CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research methodology is the indispensable part of any research work. This is recognized to be the most vital part of the research that allows the researcher to carry out the research in a proper design to follow the objectives of the research by means of organized data collection which are important for the conduct of any research and evaluating them by using the suitable analysis tools and techniques and also interpreting them in order to obtain the answers for the research questions formulated by the researcher based on aim of the research. Through this an investigator gains an insight for utilizing various elements of research that are relevant to the proposed topic and also to the geographical location in which the study is carried out.

This chapter provides the research paradigm, research approach, research design, sampling design, data collection techniques, analysis and interpretation of the collected data, statistical tools employed for analysis of data, ethical considerations amended by the researcher in carrying out this research from choosing the respondents, as first step, and finally to synopsis of obtained findings. This section also comprises of the strategies adapted by the researcher in assessing the validity of the verdicts.

3.2 EXPLORATORY FLOW DIAGRAM OF METHODOLOGY REVISED IN THIS STUDY

The whole sequence of different elements of research methodology reviewed by the researcher in this investigation is explicitly symbolized below in the following Figure 3.1.
3.3 RESEARCH PARADIGM

A research paradigm is defined as a stable set of assumptions or beliefs that enable an analyst to understand the research pathway and provides a definite set of instructions through which the research can be carried without any deviation from the research objectives. Research rationale is a procedure, which is used by the examiner as a piece of demand to finish the research or examination work. The framework formulated through the research paradigm basically involves three fundamental hypothesis namely ontological, epistemological and methodological conjectures. In general, there are two different paradigm namely positivistic and interpretivistic paradigm that are employed by the researchers based on the type of research (Hughes and Sharrock, 1997).
Interpretivism:

The progression of qualitative research is conducted through beliefs and assumptions, and so interpretative theory ensembles to be best for subjective researches. The methodologies inducted for undertaking usual science researches will not be appropriate for the conduct of social science researches, as the social science is neither governed by rules nor by laws as in natural sciences. Rather the social world is mediated through perspicacity and opinions of the humanoid interventions (Lester 1999). This also aids the researchers in formulating modules based on the interpretation of the received data and not just involved in passive adoption of obtained information. The empathy of varied features is an important aspect of qualitative research (Larkin and Thompson, 2012).

According to Punch, (2009) interpretivism aims at delivering enhanced understanding of subjects by multiple perspective analyses of the respondents’ opinion. The expression "interpretivism" is the specific case that shows the investigation of clarification. At the point when all is said and done, the expression interpretivism, i.e. Interpretivism is associated with the subsequent presentation of data obtained in the course of study; it is particularly known as the investigation of investigator's choice. The term Interpretivism is generally called as the subjective examination. Interpretivism is the specific case that frequently impacts the choice of subjective methods. This category of methodology permits a researcher to obtain knowledge about the world events through the experiences and perceptions of the participants.

In addition, this technique also allows the analysts to verbalize theories based on the understanding acquired by the opinions of the respondents. The exploration of social, cultural, psychological and historical characteristics of human biosphere is much needed in case of accepting and formulating theories. In order to obtain holistic knowledge of the respondents, the interpretative phenomenological approach helps a lot (Glesne and peshkin, 1992). Even though the social authenticity cannot be represented as impeccably as obtained through participants, due to compound interventions and discernments, the interpretivism supports the researchers in portraying the participants’ opinions as convincingly as possible. The predominant intention of a researcher is to acquaint with in-depth information and insights of the respondents, to exemplify the reality, hence interpretative approach of research allows the scientists to incarcerate the information by vicarious understanding and deep connotations (Mc Queen, 2002).
As per the view of Blaikie (2007) the ontological assumption means the nature of the environment in which the research is about to be carried out. It is known to be the prophetic nature of a researcher in assessing the prevalence of social reality, the pre-defined theories and conceptions notwithstanding. Subsequently the epistemological assumption exemplifies the realistic liaison prevailing amid the subject and object.

**Positivism:**

Scotland (2012) terms positivism as the numerical examination which acclimatizes the reality and spots it into estimations with a particular ultimate objective to discover the results. Positivism is an approach that is used to exhibit that all actuality and the reality of the situation is unmistakable and depicted from the objective point of view and perspective, without meddling with real situations that are being inspected. Generally speaking, positivism is in the perspective of some sensible qualities, truth, convictions and authenticity; besides it notes down the primary substances. Here, the data are gathered through understanding and observation and it is totally measured by using the systems for quantitative techniques like the quantifiable examination, tests, and reviews and so on. The term positivism is generally called quantitative investigation (Gadmer 2006).

The ontology of the positivistic paradigm demonstrates the existence of singular truth or reality. In addition, this ontological assumptions can be classified into two major divisions namely realism and idealism (Gliner and Morgan 2000). Realism means the manifestation of external reality, independent of human interpolations on its concepts and viewpoints. It can be also defined as the discrepancy between the ways of the actual purview and the meaning and interpretation of that specific ecosphere held by the entities (Robson and Foster 1989). In a peculiar perspective, the idealism is acknowledged to be a concept that asserts reality, as basically a mind reliant portent. In this concept the world happenings are supposed to be known only through the scrutiny of anthropological observations and through examining the socially constructed meanings. This module adheres to the notion that no manifestation in this real world exists devoid of human interventions and socially constructed denotations. This idealism can be classified into two major types namely: Subtle/ Collective/ Contextual idealism and Radical/ Relative idealism (Soini, Kronqvist and Huber 2011).
In the same vein, the epistemological assumption of positivistic theory is dependent on postulate that the current truth cannot be rehabilitated by an analyst as it exists at present, hitherto it can be assessed with appropriate statistical tools (Ritchi et al., n.d.). The epistemology is predominantly classified into four entities consisting of: Causality is defined as the adequacy of the proposed concept under the nature of the study; Meaning elucidates the level of realistic consideration of the theoretical acquaintance; Diversity, is known as the effect of visualizing multiplicity as a real phenomenon, as an alternative of error or noise that masquerades the indispensable commonalities and finally is validity that involves in the assessment of value and quality of research. The methodological assumption typifies the *modus operandi* of the research, by means of which an analyst anticipates to procure the data essential for the conduction of the research (Pannerselvam, 2004).

### 3.3.1 Research Paradigm Adapted

The present study makes utilization of the blended technique for the gathering of data. Blended strategy implies the utilization of both positivism and interpretivism strategies for the gathering of data. A blended techniques situation uses a few systems for gathering data, however regularly it depends on meetings, perception and study surveys (Creswell, 2007). This study mainly focuses on the analysis the existing laws, policies and how far women could utilize the same for their empowerment and to assert their rights. This study also aims to consolidate the various dimensions related to women’s land rights. This will be analyzed using existing socio-political and economic discourses on social policy and public policy making process. Using blended techniques will reinforce the unwavering quality of data, and the legitimacy of the discoveries and suggestions.
3.4 RESEARCH APPROACH

The research approach illustrates the style by means of which a researcher can very well carry out the research in promoting proper justification to the research questions generated. The inductive approach is defined to be as bottom up approach since it is intended for acquiring evidences basically from the human interventions for the formulation of a concept or a theory, whereas the deductive approach is known to be as top down approach that employs pre-defined theories for the formulation of hypothesis and gathering evidences in accordance to the generated hypothesis and analyzing them in order to conform whether the proposed hypothesis is accepted or rejected and to conclude the study accordingly according to Baskerville and Harper (1996).

Quantitative research:

According to Bryman, (1984) the quantitative research provides single reality and it can be measured by using an instruments. Quantitative research has ability to establish relationships between the measured items (variables). In general, quantitative research is deductive in nature. The hypothesis is formulated by researcher before the study is conducted and also all the procedures and practices are established before the
research begins. In quantitative type research, the researcher acts ideally as an objective observer and also the researcher neither participates in the research nor influences what is being studied in the research (Wholey, Hatry, and Newcomer (2004).

Quantitative examination utilizes scientific investigation and numerical information frequently from huge investigator tests. Quantitative research is an approach which has ability to provide clear graph, chart and picture about proposed topics. Basically, quantitative research may use several tools such as surveys (mail surveys, online surveys and telephone surveys), questionnaires (open-end questionnaires or closed-end questionnaires) and also other tools in order to collect the data. Most importantly, quantitative research always produces numerical data as result. Quantitative research is much quicker when compared to the qualitative research in terms of data collection and also it has the ability to reach a large number of people (Maykut and Morehouse, 2002).

Studies mainly use mathematical analysis which has ability to expose statistically important differences. The quantitative research is an objective, systematic and formal process to explain, evaluate and test the relationships and also to examine the effect and cause of the interactions among the defined variables. Quantitative research mainly focuses on measuring the social reality. In general, quantitative type research and / or questions are mainly used for searching the quantities in something which establishes the research numerically (Thomas 2003). In general, there are many types of quantitative research and it can be classified into four types such as survey research, experimental research, correlational research and causal-comparative research. Here, this study attempted to use experimental research.

**Qualitative research**

The qualitative research provides multiple realities to the hypotheses made in research. In general qualitative research helps to understand the social situation based on the participants’ (respondents’) perspectives. Qualitative research is generally conducted in the type of an interpretative paradigm. Turner (2010) stated that, qualitative research is a research that focuses mainly on the meaning and understanding and also it has ability to offer rich description about the research phenomenon based on the investigation. It is essential to maintain the integrity of the data when collecting the data or information using the qualitative approach.
The qualitative research is inductive in nature and also it is more flexible and allows changing strategies. The design of qualitative data emerges based on the data or information that is collected. Here, there is no need for hypothesis to begin the proposed research. In qualitative type research, the researcher participates in the research and also becomes immersed in the social/research setting. In qualitative type research, the researcher acts as the primary instrument or tool for the collection of information or data and analysis. Interview is the most common and suitable techniques to obtain data in the qualitative research. In qualitative studies, the researcher gathers the information in non-interfering manner in order to study real world situations (problems) (Merriam 2009; Collis and Hussey 2009).

Quantitative examination utilizes numbers to test theories and make conjectures by using estimated wholes, and finally delineate an event by using figures. By using numbers the examiner has the opportunity to use advanced and powerful truthful tests to ensure that the results have a quantifiable relationship, and are not just an oddity observation. The inductive approach basically implicates the data collection in the form of texts, reports and documents. This approach helps the researcher in understanding the obtained composite data through formulating themes and summarizing the unprocessed data to the point as per the research objective (Johnson and Onwuegbuzie 2004).

The quantitative study follows deductive and qualitative study follows inductive approach. The inductive approach is defined to be as bottom up approach since it is intended in acquiring evidences basically from the human interventions for the formulation of a concept or a theory, whereas the deductive approach is known to be as top down approach that employs pre-defined theories for the formulation of hypothesis and gathering evidences in accordance with the generated hypothesis and analyzing them in order to conform whether the proposed hypothesis is accepted or rejected and to conclude the study accordingly. The inductive approach basically involves the data collection in the form of texts, reports and documents. This approach helps the researcher in understanding the obtained composite data through formulating themes and summarizing the unprocessed data to the point as per the research objective (Bryman, 1984).
3.4.1 **Research Approach Used**

This study makes use of both quantitative and qualitative approach. The research is best suited with both the theories (Inductive and Deductive). There are many factors determining the women welfare and rights, which cannot be explored only by incorporating numerical exploration. Thus, the researcher carries the research by using both inductive and deductive approach.

3.5 **RESEARCH DESIGN**

A clear research outline needs a well-directed effort to tide over the inconvenience during the research process. Its configuration offers connection to the exertion to sensibly shape an approach to assess the people’s judgments and responses to provide for the basis of results and interpretations that are concluded through the measurements. Research design explains how, when and from where the data will be collected and analyzed. Research design facilitates the process of testing the hypotheses and answering the research questions specific to the study being conducted. Research design is process of designing a blueprint for the research in such a way that the factors affecting the validity of the research findings may be controlled effectively (Creswell 2014).

According to Zikmund (2010), research configuration is the approach, guide and game plan of examination obtained to expand reactions to study addresses and oversee disparity. Research design is categorized as descriptive research, exploratory research and casual research design.

The explanatory design is basically used to elucidate the assumed casual links of real life interventions that are very challenging to be explained through experimental designs and strategies. Secondly, the exploratory design is predominantly employed for exploring the situations that cannot be interposed as clearly, since it may possess complex set of outcomes. Exploratory research design is conducted when the main purpose of the research is to formulate a problem more precisely so that it may be used as a starting point of the research. It is used when the researcher is obligated by an intent to conduct an advertising research but is not convinced of the meticulous bearing the research must take (Festinger 2010).
According to Neelankavil, (2007) exploratory research comprises of testing the objectives through recognizing the resultant issues in the chosen event. Exploratory survey plan assists in characterizing the specific difficulties with the help of interview data or information collected through the appropriation of the research problem. Further, it leads to distinguishing alternate measures that correspond with the research issue. The other type is the Causal research design, which is specified in cause and effect manner. Causal research is a highly structured research design which is often characterized by the use of control procedures. Therefore, casual research design is used to investigate the cause and effect relationship between variables.

Causal research identifies the extent to which variables are interrelated with each other. Causal research configuration is utilized to consider the reason and result affiliation interspersed between factors. Causal research finds the level in which the factors are reliable with all other. Finally, is the descriptive type of research design, which is mainly utilized in describing the detailed occurrence or arbitration in accordance to the real-life interventions in which the event becomes visible. Inappropriate to descriptive designs, the case study design also represents the same strategy in case of compound case studies that are being focused(Stake 1995). Descriptive research design is used to describe the relevant characteristics of the specific groups under study for example in case of a research based on marketing field where the relevant groups include consumers, salespeople, organizations or market areas (Yin 2003).

3.5.1 Research Design Adapted

This study employs descriptive research design. Descriptive research also facilitates the determination of the issue characteristics and people’s perceptions. Descriptive research helps in furnishing a detailed data collection procedure and plan. The distinct characters and practices that are revealed through research examinations are portrayed effectively through the descriptive research. A significant consideration is the recognitions of the unique procedures, people, activities and environment that truthfully depict the existence of the characteristics and phenomenon. Descriptive research primarily helps in the development of the data fundamentals on clearly evident planned and pre-arranged grounds (Srinagesh, 2006).
3.6 SAMPLING DESIGN

Sampling framework or sampling arrangement is the choice of the researcher while deciding the respondents for the fundamental data gathering (Guthrie, 2010). Examining design is a strategy by which the data or data is gathered from an immense (aggregate) populace. There are two noteworthy systems of the examining design and they are non-probability testing procedure and probability inspecting method. The probability examining procedure can be ordered into five sorts, for example, a) Simple random sampling; b) Cluster testing; c) Systematic inspecting; d) Multi organize sampling; and e) Stratified sampling. As indicated by Babbie (2008), the non-probability examining method can be arranged into four noteworthy sorts, for example, a) Convenience sampling; b) Snowball sampling; c) Quota sampling; and d) Judgment sampling. Non-probability sampling or non-random testing is a system, which does not include the arbitrary determination of samples. In the meantime, probability examining is a procedure, which enables researcher to arbitrarily choose the people (Egan, 2014).

The sampling technique utilized in this study is **purposive sampling** in terms of quantitative study. This technique is also called as judgmental sampling. This technique is mainly chosen by the researcher for being really cost effective and time saving. This type of sampling enables a research to finalize the sample population based on his/her judgment. This type of sampling is mainly considered when only a limited source of population relevant to the proposed study is available (Thomas 2010).

### 3.6.1 Sampling Unit

The sampling unit comprises of rural women involved in agriculture from the two districts, Thiruvannamalai and Salem of Tamil Nadu.

### 3.6.2 Study Population

Target population is nothing but the collection of objects that would contain the information required by a researcher in finding the answers to his/her proposed research questions (Shi, 2014). The study population is chosen from 8 villages belonging to Pudupalayam Block in Thiruvannamalai District and Ayothiapattinam Block in Salem District. Each block has a cluster of 4 villages. The sample population for quantitative study was 415 women, chosen by cluster sampling from Oravandavadi, Nammiyandal,
Allianthal and C.Gangampattu located in Thiruvannamalai; AN Mangalam, Yeripudhur, Kuppanur and Kullampatty located in Salem district. The sample size for qualitative study comprised of 12 respondents from the same regions through convenience sampling. The identification of the communication to which the sample population belongs was done through discussions (Interviews) with VAOs. In all the eight villages it was observed that the laborers and cultivators belonged to SC/ST population, most backward (MBC) and backward class (BC). The scheduled tribe population in Thiruvannamalai is almost nil and Salem has nearly 1% ST of its total population. Hence ostensibly the ratio of SC/ST and other population involving in agricultural works is arrived as 30:20.

Based on the discussions with the Village Administrative Officers, the primary data was collected during the period on Oct-November 2017 in all the eight villages. On an average 50 women respondents were identified based on workforce participation in farming from different social groups identified for the survey.

3.7 DATA COLLECTION METHODS

Data collection is considered to be the dynamic step of any research, since it makes available evidence for the results to be produced relevant to the research topic. Information is most important in completing any examination. Data collection is the genuine part of any research and also it is most essential for any research. In general, any data that is collected for research may be in two forms, viz. primary data and secondary data. Primary data are the one which are directly collected from the respondents. Primary data are collected to know about the opinion of various people and also from various locations and situations and their views about particular topic (Sekaran 2006).

3.7.1 Primary Data

As per the words of Teddlie and Tashakkori (1998) the primary data of quantitative approach is collected through the involvement of survey approach and is best executed with questionnaires. The survey technique is the fundamental structure for the collection of primary data from the respondents in the case of quantitative research. Henceforward in this study, the researcher intends to utilize questionnaires in gathering data from the respondents. The primary data of this study is framed with close-ended questionnaires formed in supporting research aim. The questionnaires are given to the respondents at their convenient place for obtaining required data (Greenhalgh and
Peacock 2005). The main advantage of using close-ended questionnaires is that, it enables the participants to express their views precisely and that too within a single shot. The close-ended surveys basically contain the kind of request that is primarily used to form the experience of quantitative examination. Despite the above significance the demand of close-ended survey questionnaires may induce every possible reaction verbalized in the form of options which enables the respondents to choose the suitable response according to their view. Designing of close-ended questionnaires can be done by referring other previously published research works of that particular field, rather than involving a newer approach that is being devised by the author himself. This may enable the researcher in obtaining a highly reliable data from the respondents which is narrows down to zero error. The close-ended surveys are the ones that have their individual predestined answer set. The central purpose of adopting these kind of close-ended surveys is that a massive game plan of occasion is secured in the data order and organizing it for processor examination. The accompanying genuine aspect is that close-ended surveys with their bounce back choices talk similar zone packaging to all individuals. These sorts of close-ended surveys are utilized to finish numerical examination (Kolb 2008).

Surveys are the clearest structure strategy and one of the successful hotspots for gathering the primary data in particular to quantitative research. The survey is being conducted through questionnaires and the responses were measured using Likert’s scale. A Likert’s scale is commonly used in the evaluation of responses of the participants on a level ranging from 1 to 5, in which 1 depicts the opinion of the respondents as strongly disagree and 5 depicts the participant’s opinion as strongly agree. The available multiple choices are numbered from 1 to 5 or portrayed on a scale ranging from negative through neutral and finally positive. The main challenge of a survey taker is that, the respondent may provide a negative opinion for the question but not literally wanted to, as it cannot hold positive answer as well and there is no option of neutral opinions. This condition can be overcome with the implementation of 5-point Likert’s scale, which enables the easy assessment of collected data with the aid of pragmatic tools. The questions for the quantitative surveys will be verbalized with reference to aim and objectives of the research. The factors corresponding to sub-sections of the questions will be selected through the repercussions from the literature reviews (Tracy 2012).

The researcher has prepared detailed questionnaire to collect data from women in the identified villages. Apart from women in the chosen villages, the researcher had
interview with village administrative officer using semi-structured interview schedule. Researcher obtained land records from the register of the districts to verify the authenticity of the collected data. There are number of civil society organizations working in two districts some of whom were interviewed using semi-structured interview schedule to understand the struggle of the women over land rights and the protection of common property rights. The alternative models practiced by civil society interventions and enabling role they play in training the women to represent the issues through protests, participation in elections of local governance and gram sabha where the deliberative democracy in practice are also explored. Individual survey is conducted with 18 questions of independent variables on the status, 11 questions related to social empowerment indicators, 21 questions related to economic empowerment, 18 questions related to political empowerment and in total 68 questions were covered in the questionnaire. During this questionnaire survey, the individual women were identified to get further details and interviews conducted and case studies documented.

This study aims in obtaining in-depth data from the participants, for this reason the researcher utilizes the interview technique in exploring the data needed for subjective analysis. The in-depth interviews are much more like discussions rather than a formal meeting proposed with certain response elements. This type of data collection is mostly preferred for the research involving social science and applied science research. As this type involves in socially oriented style of data collection and primarily aims at procuring data from the participants belonging to a more relevant atmosphere than obtaining information from respondents in an artificially created environment of investigation (Seymour, 2001). Apart from the surveys, focus group were discussions conducted with landless women and women’s movement groups who are engaged in land rights struggle. Interviews with the Village Administrative Officer were also conducted to understand the land use and land holding pattern and trends.

3.7.2 Secondary Data

This investigation makes use of secondary research to depict about the structure of the examination and existing investigates. Secondary data is the data or data, which starting at now exists in some form yet that, was not fundamentally collected for some specific purposes (Kumar, 2002). The secondary data can also be assembled from existing books, accounts, magazines, articles, reference books and online sources. Not all
the data in the secondary data was extraordinary. The secondary data may involve both dispersed things and crude layouts. A couple of affiliations collect data and store it in unmistakable structures with a particular true objective to support their operations. As usual, the secondary data may save time and resources.

Beside these, secondary data also require attentive portrayal to ensure that the data or information, which the investigator perceives, is useful and truly relevant to the objective and topic of study. Secondary data is gathered in view of the finer points of subject for the research. The secondary information required for this study is collected extensively by reviewing published and unpublished reports, articles, internet search from professional websites and grey sites (VanderStoep and Johnston 2009).

The research on secondary analysis is focused upon the available government data sources for studying the larger context of women’s land rights from the state and country perspective. The secondary analysis and arguments are based on the prevailing discourse in the development sector, Planning Commission and some academic studies, which are specifically apposite to the research topic. As the study is to outline the governance and policy gaps, it doesn’t go into the details of the legislations and programme of the state and central governments.

The data collected from the Village Administrative Officer records on the land use and categories are given below;
Table 3.1 Agricultural Status of Survey Villages- Thiruvannamalai and Salem Districts (ha- hectares)

<table>
<thead>
<tr>
<th>Villages</th>
<th>Thiruvannamalai</th>
<th>Salem</th>
<th>Salem</th>
<th>Salem</th>
<th>Salem</th>
<th>Kuppanur</th>
<th>Kullampathy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oravandavadi</td>
<td>Nammiyandal</td>
<td>Allianthal</td>
<td>C.Gangampattu</td>
<td>AN Mangalam</td>
<td>Yeripudhur</td>
<td>Kuppanur</td>
</tr>
<tr>
<td>Total geo area</td>
<td>706.68.0 ha</td>
<td>146.03.0 ha</td>
<td>234.01.0 ha</td>
<td>518.05.00 ha</td>
<td>272.53.05 ha</td>
<td>435.18.05 ha</td>
<td>390.95.05 ha</td>
</tr>
<tr>
<td>Dryland</td>
<td>483.53.5 ha</td>
<td>53.14.50 ha</td>
<td>165.33.0 ha</td>
<td>352.16.50 ha</td>
<td>157.05.00 ha</td>
<td>319.95.05 ha</td>
<td>334.66.00 ha</td>
</tr>
<tr>
<td>Wetland</td>
<td>97.23.9 ha</td>
<td>42.84.50 ha</td>
<td>20.36.50 ha</td>
<td>60.18.0 ha</td>
<td>47.38.05 ha</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>DC Land</td>
<td>141.64.00 ha</td>
<td>0</td>
<td>76.07.00 ha</td>
<td>45.79.00 ha</td>
<td>30.43</td>
<td>12.46.00 ha</td>
<td>2.93.00 ha</td>
</tr>
<tr>
<td>wet waste land</td>
<td>1.42.0 hectares</td>
<td>0.06.5</td>
<td>NA</td>
<td>0</td>
<td>0.35.00</td>
<td>2.10.05</td>
<td>2.10.00</td>
</tr>
<tr>
<td>dry waste land</td>
<td>6.35.5 hectares</td>
<td>0.97.0</td>
<td>NA</td>
<td>1.80.0</td>
<td>0</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Unassessed waste</td>
<td>0.04.5 hectares</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>10.40.05</td>
<td>86.80.05</td>
<td>20.05.00</td>
</tr>
<tr>
<td>Porambokes (canal, stream, pond, pathway and natham) including river poramboke</td>
<td>120.00.5</td>
<td>49.00.5</td>
<td>48.23.5</td>
<td>103.90.5</td>
<td>56.98.00 ha</td>
<td>26.32.00</td>
<td>22.30.00</td>
</tr>
<tr>
<td>Patta Holders (No of persons)</td>
<td>1100</td>
<td>290</td>
<td>383</td>
<td>680</td>
<td>595</td>
<td>506</td>
<td>132</td>
</tr>
<tr>
<td>Cultivated Area*</td>
<td>548.17.0 hectares</td>
<td>95.99.00 ha</td>
<td>185.69</td>
<td>412.34.50</td>
<td>204.43</td>
<td>235.04.05 ha</td>
<td>334.66.00</td>
</tr>
<tr>
<td>SC Patta</td>
<td>208**</td>
<td>30</td>
<td>NA</td>
<td>144</td>
<td>15</td>
<td>43</td>
<td>0</td>
</tr>
<tr>
<td>BC Patta</td>
<td>336</td>
<td>260</td>
<td>NA</td>
<td>536</td>
<td>580</td>
<td>463</td>
<td>132</td>
</tr>
<tr>
<td>SC Households</td>
<td>140</td>
<td>187</td>
<td>218</td>
<td>183</td>
<td>350</td>
<td>214</td>
<td>63</td>
</tr>
<tr>
<td>ST Households</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Total Households</td>
<td>382</td>
<td>335</td>
<td>377</td>
<td>457</td>
<td>1136</td>
<td>475</td>
<td>486</td>
</tr>
</tbody>
</table>

Source: Computed from the data of Village Administrator's Office - Oravandavadi, Alliandal, Gengampattu, Kuppanur, A.N. Mangalam, Kullampatti (includes Eripudhur) between October-November 2017

Note: Nammiyandal and Oravandavadi comes under same revenue village division, hence, DC land in Oravandavadi shared between two villages. Hence, Pattadar in Oravandavadi record is high.

*Cultivated Area recorded as on March 2017.

**SC households from Alliandal villages have lands in Oravandavadi. The DC land patta is combined for both Alliandal and Oravandavadi villages.
Except Yeripudhur, which abounds only dryland, all other villages have 1/2 or 3/4th cultivated agricultural land of their total geographical area. Kuppanur has no land for Scheduled Caste and Scheduled Tribes. Oravandavadi has the highest area as DC land measuring about 141.64 ha, distributed among two villages—Oravandavadi and Nammiyandal. No details about break-up of holdings on patta status were available Alliyandhal, which has more than 58% of dalit population. The Village Administrative Officers do not hold consolidated data on Gender Disaggregation. Further, the lands held by Scheduled Castes are put under the category of DC Land. Originally the DC lands were allotted during the British and later administered by land administration departments of the state. According to the statement of VAO of Kullampatty, since, there are large chunk of encroachments and political influence on DC land by dominant groups, it becomes hard to maintain the record. So in most of the cases the land holding of Scheduled Caste is shown as DC land. Instances of frequent transfer of VAOs also create problems in maintaining the records. Further, villages in Salem district are more concentrated with non-irrigated/rainfed lands, whereas, Thiruvannamalai comparatively perform better in this regard. In addition, the Scheduled Caste’s (dalit’s) access to land in Salem is very skewed compared to Thiruvannamalai.

3.8 DATA ANALYSIS AND INTERPRETATION OF DATA

According to Trochim (2010) the primary data obtained by any analyst must be analysed eruditely, which is positively supported by the data analysis and interpretation techniques. As per the view of Fellows and Liu (2015) the data collected for the subjective research requires in-depth analysis and deep interpretation as compared to quantitative data, since qualitative research is very theoretical in nature. The thematic analysis is defined to be an all-inclusive process through which researchers are capable of identifying varied cross references among the collected data. The data collected in the form of interviews are segregated based on specific themes, in satisfying the research questions. These themes can be constructed based on the analysis of data collected from the participants. The qualitative study involves the collection and understanding of data in terms of varied aspects, hence thematic analysis helps in providing better chance of accepting the prospective of any sort of issues extensively (Given 2008).
The quantitative data gathered for any research work have to be investigated by opting quantifiable tools or graphical tools in order to generate results. The data analysis and interpretation techniques enable a researcher to analyse the responses obtained from the respondents in supporting the articulated research questions. The data gathered for the proposed study, when analysed by involving these tools, handling outcomes of the proposed study or completion of the study becomes easier. Also, this allows the researchers in gathering proper justification to the data gaps that are identified during the research process, furthermore enhancing the significance and veracity of the proposed study (Miller and Gatta 2006).

Statistical analysis is an integral part of a quantitative research approach. Statistical analysis is very much essential for the test of hypothesis too in an empirical deductive research approach (Thompson 2012). It has been proposed to employ the following analysis techniques for this research.

### 3.8.1 Statistical Tools

**i) Simple percentage analysis:**

The analysis of simple percentage is used in comparing between more than two sets of data. In this method the percentages are used to represent relationship; percentages can also be used to compare similar terms.

\[
\text{Percentage} = \frac{\text{No. of responses} \times 100}{\text{Total number of responses}}
\]

**ii) Multiple linear regression:**

Multiple Linear Regression (MLR) is adapted when the relationship between a single dependent variable and two or more independent variables is to be identified (Krueger & Casey 2014). The research question is focused towards identifying the relationship between various dependent and independent variables determining various dimensions related to women’s land rights in Tamil Nadu. Therefore Multiple Linear Regression would suit the best in this research.
iii) Mean

Mean is defined as the arithmetic average that is used to illustrate variance. The following formula is used to calculate the mean of two variables.

\[
\text{Mean} = \frac{\text{Sum of all observations}}{\text{Number of observations}}
\]

\[
\bar{x} = \sum_{i=1}^{n} x_i
\]

In which \( x \) = each observation and \( n \) = number of observations.

iv) Standard Deviation:

To make the interpretation of the data simple and to retain the basic unit of observation, the square root of variance is used. The SD is calculated using following formula.

\[
\sigma = \sqrt{\left( \sum \frac{(x_i - X)^2}{N} \right)}
\]

Where \( \sigma \) is the population SD, \( X \) is the population mean, \( X_i \) is the \( i^{th} \) element from the population and \( N \) is the number of elements in the population.

v) Graphical approach

Graphical approach as the name suggests is the pictorial representation of the quantitative data collected, in a readable and easily interpretable format (Clark & Creswell 2011). Graphical representation could be done in many forms such as line charts, histograms, pie charts, bar charts and so on. The researcher has made use of pie charts and bar charts in this research in order to present the empirical data collected through distribution of questionnaires to the target respondents.

3.8.2 Software Tools

i. Microsoft excel:

Microsoft Excel is used to create graphs for the percentages by using the collected primary data, which helps to support the hypothesis.
ii. **SPSS:**

SPSS is abbreviated form of Statistical Package for Social Science. SPSS Software was used in this study keeping in mind the true objective to play out the quantitative data quantifiable examination. This study uses SPSS–16 package for better analysis of data obtained.

### 3.9 VALIDATION STRATEGIES

i. **Reliability:**

According to Dominick and Wimmer (2010) the precision of the tools used in the proposed study is evaluated through reliability. The researcher of this study conducted a reliability test and ensured that Cronbach’s alpha value of the research instrument employed is greater than 0.7 to ensure that the instrument is reliable.

<table>
<thead>
<tr>
<th>Variable Category</th>
<th>Cronbach's Alpha</th>
<th>N of Factors</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent Variable</td>
<td>0.699</td>
<td>5</td>
<td>415</td>
</tr>
<tr>
<td>Independent Variables</td>
<td>0.914</td>
<td>41</td>
<td>415</td>
</tr>
<tr>
<td>Intervening Variables</td>
<td>0.894</td>
<td>13</td>
<td>415</td>
</tr>
</tbody>
</table>

The dependent variable which is; access to the land rights and its associated factors have a Cronach alpha value of 0.699 showing that the rating of the access to the land rights by respondents was 69.9% reliable.

The independent variables which included: food security and nutrition, socio-cultural capital, economic capital and political empowerment and their respective factors had a Cronbach alpha value of 0.914 showing that the responses on the queries about food security and nutrition, socio-cultural capital, economic capital and political empowerment were rated by respondents to be 91.4% reliable.
The intervening variables and their respective factors had a Cronbach alpha value of 0.894 showing that responses by respondents on their land profile and socio-demographic factors were 89.4% reliable.

ii. Validity:

Validity defines the assurance of a researcher that every requirements of the research is being satisfied by utilizing the obtained data (Berthon et al., 2002). Researcher has maintained the validity by verbalizing the survey inquiries in sustaining the aim and objectives of the proposed study.

iii. Credibility:

Credibility specifically refers to distributing trust element in the results of the research among the external viewers (Kothari, 2013). The researcher has maintained the credibility of the study connecting him in the course of research for an extended period of time.

iv. Transferability:

The concept of transferability denotes the generalizable aspect of a research provided by the verdicts of the present study over the other related topics (Malterud2001).

v. Dependability:

This principally expounds the constancy of the collected data and the verdicts obtained from the data. The credibility and dependability are related to each other and reliant upon one another (Cohen, Manion and Morrison 2011).

vi. Conformability:

Conformability is determined as assertion produced by the researcher on the developed results, which guarantees that the verdicts are not delusion of the analyst, but the justification to the objectives from the immense data collected by researcher without violating the ethics (Chilisa and Preece (2005). In maintaining the conformability of the research, the researcher has well-preserved the soft copies of the respondent’s opinions.
3.10 ETHICAL CONSIDERATION

Proper information regarding the objectives of the research should be given to the respondents before the start of a research. When a research is being carried out without any informed consent from the participants of the research, it is perceived to be underhanded research and apparently face serious ethical insinuations (Schmit, 2011). In order to obtain proper responses, the participants were selected accordingly for the purpose of obtaining relevant information based on their views and perception regarding the subject. The concerns of the participants will be published with duplicate names in order to maintain the privacy of the participants.

3.11 SUMMARY

It is clear from the chapter that this study utilizes both qualitative and quantitative approach and descriptive research design in delineating the objectives of the study. Primary data have been collected through both surveys and interviews. Further, this study makes use of cluster sampling for obtaining the quantitative data and convenience sampling for collecting qualitative data respectively. Sample size of survey is 415 and the interview is 12. The respondents are women belonging to rural regions of Tamil Nadu and belonging to various social groups. Further the researcher has maintained utmost care in delivering the verdicts of the study without deviating from the ethical considerations.