	183061	2900000
	2012-13	208023	4806958

Source: District Tourism Promotion Council, Wayanad District, Kalpetta.



## APPENDIX II

### LIST OF MAPS

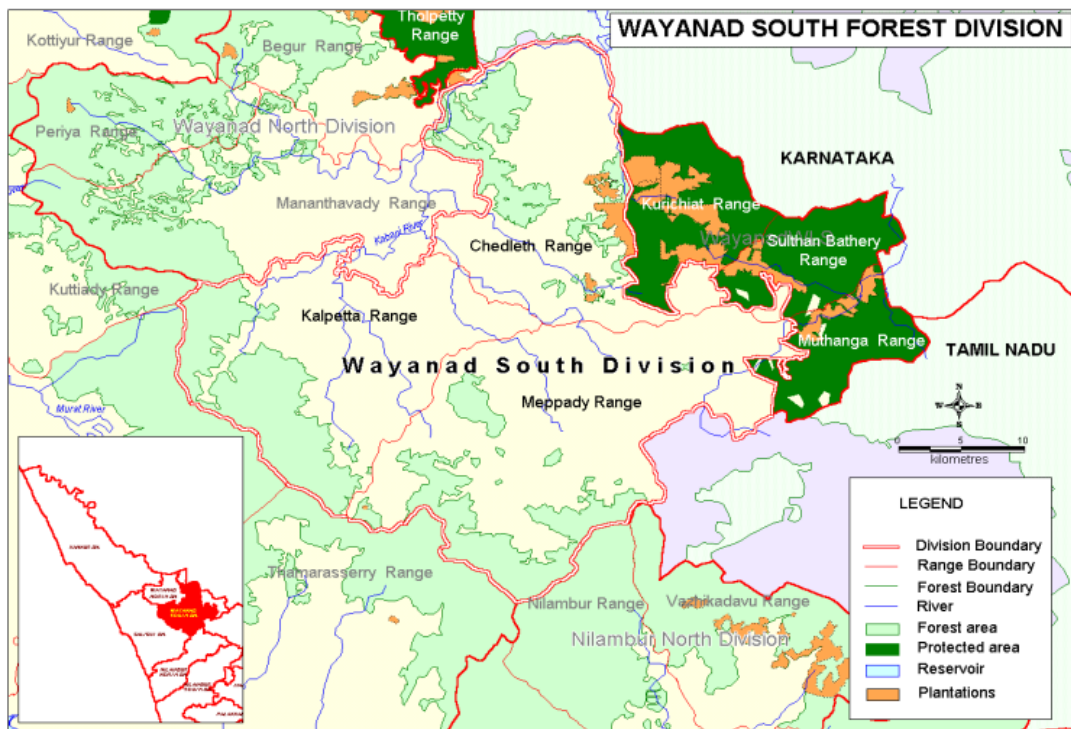
#### 1. OUTLINE MAP OF WAYANAD IN 1889



Not scale in

Source: *Central Survey Office, Madras, Regional Archives, Kozhikode.*

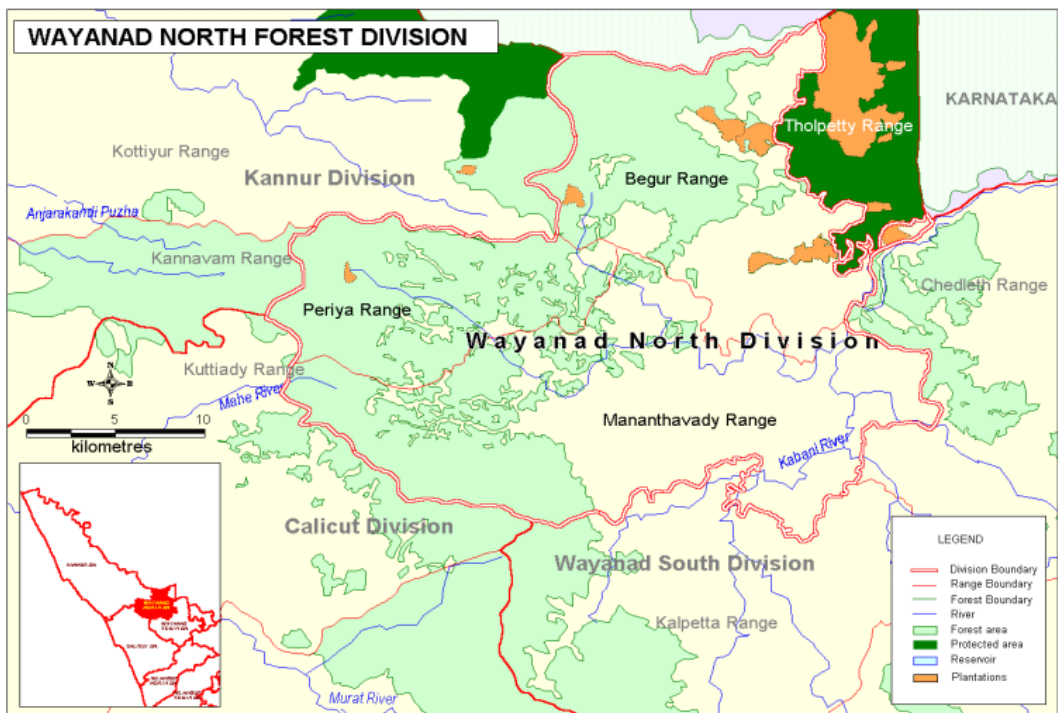
## 2. WAYANAD SOUTH FOREST DIVISION



Not scale in

Source : kerala\_forest-keralapages2, sites.google.com

### 3. WAYANAD NORTH FOREST DIVISION



Not scale in

Source : Kerala\_forest-keralapages2, sites.google.com



## **APPENDIX III**

### **PHOTOGRAPHS**

#### **1. Keni (near Pakkom)**



#### **2. Serambi (near Pakkom)**



## **BIBLIOGRAPHY**

### **PRIMARY SOURCES**

#### **A. Regional Archives, Kozhikode**

*A Soil Survey of the Malabar District, A/215.*

*A Statistical Atlas of the Madras Presidency, Govt. Press, Revised and brought up to the FND of Fasli 1330, Madras, 1924.*

*Administration Report of the Agricultural Department, for Fasli Year 1948-49, G.O. No.765, 20April 1950, Food and Agriculture Department, Govt. Press, Madras, 1950, A/397.*

*Administration Report of the Agricultural Department, for Fasli Year 1949-50, Govt. Press, Madras, 1951, Food and Agriculture Department, A/398.*

*Administration Report of the Forest Department of Madras Presidency, for the Year ending 31<sup>st</sup> March 1932, Govt. Press, Madras, 1933.*

*Administration Report of the Forest Department of the Madras Presidency, for the Year Ending 31 March 1934, Govt. Press, Madras, 1934.*

*Administration Report of the Forest Department of the Madras Presidency, for the year ending 31<sup>st</sup> March 1924, 1923-1924, Vol.I., Madras, Govt. Press, Madras, 1926.*

*Administration Report of the Forest Department of the Madras Province, For the Year Ending 31 March, 1939, Vols. I & II, Proceedings of the Chief Conservator of Forest, No.494, Dated 16 October 1939, Govt. Press, Madras, 1939.*

*Agricultural Statistics of India, 1931-32, Vol. II, Department of Commercial Intelligence and Statistics, India, 48<sup>th</sup> Issue, Govt. Press, Madras, 1934.*

*Annual Report of the Material Condition and Progress Report of the Aboriginal Tribes and Very Backward Communities, Reference No.A.1658-45-1 dated 9 May 1946, R-Dis File No.9602/46 dated 22-5-1946, Revenue Department.*

*Annual Report of the Material Condition and Progress Report of the Aboriginal Tribes and Very Backward Communities, Reference No.A.1658-45-1 dated 9 May 1946, R-Dis File No. 4374/42, S-13, B-554, Revenue Department.*

Arcy, W. E. D', *Preparation of Forest Working Plans in India, India, 2<sup>nd</sup> Edition, 1895.*

Arputhanathan, J. I., Madras, *1951 Census Handbook, Malabar District, Govt. Press, Madras, 1953.*

Boag, G. T., *Annual Report of the Material Condition and Progress of Aboriginal Tribes and Very Backward Communities*, G.O. No.51, Office of the Collectorate of Malabar, 8 January 1937, Govt. of Madras, Sl.No.8, B. No.468, Revenue Department.

Buchanan, Francis, *Map: Explanatory of the Route, Journey from Madras Through the Countries of Mysore, Canara and Malabar*, Vol. I, 2<sup>nd</sup> Edition, Higginsbotham, Madras, 1870.

Cecil Wood, R., (Compiled), *A Note-Book of Agricultural Facts and Figures*, Madras Agricultural Department, 3<sup>rd</sup> Edition 1920, Govt. Press, Madras, Madras,A/209.

*Classification of Forest*, R.Dis File, Sl.No.7, B.No.162, Revenue Department.

Dyson, W. G., *Proceedings of the Chief Conservator of Forests, No.235*, Dated 29 April 1930, Revised Working Plan for the Nilgiri Plantations, 1928, Madras, Govt. Press, Madras, 1930.

*Forest Act, dated 9-4-1907*, File No.345, Public DR-1907, Sl.No.16, B.No.51.

*Forest Inspection Made by F. A. Lodge 1907*, R-Dis File,Sl.No.13, B.No.54, Revenue Department.

*Forest land in Wayanad, 1888-1907*, Proceedings of the Board of Revenue, 20 January, 1888, Correspondence Files, Sl. No. 61, B.No. 164, Revenue Department.

*Forest Land in Wayanad, 1888-1907*, Proceedings of the Board of Revenue, Madras, Proceedings No.129, 8 May 1907, Assignment of land in Wayanad, Correspondence Files, B.No.164, Revenue Department.

*Forest Well-Wooded Lands in Wayanad, 1913*, R-Dis, Sl.No.9, B.No.133, Revenue Department.



Graeme, H. S., *Report of the Revenue Administration of Malabar*, dated 14 January 1822, in Reprint, J. Rejikumar, (Ed.), *Greame's Report on the Revenue Administration of Malabar 1822*, Kerala State Archives, Thiruvananthapuram, 2010.

*Guide to the Records of the Malabar District, 1714 to 1835* in 9 Vols., Vol. IX, Govt. Press, Madras, 1936.

Higgins, W. B., *Preliminary List of Vernacular Names of Trees, Shrubs and Woody Climbers Found in the Forests of the Madras Presidency*, Madras, Government Press, 1901, L/218A.

Innes, C. A. *Malabar Gazetteer*, Volume I and II, F.B.Ivans (Ed.), in Reprint, J. Rejikumar (Ed.), Kerala Gazetteers, Thiruvananthapuram, 1997.

*Kerala State Administration Report, 1967-68*, Government of Kerala, 1969, Govt. Press, Trivandrum, 1969.

Langley, W. K. M., (Ed.), *Century in Malabar: The History of Peirce Leslie, (1862- 1962)*.

*Letter dated 14-5-1946*, Office of Collector of Malabar, R-Dis File No. 9602/46 dated 22-5-1946, Revenue Department.

*Letter dated 26-4-1946 of Revenue Divisional Officer*, Malappuram to the Collector of Malabar, Calicut, R-Dis File No.9602/46 dated 22-5-1946, Revenue Department.

*Letter from Revenue Divisional Officer*, Manathavady to The Collector of Malabar, dated 20-09-1918, R-Dis File, Sl. No.38, B. No.210, Revenue Department.

*Letter from Sri. C. P. Kelu Erady, Revenue Divisional Officer, Tellichery to the Collector of Malabar, Calicut R-Dis File No. D.121/46 dated 26-4-1946, Revenue Department.*

*Letter from the Tahsildar, Taluk Office, Wynad, Mananthavady, dated 18-11-1949 to the Collector of Malabar, Kozhikode, R-Dis File 6931-48 (Vol. I), Sl.No.1, B. No.617, Revenue Department.*

*List of Tea and Coffee Estates in Wayanad Taluk, 1879, Folded File, Sl.No.52, B.No.11, Revenue Department.*

Logan, William, *Malabar, Vol. I*, Government Press, Madras, 1951 (1887).

*Madras Administration Report 1947-48, Part II*, Govt. Press, Madras, 1949.

*Madras Agriculture- A Brief Survey*, 9 May 1917, File No. A/206.

*Madras District Gazetteers: Statistical Appendix for Malabar District*, Govt. Press, 1915.

*Madras in 1947, Outline of Administration, Part I*, Govt. Press, Madras, 1948.

Mello, F.M.DE, (Ed.), *Indian Farming*, The Imperial Council of Agricultural Research, Vol.II, June, 1941, No.6, New Delhi.

*Memorandum on the Planting and Maintenance of Venues: Malabar District*, 1906, Revenue Department, A/213.

*Memorandum*, No.1015 E/18-1, dated 17 August 1918, Government of Madras, File No. 4153/18 dated 30-09-18, R-Dis File, Sl. No.38, B.No.210, Revenue Department.

*Proceedings of the Board of Revenue dated 27-4-1916*, R-Dis, File, Sl.No. 181, B.No.13, Revenue Department.

*Proceedings of the Madras Government*, 28 August 1874, Miscellaneous Proceedings, dated 1882, B.No.149, Correspondence File, B.No.556, Revenue Department.

*Progress Report of Forest Research Work in India*, For the Year 1929-30, Govt. of India, Calcutta, 1931.

*R-Dis File No.8206*, 1946, Revenue Department, M.46.

*Report of a Joint Commission from Bengal and Bombay Appointed to Inspect into the State and Condition of the Province of Malabar*, In the years 1792 and 1793, Reprint, H. Smith, Fort Saint George Press, 1862, in Reprint, J. Rejikumar (Ed.), *The Joint Commissioners' Report on Malabar:1792-93*, Kerala State Archives, Thiruvananthapuram, 2010.

*Report of Subordinate Officers of the Department of Agriculture*, Madras for 1932-33, Govt. Press, Madras, 1933, A/484.

*Report on the Administration of the Madras Presidency*, for the Year 1930-31, Govt. Press, Madras, 1932, A/483.

*Report on the Administration of the Madras Presidency*, for the Year 1932-33, Govt. Press, Madras, 1934.

*Report on the Administration of the Madras Presidency*, for the Year 1923-24, Weather and Crops, Fasli 1333-1<sup>st</sup> July 1923 to 30<sup>th</sup> June 1924, Govt. Press, Madras, 1925.

*Resurvey Settlement Register*, 1928, No.1 to 58, Wayanad Taluk, (Total 58 Desams).

Robertson, William R., *An Agricultural Class-Book for the Use of Schools in South India*, Govt.Press, Madras, 1880.

Robinson, W., *Report on the History, Conditions and Prospects of the Taluk of Wynad*, dated 22<sup>nd</sup> August 1857, in Reprint, J. Rejikumar (Ed.), *Selected Reports on Malabar, Canara and Wynad*, Kerala State Archives, Thiruvananthapuram, 2010.

Rudolph D. Anstead, *The Manorial Problem in South India and its Solution*, in Reprint, Madras Mail, The Agricultural Department, Madras, Bulletin No.90, Govt. Press, Madras, 1928, A/207.

*Sale of Chundale Estate*, R-Dis. File Folded, Sl.No.17, B.No.23, Revenue Department.

*Season and Crop Report of the Madras Presidency*, for the Agricultural Year 1929-30, Fasli 1339, Department of Agriculture, Govt. Press, Madras, 1930.

Sen, H. K., *Indian Farming*, Vol.VI, No.1 January 1945, Imperial Council of Agricultural Research, New Delhi.

Smith, H. , *Report of A Joint Commission from Bengal and Bombay appointed to Inspect into the State and Condition of the Province of Malabar*, In the years 1792 and 1793, Madras at the Fort Saint George Gazette Press,1862, in Reprint, J. Rejikumar (Ed.), Kerala State Archives, Thiruvananthapuram, 2010.

Sreedhara Menon, A., (Ed.), *Kerala Gazetteers*, Trivandrum, Kerala District Gazetteers, Kozhikode, 1962, Govt. Press, Thiruvananthapuram.

*Statistical Atlas: Malabar, A Statistical Atlas of the Madras Presidency*, Govt. Press, Madras, 1924.

*Statistical Atlas: Malabar*, Revised and brought up to the FND of Fasli 1330, Govt. Press, Madras, 1924.

Strachey, J., *Report on the Northern Division of Malabar, Dated 7<sup>th</sup> March 1801*, in Reprint, J. Rejikumar (Ed.), Kerala State Archives, Thiruvananthapuram. 2011.

*The Forest Manual*, Corrected up to the end of December 1928, Govt. Press, Madras, 1931, M/64.

*The Legislative Debates*, Council of the Governor of Madras, Tuesday, the 14 March 1933, Land Revenue Administration.

*The Madras Forest Department and Account Code*, Vol. II, Forms and Appendices First Edition, Govt. Press, Madras, 1927, C/112.

*The Madras Forest Manual Vol. I*, Legal Enactments and Rules of General and Special Application Issued under the Madras Forest Act, with Departmental Rules and Appendices, Corrected up to the End of February, 1940, Madras, Govt. Press, 1940, M/65.

*The Malabar Tenancy Act-1929, Madras Act XIV of 1930*, Govt. Press, Madras, A/187.

*The Transfer of Property Act, 1882 (IV of 1882)*, As modified up to the 1 April, 1930, Legislative Department, Govt. Press, New Delhi, 1938, A/157.

*Vythiri and Mananthavady Division, Area and Population*, 1886, Folded File, Sl.No.3, B.No.32, Revenue Department.

*Wayanad Land Assessment and Cultivation*, Proceedings of the Board of Revenue, dated 9 December 1881, Enclosure No.1, Correspondence File, B.No.556, Revenue Department.

Yeatts, M. W. M., *Census India, 1931, Volume XIV, Madras, Part I*, Report, Govt. Press, Calcutta.

**B. Department of Economics and Statistics, Government of Kerala,  
Trivandrum**

*Agricultural Statistics of Kerala, 1985-86.*

*Agricultural Statistics of Kerala, 1986-87.*

*Agricultural Statistics of Kerala, 1987-88.*

*Agricultural Statistics of Kerala, 1988-89.*

*Agricultural Statistics of Kerala, 1989-90.*

*Agricultural Statistics of Kerala, 1990-91.*

*Agricultural Statistics of Kerala, 1991-92.*

*Agricultural Statistics of Kerala, 1992-93.*

*Agricultural Statistics of Kerala, 1993-94.*

*Agricultural Statistics of Kerala, 1994-95.*

*Agricultural Statistics of Kerala, 1995-96.*

*Agricultural Statistics of Kerala, 1996-97.*

*Agricultural Statistics of Kerala, 1997-98.*

*Agricultural Statistics of Kerala, 1998-99.*

*Agricultural Statistics of Kerala, 1999-2000.*

*Agricultural Statistics of Kerala, 2000-01.*

*Agricultural Statistics of Kerala, 2001-02.*

*Agricultural Statistics of Kerala, 2002-03.*

*Agricultural Statistics of Kerala, 2003-04.*

*Agricultural Statistics of Kerala, 2004-2005.*

*Report on the Timely Reporting Survey on Agricultural Statistics in Kerala, 1981-82.*

*Report on the Timely Reporting Survey on Agricultural Statistics in Kerala, 1982-83.*

*Report on the Timely Reporting Survey on Agricultural Statistics in Kerala, 1983-84.*

*Report on the Timely Reporting Survey on Agricultural Statistics in Kerala, 1984-85.*

**C. Kerala Forest Central Headquarters, Library,  
Thiruvananthapuram**

Adiyodi, P. N., *Seventh Working Plan for The Wayanad Forest Division (1974-75 to 1983-84)*, Govt. Press, Eranakulam, 1977.

*Administration Report 2013-14*, Kerala Forest and Wildlife Department.

*Administration Report of the Forest Department of the Madras Presidency, for the Year Ending 31 March 1924, 1923-1924, Vol.I*, Govt. Press, Madras, 1926.

*Administrative Report of the Forest Department, for the year 1974-75*, The Government of Kerala, 1977.

Cariapa, B. A. , *Revised Working Plan for The Wynad Forest Division 1950-51 to 1959-60*, Govt. Press, Trivandrum, 1955.

Chettiar, I. Natarajan, *The Working Plan for The Wynad Forest Division, 1962-63 to 1971-72*, Govt. Press, Trivandrum, 1965.

*Forest Statistics, 1969-70 and for the Decade 1960-70*, St. Joseph's Press, Trivandrum, 1972.

Iyer, R. Parameswar, *A Working Plan for Kozhikode Forest Division (1964-65 to 1973-74)*, Govt. Press, Trivandrum, 1975.

*Kerala Forest Statistics, 1974-75*.

Satyanarayana, P., *Survey Report on Flora of Wayanad Wildlife Sanctuary, Kerala*, Government of India, Ministry of Environment & Forests, Coimbatore.

*The National Forest Policy of India*, Sl.No.8050, Ministry of Food and Agriculture, 1988.

**D. Centre for Development Studies, Thiruvananthapuram.**

**Census**

*Census Handbook 1951, Malabar District*, Govt. Press, Madras, 1953.

*Census of India, Paper No.2, Population Zones, Natural Regions, Sub-regions and Divisions*, 1952, C/145.

*Census of India, Paper No.2, Population Zones, Natural Regions, Sub-regions and Divisions*, 1952, C/145.

Menon, T. K. Sankara, (Ed.), *Cochin State, Census of India, 1931*, Volume XXI, Cochin: Part I- Report, Part II- A & B Tables, 1933, Govt. Press, Ernakulam.

Narayanan, K., (Ed.), *District Census Handbook, Kozhikode, Census 1971*, Series -9, Kerala, Part X- A & X- B, Govt. Press, Ernakulam, 1974.



*Report of the Census of Travancore 1931, Census of India 1931.*

**E. Achoor Tea Museum, Wayanad**

*Daily Rainfall Records of Achoor Estate.*

*Field History Records of Tea in Achoor Estate.*

*Planters Chronicle, August 2016.*

**F. Interviews**

A. M. Bhaskaran (62), Farmer from Pulpally, at his Residence, 5 December 2015.

Babu Joseph (68), Farmer, at his residence near Kenichira, 13 January 2018.

Baby Thombrayil (63), Farmer, Choothupara at his Residence, 28 January 2018.

C. M. Francis (64), President Rubber Production Society, at Padichira, 15 August 2014.

Cheruvayal Raman (68), Farmer, at his Residence in Kammana near Mananthavady, 20 May 2018.

Eldose (48), Assistant Executive Engineer, Irrigation Department, Kuttiady Augmentation Scheme, Padinjarathara, 9 November 2018.

K. J. Baby (66), Environmental Activist and Writer, Nadavayal, 27 October 2019.

M. Gangadhran Master (62), Vice President, Pazhassi Granthalayam and founding member of Wayanad PrakrithiSamrkshana Samithi, Mananthavady, 2 June 2019.

P. U. Das (54), Soil Conservation Officer of Wayanad District Office, Civil Station, Kalpetta, 29 December 2018.

Sijo (39), Office Assistant, Directorate of Tourism, Government of Kerala, Kalpetta, 9 November 2018.

Bosen Lal (44), Assistant Engineer, Kerala State Electricity Board, BanasuraSagar Dam, 9November 2018.

#### **G. Souvenir and Pamphlets**

*Information Bulletin*, Kuttiady Augmentation Scheme, Irrigation Department, Government of Kerala, Padinjarathara.

*Information Bulletin*, Mining and Geology Department, Meenanagadi, Wayanad on 23 December 2018.

*Vijaya High School Rajatha Jubilee Smaranika* (Mal.), Pulpally, 1990.

#### **H. Diaries**

Fr. Jefreeno, *Jefreenoyude Diarykkurippukal* (Mal.), 2 July 1909, Pallikkunnu Lourde Matha Church, Bishop's House of Calicut, 1977.

#### **I. Newspapers and Periodicals**

*Malayala Manorama Daily*, 14 August 2016.

*Malayala Manorama Daily*, 26 August 2016.

*Malayala Manorama Daily*, 31 March 2017.

*Malayala Manorama Daily*, 27 September 2019.

*Mathrubhumi Daily*, 16 January 1934.

*Madhyamam Weekly*, 4 March 2005.

*Mathrubhumi Daily*, Kozhikode, 27 November 2011.

*Mathrubhumi Daily*, 20 November 2013.

*Mathrubhumi Daily*, 24 September 2014.

*Mathrubhumi Weekly*, 29 November 2015.

*Mathrubhumi Daily*, 8 January 2016.

*The Hindu, Daily*, 29 April 2018.

*The Hindu, Daily*, 21 June 2018.

## **SECONDARY SOURCES**

### **A. Books (English)**

Agarwal, Arun, & Sivaramakrishnan, K. (Ed.), *Social Nature: Resources Representations and Rule in India*, Oxford University Press, New Delhi, 2001.

Agarwala, V. P., *Forests in India: Environmental and Production Frontiers*, Oxford & I.B.H. Publishing, New Delhi, 1985.

- Agnoletti, Mauro & Serner Neri, Saimone (Ed.), *The Basic Environmental History*, Springer, Switzerland, 2014.
- Agnoletti, Mauro (Ed.), *Italian Historical Rural Landscapes, Cultural Values for the Environment and Rural Development*, Springer, London, 2013.
- Ambre Rao, Neena, *Forest Ecology in India: Colonial Maharashtra 1850-1950*, Foundation Books, New Delhi, 2008.
- Anandaraj, A., & Subramanian, K. K., *Forest Management and Forest Based Industries: Some Lessons from Pulp and Paper Industry in Kerala*, Socio-Economic Research in Forestry, Kerala Forest Research institute, Peechi and the Ford Foundation, 1993.
- Arnold, David & Guha, Ramachandra, (Ed.), *Nature and Culture and Imperialism: Essays on the Environmental History of South Asia*, Delhi, Oxford University Press, 1996.
- Backhouse, Roger E., & Fontaine, Philippe (Ed.), *A Historiography of Modern Social Sciences*, Cambridge University Press, New York, 2014.

- Bagchi, Amiya Kumar, *Colonialism and Indian Economy*, Oxford University Press, New Delhi, 2014.
- ....., *Private Investment In India 1930-1939*, Cambridge University Press, Cambridge, 1972.
- Behera, Hari Charan, *Agrarian Transformation in Tribal Areas: Emerging Trends and Issues*, Discovery Publishing House, New Delhi, 2010.
- Bhat, K. M., et. al., *Wood and Bark Properties of Branches of Selected Tree Species Growing in Kerala*, KFRI Research Report 29, Kerala Forest Research Institute, Peechi, 1985.
- Bhatia, S. C., *Global Climate Change and Cultivated Production*, Agrotech Press, New Delhi, 2013.
- Biswas, T. D., & Mukherjee, S.K., *Textbook of Soil Science*, Tata McGraw-Hill Publishing, New Delhi, 18<sup>th</sup> Reprint, 2008.
- Boersema, Jan J., & Reijnders, Lucas (Ed.), *Principles of Environmental Sciences*, Springer, United Kingdom, 2009.
- Brown, Alison Leadley, *Ecology of Fresh Water*, Heinemann Educational Books, London, 1971.

Buchy, Marlene, *Teak and Arecanut: Colonial State, Forest and People in Western Ghats (South India) 1800-1947*, Indira Gandhi National Centre for the Arts, Publication Division, New Delhi, 1996.

Cederlof, Gunnel, & Sivaramakrishnan, K., (Ed.), *Ecological Nationalism: Nature, Livelihoods and Identities in South Asia*, Permanent Black, New Delhi, 2005.

Champakalakshmy, R., et. al. (Ed.), *State and Society in Pre-Modern South India*, Cosmo Books, Thrissur, 2002.

Chandra Bose, Satheese, & Sam Varghese, Shiju, (Ed.), *Kerala Modernity: Ideas, Spaces and Practices in Transition*, Orient Black Swan, New Delhi, 2015.

Cherian, P. J., (Ed.), *Perspectives on Kerala History*, The Second Millennium, Kerala State Gazetteer, Vol. II, Part II, Govt. of Kerala, Thiruvananthapuram, 1999.

Chundamannil, Mamman, *History of Forest Management in Kerala*, Kerala Forest Research Institute, Peechi, 1993.

Covert, William M., *The Smoke of London: Energy and Environment in the Early Modern City*, Cambridge University Press, Cambridge, 2016.

- Crosby, Alfred W., *Ecological Imperialism: The Biological Expansion of Europe 900-1900*, Cambridge University Press, 1995.
- D' Souza, Roshan, (Ed.), *Environment, Technology and Development: Critical and Subversive Essays*, Orient BlackSwan, New Delhi, 2013.
- Daniel, P. J. Ranjit, & Vencates, Jayashree, *Western Ghats: Bio-Diversity, People, Conservation*, Rupa &Co., New Delhi, 2008.
- Deori, Pushpanjoli, *Environmental History of Naga Hills: 1881-1947*, Maulana Abdul Kalam Azad Institute of Asian Studies, Kolkatta, 2005.
- Devi, P. Indira, et. al., *National Agricultural Innovation Project: Base-line Survey Report of "Multi Enterprise Farming Models to Address the Agrarian Crisis of Wayanad District of Kerala": Socio-Economic Status of Wayanad District*, Kerala Agricultural University, Poorna Publications, Kozhikode, 2012.

- Devi, V. Chithra, *The Agrarian Transition and Socio-Economic Changes in Baroda State*, Sunday Circle, Thiruvananthapuram, 2008.
- Dhaliwal, G. S., & Arora, Ramesh, (Ed.), *Environmental Stress in Crop Plants*, Commonwealth, Indian Ecological Society, New Delhi, 1999.
- Ellis, Markman, *The Coffee-House: A Cultural History*, Phoenix, London, 2005.
- Enamul Haque, A. K., et. al. (Ed.), *Environmental Valuation in South Asia*, Cambridge University Press, New Delhi, 2011.
- Fernandes, Walter & Pereira, Melvin, *Changing Land Relations in North-Eastern India: A Comparative Study of Six Tribes and Non-Tribal Group*, North Eastern Social Research Centre, Guwahati, 2005.
- Fernandes, Walter, (Ed.), *Forests, Environment and People: Ecological Values and Social Cost*, Indian Social institute, New Delhi, 1983.
- Fiege, Mark, *The Republic of Nature, An Environmental History of the United States*, University of Washington Press, U.S.A., 2012.



- Freedman, Daniel G., *Human Sociobiology: A Holistic Approach*, The Free Press, A Division of Macmillan, New York, 1979.
- Furer-Haimendorf, Christoph Von, *Tribes of India: The Struggle for Survival*, Oxford University Press, New Delhi, 1989.
- Gadgil, Madhav, *Report of the Western Ghats Ecology Expert Panel*, Submitted to The Ministry of Environment and Forests, Government of India, 2011.
- Ganesh, K. N., *State Formation in Kerala: A Critical Overview*, Indian Council of Historical Research, New Delhi, 2010.
- Gangadharan, M., (Ed.), *The Book of Duarte Barbosa, Vol.II: Making of Modern Keralam: The Land of Malabar*, Mahatma Gandhi University, Kottayam, 2000.
- Gare, Arran E., *Post-Modernism and the Environmental Crisis*, Routledge, London, 1995.
- George K., Tharian, *The Crisis of the South Indian Tea Industry: Legacy of the control by British Tea Multi-Nationals*, Working Paper No.191, CDS, Trivandrum, 1984.

- Goswami, N. N., (Ed.), *Fundamentals of Soil Science*, Indian Society of Soil Science, New Delhi, 2012.
- Guha, Ramachandra, (Ed.), *Social Ecology*, Oxford University Press, New Delhi, 2010.
- ....., *How Much Should a Person Consume? Thinking through the Environment*, Permanent Black, Ranikhet, 2008.
- ....., *The Unquiet Woods: Ecological Change and Peasant Resistance in Himalaya*, Permanent Black, New Delhi, 20<sup>th</sup> Edition, 2010.
- Guha, Sumit, *Health and Population in South Asia: From Earliest Times to the Present*, Permanent Black, New Delhi, 2001.
- Gupta, Ashin Das, *Malabar in Asian Trade 1740-1800*, Cambridge University Press, Cambridge, 1967.
- Gurukkal, Rajan, *Social Formations of Early South India*, Oxford University Press, New Delhi, 2010.
- ....., *The Kerala Temple and the Early Medieval Agrarian System*, VallatholVidyapeetham, Sukapuram, 1992.

- Haridas, V. V. & Haskarali, E.C.(Ed.), *Multi- Cultures of South India: New Perception on History and Society*, Karnataka State Open University, Mysore, 2015.
- Hay, Peter, *A Companion to Environmental Thought*, Rawat publication, Jaipur, 2002.
- Hughes, J. Donald, *An Environmental History of the World: Humankind's Changing Role in the Community of Life*, (2001) 2<sup>nd</sup> Edition, Routledge, Newyork, (London), 2010.
- ....., *What is Environmental History?*, Polity Press, Cambridge, 2<sup>nd</sup> Edition, 2016.
- Indurkar, Pushpa, *Forestry, Environment and Economic Development*, Ashish Publishing House, New Delhi, 1992.
- Jacob, T. G., *Wayanad Misery in an Emerald Bowl: Essays on the Ongoing Crisis in the Cash Crop Economy-Kerala*, Vikas Adhyayan Kendra, Mumbai, 2006.
- Johny, O. K., (Ed.), *Edakkal Caves and the History of Wayanad*, Mathrubhumi Books, Kozhikode, 2008.
- Joseph, K. V., *Migration From Kerala, 1920-1960*, CDS, Thiruvananthapuram, 2000.

Joseph, Sebastian, *Cochin Forests and the British Techno-ecological Imperialism in India*, Primus Books, Delhi, 2016.

Kanti Das, Bidhan, & Kanti Das, Rajat, (Ed.), *Rethinking Tribe in Indian Context: Realities, Issues and Challenges*, Rawat Publications, New Delhi, 2017.

Karunakaran Pillai, C. K., *Politics of Vanishing Forests in Kerala*, Kerala Sastra Sahithya Parishad, Thrissur, 2003.

Kavinde, Hemal S., et. al., *Wild Food Management in Wayanad, Kerala: An Explanatory Study*, (Unpublished), Community Agro-biodiversity Centre, Kalpetta, Wayanad and Uttara Devi Resource Centre for Gender and Development, M.S,Swaminathan Research Foundation, 2001.

KesavanVeluthat, *Brahman Settlements in Kerala*, Cosmo Books, Thrissur, 2013.

Kjosavik, Darley Jose & Shanmugaranam, Nadarajah, *Political Economy of Development in India: Indigeneity in Transition to the State of Kerala*, Routledge, Newyork, 2015.

- Kohli, G. R., *History of Science, Technology and Environmental Movements in India*, Surjeet Publications, New Delhi, 2012.
- Krishna, Sumi, (Ed.), *Agriculture and Changing Environment in North-Eastern India*, Routledge, New Delhi, 2012.
- Kumar Das, Dilip, *Introductory Soil Science*, Kalyani Publishers, New Delhi, 2<sup>nd</sup> Reprint, 2008.
- Kurien, C. T., *Dynamics of Rural Transformation: A Study of Tamilnadu 1950-1980*, Orient Longman, Madras, 2<sup>nd</sup> Edition, 1989.
- Kurup, K. K. N., *The Process of Tribal Land Alienation and Disempowerment in Wayanad, Kerala*, Indian Council of Historical Research, New Delhi, 2006.
- ....., *Agrarian Struggles in Kerala*, CBH Publications, Trivandrum, 1989.
- Lal, J. B., *India's Forest: Myth and Reality*, Natraj Publishers, Dehra Dun, 1989.
- Laxmanshastri Joshi, Tarkateerth, *Green Revolution: The Unfinished Task*, Centre for the Study of Social Change, New Delhi, 1974.

- Ludden, David (Ed.), *Agricultural Production and Indian History*, Oxford University Press, New Delhi, 1994.
- Mc Michael, A. J., *Planetary Overload: Global Environmental Change and the Health of the Human Species*, Cambridge University Press, Cambridge, 1995.
- Mcneill, J. R., & Mauldin, Erin Stewart, (Ed.), *A Companion to Global Environmental History*, Wiley-Blackwell, West Sussex, 2012.
- Mol, Arthur P. J., et. al. (Ed.), *The Ecological Modernisation Reader: Environmental Reform in Theory and Practice*, Routledge, Newyork, 2010.
- Nagendra, Harini, *Nature in the City: Bengaluru in the Past, Present and Future*, Oxford University Press, New Delhi, 2016.
- Nair, Adoor K. K. Ramachandran , *Slavery in Kerala*, Mittal Publications, New Delhi, 1986.
- Nair, C. Gopalan, *Wynad: Its People and Traditions* (1911), Asian Educational Service, New Delhi, 2000.
- Nair, K. N., et. al., *Agrarian Distress and Livelihood Strategies: A Study in Pulpally Panchayath, Wayanad*

*District, Kerala, Working Paper Series 396, CDS, Thiruvananthapuram, 2007.*

Nair, K. S. S., et. al. (Ed.), *Eco development of Western Ghats*, Proceedings of the National Seminar on Eco development of Western Ghats, Kerala Forest Research Institute, Peechi, 1984.

....., et. al. (Ed.), *Eco-Development of Western Ghats*, Kerala Forest Research Institute, Peechi, 1986.

Narayanan, M. G. S., (Ed.), *Malabar, Malabar Maholsav Souvenir*, Kozhikode, 1993.

Pai, Mohan, *The Western Ghats*, Narcinva Damodar Naik, Margoa, 2005.

Pati, Biswamoy, (Ed.), *Adivasis in Colonial India: Survival, Resistance and Negotiation*, Indian Council for Historical Research, Orient BlackSwan, New Delhi, 2011.

Peckham, Robert, *Epidemics in Modern Asia*, Cambridge University Press, Cambridge, 2016.

Poore, M. E. D., & Frier, C., *The Ecological Effects of Eucalyptus*, Natraj Publishers, Dehra Dun, 1987.

- Puri, G. S., *Indian Forest Ecology: A Comprehensive Survey of Vegetation and its Environment in the Indian Subcontinent*, Vol. II, Oxford, New Delhi, 1960.
- Rajan, S. Ravi, *Modernising Nature: Forestry and Imperial Eco- development 1800-1950*, Clarendon Press, Oxford, 2006.
- Rangarajan, Mahesh & Sivaramakrishnan, K. (Ed.), *India's Environmental History: From Ancient Times to the Colonial Period*, Vol.I, Permanent Black, NewDelhi, 2011.
- ....., (Ed.), *India's Environmental History: From Ancient Times to the Colonial Period*, Vol. II, Permanent Black, 2011, New Delhi.
- Rangarajan, Mahesh, *Nature and Nation: Essays on Environmental History*, Permanent Black, New Delhi, 2015.
- Rao, Srinivas C., & Ryan, John, (Ed.), *Challenges and Strategies for Dryland Agriculture*, Scientific Publishers, Jodhpur, 2004.



- Ray, Himanshu Prabha, *A Historical Survey of Seafaring and Maritime Networks of Peninsular India*, Indian Council of Historical Research, New Delhi, 2006.
- Rehiman, M. P. Mujeebu, *Malabar in Transition: State, Society and Economy in Malabar 1750-1810*, Kalpaz Publications, New Delhi, 2020.
- Russell, Bertrand & Russell, Dora, *The Prospects of Industrial Civilization*, George Allen & Unwin, London, 1959.
- Sajeev, T. V., et. al., *Are Alien Invasive Plants a Threat to Forests of Kerala?*, KFRI Occasional Papers 001, Forest Health Programme Division, Kerala Forest Research Institute, Peechi, 2012.
- Sareen, Shalini, *Environmental Studies*, IVY Publishing House, Delhi, 2005.
- Sarkar, Sumit, *Modern Times: India 1880s-1950s Environment, Economy, Culture*, Permanent Black, New Delhi, 2015.
- Shah, S. A., *Imperialism: Notes Towards a Contemporary Perspective*, Azad Reading Room, Hyderabad, 2006.

- Sheela, M. K., (Ed.), *Package of Practices Recommendations: Crops*, Kerala Agricultural University, Thrissur, 13<sup>th</sup> Edition, 2007.
- Shiva, Vandana, *The Violence of the Green Revolution: Agriculture, Ecology and Politics in the South*, Other India Press, New Delhi, 2001.
- Simmons, I. G., *Global Environmental History 10000 B.C. to 2000*, Edinburg University Press, Edinburg, 2008.
- Singh, K. S., *People of India: National Series Vol. III, The Scheduled Tribes*, Anthropological Survey of India, Oxford University Press, New Delhi, 1994.
- Singh, Rana P. B., (Ed.), *Sacred Geography of Goddesses in South Asia : Essays in Memory of David Kinsely*, Cambridge Scholars Publishing, U.K., 2010.
- Sinha, V. N. P. & Atallah, M. D., *Migration: An Interdisciplinary Approach*, Seema Publications, Delhi, 1987.
- Slyaymaker, Olav, & Spencer, Tom, *Physical Geography and Global Environmental Change*, Longman, Essex, U.K., 1998, British Library Cataloguing in Publication data, State Central Library, Thiruvananthapuram.

Sridhar R., *Grasim Since 1963: The Burden on Our Heads: An Enquiry into What This Industry did to Our Forests*, Centre for Nature Studies, Thiruvananthapuram, 2000.

Stears, Peter N., (Ed.), *Themes in World History Series*, Routledge, Newyork, 2010.

Subramanyam, Sanjay, *The Political Economy of Commerce Southern India 1500-1650*, Cambridge University Press, Foundation Books, New Delhi, 2004.

Sundar, Nandini, (Ed.), *The Scheduled Tribes and Their India: Politics, Identities, Policies And Work*, Oxford University Press, New Delhi, 2016.

Surendran, T., & Seethalakshmi, K. K., *Investigations on the Possibility of Vegetative Propagation of Bamboos and Reeds by Rooting Stem Cuttings*, KFRI Research Report 31, Kerala Forest Research Institute Peechi, Thrissur, 1985.

Sutton, Mark Q., & Anderson, E.N., *Introduction to Cultural Ecology*, Berg, Oxford, 2004.

Swami, Vandana, *Environmental History and British Colonialism in India: A Prime Political Agenda*, The

New Centennial Review, Vol.3, No.3, Michigan State University Press, 2003.

Tewari, D. N., *A Monograph on Teak (TectonagrandisLinnif)*, International Book Distributors, Dehra Dun, 1992.

Tharakan, P. K. Michael, *Coffee, Tea or Pepper? Factors Affecting Choice of Crops by Agro- Entrepreneurs in the 19<sup>th</sup> Century South West India, Working Paper No.291*, CDS, Thiruvananthapuram, 1998.

*The Encyclopedia of Dravidian Tribes*, Vol.I, St.Xavier's College, Thiruvananthapuram, First Edition, 1996.

Theodorson, George A., (Ed.), *Studies in Human Ecology*, Harper and Row Publishers, New York, 1961.

Thurston, Edgar and Rangachari, K., *Castes and Tribes of Southern India*, (7 Vols.), Vol. VI, Low Price Publications, New Delhi, 2010.

Trivedi, P. R., & Singh, U. K., *Forest and Wildlife Protection*, JanadaPrakashan, Global Open University, Nagaland, New Delhi, 2017.

Varghese, T. C., *Agrarian Change and Economic Consequences : Land Tenures in Kerala 1850-1960*, Allied Publishers, New Delhi, 1970.

- Vijayan, Abraham, *Caste, Class and Agrarian Relations in Kerala*, Reliance Publishing House, New Delhi, 1998.
- Vinod, T. R., et. al., (Ed.), *Proceedings of Kerala Environment Congress 2013*, Focal Theme Culture and Heritage for Environment Management, 2013.
- Walliman, Nicholas, *Your Research Project*, Vistaar Publications, New Delhi, 2<sup>nd</sup> Edition, 2006.
- Whyte, Ian, *World Without End?: Environmental Disaster and the Collapse of Empires*, I. B. Tauris, New York, 2008.
- Wishwakarma, R. K., *Land and Property Values: An Analysis of Environmental Impact*, Centre for Urban Studies, The Indian Institute of Public Administration, New Delhi, 1980.
- Worster, Donald, *Nature's Economy: A History of Ecological Ideas*, Preface, Second Edition, Cambridge University Press, New York, 1994.
- Zachariah, K.C., et. al., *Migration in Kerala State, India: Dimensions, Determinants and Consequences*, Working Paper II, Centre for Development Studies, Thiruvananthapuram, 2000.

## **B. Books (Malayalam)**

Achyuthan, A., *Paristhithipadanathinu Oru Aamukham*, Kerala Sastra Sahithya Parishath, 1<sup>st</sup> Edition, Thrissur, April 2013.

Anand, *Sthanam Thettiya Vasthu*, Mathrubhumi Books, Kozhikode, 2014.

Baby, K. J., *Mavelimanram*, Current Books, Thrissur, 2000.

....., *Nadugadhika*, Gadhika Publications, Nadavayal, Wayanad, 1993.

Damodharan, Nettur P., *Adhivasikalude Keralam*, National Book Stall, Kottayam, 1974.

Divakaran, M., *GandhijiyumKeralavum*, D.C. Books, Kottayam, 1978.

Fukuoka, Masanobu, *Prakrthiyilekku Madangan*, (Tr. Mohan, K. M. R., *The Road Back to Nature: Regaining the Paradise Lost*), D. C. Books, Kottayam, 2004.

Fukuoka, Masanobu, *Ottavaikol Viplavam*, (Tr. Ganagadharan, C.P., *The One Straw Revolution*), Alter Media, Thrissur, 5<sup>th</sup> Edition, 2004.

Gopi, Mundakayam, *Ariyappedatha Wayaand*, Sahya Publications, Kalpetta, 2002.

Johny, O. K., *Wayanad Rekhakal*, Mathrubhumi Books, Kozhikode, 2016.

Logan, William, *Malabar Manual*, (Tr. Krishnan, T. V., *Malabar*), Mathrubhumi Books, Kozhikode, 2014.

Madhusoodanan, G., *Nashtamakunna Nammude Swapnabhoomi: Keralathinte Paristhithika Charithram*, Kerala Sahithya Academy, Thrissur, 2017.

- ....., *Kathayum Paristhithiyum*, (Literary Criticism), Current Books, Thrissur, 2000.
- Menon, P. A. & Rajan, C. K. , *Keralathinte Kalavastha*, (Tr. Sasi, M. N., *Climate of Kerala*), Kerala Sasthra Sahithya Parishath, Thrissur, 1985.
- Mohan, Manila C., (Ed.), *Madhav Gadgilum Pachimaghatta Samrakshnavum*, Mathrubhumi Books, Kozhikode, 2014.
- Nair, C. Gopalan, *Wayanad: Janangalum Parampariyavum*, (Tr. Kurup, K. K. N., *Wynad: Its People and Traditions*), Modern Books, Sulthan Bathery, 2006.
- Nair, K. T. Narayanan, *Wayanadum Nair Kudumbangalum*, Modern Offset Printers, Sulthan Bathery, 2010.
- Nair, P. Somashekharan, *Paniya Bhasha*, National Book Stall, Kottayam, 1977.
- Oommen, M. A., (Ed.), *Agolavalkaranam: Artham Vyapthi Sidhandham* Kerala Bhasha Institute, Thiruvananthapuram, 2000.
- Pankajakshan, M. R., (Compiled), *Vayanattile Adivasikalude Pattukal*, Kerala Bhasha Ganangal, Vol.3, Kerala Sahithya Academy, Thrissur, 1989.
- Prakash, P. K., *Anyadheenappedunna Bhoomi: Adivasi Bhoomi Prasnattinte Charithravum Rashtreeyavum*, Jayachandran Suhrudsangham, Kozhikode, 2002.
- Sastri, K.A. Nilakanta, *Dakshina Bharata Charithram*, (Tr. Divakaran, M., *A History of South India*), Kerala Bhasha Institute, Thiruvananthapuram, 2000.

Warrier, S. Achutha, *Kerala Samskaram*, Kerala Bhasha Institute,  
Thiruvananthapuram, 2010.

Warrier, Madasseri Madhava, *Keralathile Adhima Nivasikal*, Manorama  
Publishing House, Kottayam, 1961.



### **C. ARTICLES**

Bhargava, Meena, “India’s Ecological Past”, in *Economic and Political Weekly*, Vol. XLVI, No 53, 31 December 2011,.

Joseph, Sebastian, “From the Timber to the Smoke: Situating Indian Environmental History”, *Unpublished Article*.

Kumar, Vikas, “A Historical Study of Environment: Colonial and Post-Colonial Situation in India (Chotanagpur)”, in *Journal of Advanced Research in Humanities and Social Science*, Vol. I, Issue 1, 2014.

More, S. D. , “Soil Quality Indicators for Sustainable Crop Productivity”, *JISSS, Journal of Indian Society of Soil Science*, Vol. 58, No. 1, March 2010, Indian Society of Soil Science, New Delhi.

Nagarajan, Aravindhan, et. al., “Appraising the Debate on Biodiversity Conservation in the Western Ghats”, in *Economic and Political Weekly*, Vol. L No.30, 25 July 2015.

Sivaramakrishnan, K., “Forests and the Environmental History of Modern India”, in *The Journal of Peasant Studies* , Volume 36, 2009.

Swami, Vandana, “Environmental History and British Colonialism in India: A Prime Political Agenda”, *The New Centennial Review*, Vol.3, No.3, Michigan State University Press, 2003.

### **D. WEBLIOGRAPHY**

*Agricultural Statistics of Kerala*, from 2005-2006 to 2012-2013,  
[www.ecostat.kerala.gov.in](http://www.ecostat.kerala.gov.in)

Bhattacharya, Neeladri, *The Great Agrarian Conquest: The Colonial Reshaping of Rural World*, SUNI Press, New York, 2019, Google Books.

Bookchin, Murray *What is Social Ecology?*, [www.psiichenatura.it>fileadmin>img](http://www.psiichenatura.it/fileadmin/img).

*Centuries Old Rosewood Trees in Wayanad Face the Axe*, April 17, 2018, [timesofindia.indiatimes.com](http://timesofindia.indiatimes.com)>

*Clean Destination Programme of Wayanad District Mission*, [www.kudumbashreeorg.org](http://www.kudumbashreeorg.org)>

*Forest and Climate Change, New Initiatives and Efforts*, Ministry of Environment, 2014-17, googlebooks.

Guha, Ramachandra, *Writing Environmental History in India*, *Studies in History*, 9, 1, n.s., Sage Publications, New Delhi, 1993, [journals.sagepub.com>dol>pdf](http://journals.sagepub.com/dol/pdf)

*History of Ecology and Environment in India*, Rai Technology University, Bangalore, 164.100.133.129>.

[http://www.dictionary.com>browse](http://www.dictionary.com/browse)>

<http://www.sreenidhi.net>>2016/10/24

[https://en.m.wikipedia.org>wiki>Ficus](https://en.m.wikipedia.org/wiki/Ficus).

*Kerala State Disaster Management Policy 2010*, Department of Revenue & Disaster Management, Kerala State Disaster Management Authority, Government of Kerala, Thiruvananthapuram, 16-06-2010, <http://sdma.kerala.gov.in>.

Kumar, Deepak, et. al. (Ed.), *The British Empire and the Natural World: Ecological Encounters in South Asia*, Oxford University Press, 2011, Google Books.

Mann, Michael, *Environmental History and Historiography of South Asia: Context and Some Recent Publications*, in <https://edoc.hu-berlin.de/handle>.

Miles, Kathryn *Eco-Feminism: Sociology and Environmentalism*, <https://www.britannica.com/topic/eco...>

Parmar, B. S., et.al., *Pongamiaglabra: Constituents & Uses*, Division of Agricultural Chemicals, Indian Agricultural Research Institute, New Delhi, <https://www.researchgate.net/publication>.

Ramadas, Vijaya, *The Raj and the Paradoxes of Wildlife Conservation: British Attitude and Expediencies*, <https://doi.org/10.1017/S0018246X14000259>, Published online: 09 February 2015.

*The Growing Importance of Eco-Feminism, Voices for Biodiversity*, [voicesforbiodiversity.org/articles](http://voicesforbiodiversity.org/articles).

#### **UNPUBLISHED M. Phil/ Ph.D. THESES**

Kunhi Krishnan, K.V. '*Forest Policy and Administration in British Malabar: 1800-1947*', Unpublished Ph.D. Thesis, Department of History, University of Calicut, 1995.

Nag, Madhusadan, '*Short Term Family Migration in India: An Analysis of Magnitude and Characteristics*', Unpublished M.Phil. Dissertation,

CDS, Thiruvananthapuram, Jawaharlal Nehru University, New Delhi, 2016.

Narayanan, Ratheesh '*Floristic Study of Wayanad District giving Special Emphasize to Rare and Threatened Plants*', Unpublished Ph.D. Thesis, Department of Botany, University of Calicut, 2009.

Prasad, Mythri, '*Migration and Production of Space: Labour, Capital and the State in Kerala, India*', Unpublished Ph.D. Thesis, CDS, Thiruvananthapuram, Jawaharlal Nehru University, New Delhi, 2016.

Rehiman, M. P. Mujeebu, '*Formation of Society and Economy in Malabar 1750-1810*', Unpublished Ph.D. Thesis, Department of History, University of Calicut, 2009.

Tharakan, P. K. Michael, '*Migration Farmers from Travancore to Malabar from 1930 to 1960: An Analysis of the Economic Causes*', Unpublished M.Phil. Dissertation, CDS, Thiruvananthapuram, Jawaharlal Nehru University, New Delhi, 1976.

