



Universiteit Utrecht



UNTOUCHABLE FOOD FOR UNTOUCHABLE WOMEN

The Inclusion and Exclusion of Women
and Their Children in the Public Distribu-
tion System and the Mid- Day Meal
Scheme in Block Jaisinagar, Madhya Pra-
desh, India.



MSc International Devel-
opment Studies

Master's Thesis

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LIST OF ABBREVIATIONS AND ACRONYMS

APL	Above Poverty Line
AY	Yellow Card
BPL	Below Poverty Line
FAO	Food and Agricultural Organisation of the United Nations
FGD	Focus Group Discussion
FNS	Food and Nutrition Security
FPS	Fair Price Shop
FSB	Food Security Bill
GEN	General Caste
HDI	Human Development Index
MMS	Mid-Day Meal Scheme
MSP	Minimum Support Price
MP	Madhya Pradesh
OBC	Other Backward Classes
PACS	Primary Agricultural Cooperative Society
PDS	Public Distribution System
Rs	Indian Rupees
SC	Scheduled Castes
ST	Tribal Castes
TPDS	Targeted Public Distribution System
SRIJAN	Self-Reliant Initiatives for Joint Action

DEFINITIONS

Angewari	Nursery School for children under five years old
Sachiv	Officer employed by the government to record the villages' public affairs
Sarpanch	Elected head of the village (form of self-governance system Panchayat)
Gram Panchayat	Local village government
Tehsildar	A district official in charge of revenues and taxation. ¹

¹ Source: Oxford Dictionaries and the Free Dictionary.

ACKNOWLEDGEMENTS

The heart of India: a barren, dry and unforgiving land that fails in its most basic requirements, to serve man. Perhaps forgotten within the political abyss, the rural areas of India are engulfed in one of development's pressing issues, food security. Perhaps this was the challenge I sought – one that would provide me with a foreign set of hurdles to overcome within a lonely setting in a forgotten corner of the great subcontinent. However, within this hardship riddled state I was never alone and found myself being constantly embraced by the people of Jaisinagar, their families and their friends. Despite such numerous challenges we all had to face – both the local community and myself, as a new addition to their monotonous yet ever-changing routine – their warm-hearted and welcoming attitude made everything so much easier...sometimes. I would like to thank the villagers of Khamaria, Kanker Kuiya and Richhai for providing me with honest insights into their lives and their patience. Without their sincerity and trust this research would not have been possible. I would like to thank Ajay Shukla as being the means to seamless communication between myself and the local community, and to SRIJAN, who created the base and infrastructure for this field research as without their existence, this location would have been inaccessible to research. Last but not least, I would of course like to thank my supervisor, Annelies Zoomers, for her support, trust and freedom during the research and thesis writing process.

ABSTRACT

This research is based on a field study in Block Jaisinagar, Madhya Pradesh (MP), India and analyses to what extent the Public Distribution System (PDS) and the Mid-Day Meals Scheme (MMS) help women and their children to improve their food and nutrition security (FNS) situation. The effective functioning of the food schemes with regards to inclusion and exclusion of High Caste, Dalit and Tribal women and the access and utilisation of food are assessed. The field work has been conducted with the support of Self-Reliant Initiatives through Joint Action (SRIJAN), an Indian grassroots implementation and support organisation committed to promote sustainable and self-reliant models of rural development. This thesis will argue that the PDS and MMS do not function efficiently enough and that the most vulnerable population groups – Dalit and Tribal women and children – often face major problems in the access to the food schemes due to low financial and social capital, frequently resulting in their exclusion. There are incidents of High Caste women having higher financial capital and social status who bribe officials responsible for the schemes to be included and thus have a favourable position in the PDS. Dalit and Tribal women are further denied the position of the MMS cook, as caste-based social exclusion and discrimination prevails in the research area and also affects Dalit children during the food distribution in the MMS. The food schemes thus fail to guarantee the right to food to everyone and to those who depend on it the most.

Key words: food schemes, caste-based social exclusion and discrimination, food and nutrition security, access and utilisation of food, corruption

INTRODUCTION

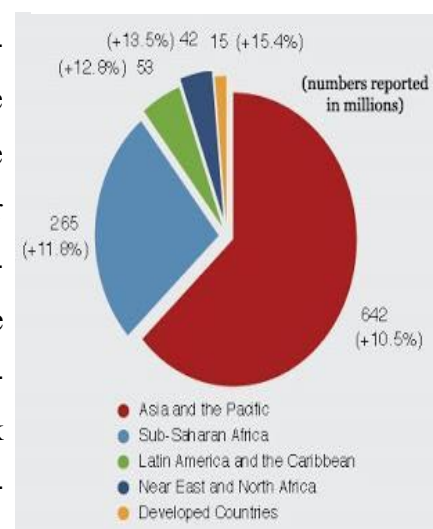
Food insecurity is a global phenomenon, widely affecting developing countries. It proves to be of high importance and actuality with the financial and economic crisis having pushed an additional 100 million people into hunger in 2009 (FAO, 2009). Addressing food security is an effective way to decrease poverty and increase health and nutritional indicators. The Indian government has recognised the urgent need to address food security through its policies, as India accounts for more than 30% of all food insecure people globally (Pawar, 2013).

PROBLEM STATEMENT

India is home to 246 million food insecure people (Pawar, 2013). Each year, more people die from malnutrition in India than those who lost their lives during the Great Bengal Famine. This is India's *silent emergency* of chronic hunger and suffering (Pawar, 2013). Food insecurity is thus more common in India than in Sub-Saharan Africa: one third of its population still lives below the poverty line and around 46% of all children below the age of three are too small for their age, or underweight (UNICEF, n.d., India). The prevalence of food insecurity varies across states, with MP recording the highest rate (FAO, 2009).

Even though India has reached self-sufficiency on the supply-side at national level and is home to various food security schemes, it still faces major challenges in terms of exclusion of the poorest and most vulnerable. Those who are most affected by low FNS levels and chronic hunger are women and children. Even within this group there are major differences in terms of vulnerability, especially when double burdens of both gender and caste occur. The effective functioning of the PDS and the Food Security Bill (FSB) is crucial for the rural population, especially in regions such as Block Jaisinagar, where agricultural production is low and heavily depends on rainfall. Revising and analysing the PDS and FSB in terms of inclusion and exclusion, can have a major impact on changing current patterns and creating inclusion mechanisms and thus improve the FNS situation of those who are currently not benefitting from the schemes. No research regarding FNS and no policy evaluation of the PDS and MMS have ever been done in the surrounding area of Jaisinagar.

Figure 1 Food Insecurity According to Region, Source: FAO, 2009.



RESEARCH OBJECTIVE

The research investigates the effective functioning of the PDS and MMS with regards to inclusion and exclusion of women and their children in the schemes and assesses the extent by which the PDS and MMS helps them to improve their FNS situation. It aims at creating awareness and making a contribution to the discussion of the inclusion and exclusion in the PDS and MMS, with greater emphasis put on those who are not granted the right to food. By looking at the effectiveness of the food schemes, policy recommendations will be given with the aim of improving the situation of the excluded.

RESEARCH QUESTION AND SUB-QUESTIONS

The research will analyse:

To what extent the Public Distribution System and the Mid-Day Meal Scheme in Block Jaisinagar, Madhya Pradesh, India help women and their children to improve their food and nutrition security situation?

1. What are the characteristics of the Public Distribution System and the Mid-Day Meals Scheme and how are they organised?
2. Who are the beneficiaries of the Public Distribution System and the Mid-Day Meals Scheme in Block Jaisinagar and how is their Food and Nutrition Security situation?
3. Who is excluded from the Public Distribution System and the Mid-Day Meals Scheme in Block Jaisinagar and how can future performance be improved?

1. THEORETICAL FRAMEWORK

The following chapter reviews the most important theoretical underpinnings of the field research. Firstly, the concept of Food and Nutrition Security will be outlined, including different dimensions of food security with emphasis put on the access and utilisation of food. Secondly, the Entitlement Approach will be introduced, followed by the Concept of Social Exclusion. Lastly, it is important to review the Sustainable Livelihoods Approach as the final theoretical foundation for this study.

1.1 FOOD AND NUTRITION SECURITY CONCEPT

The understanding of the FNS concept is crucial in this research, as the dimension access and utilisation of food will be assessed. The recognition of nutrition security as being more than food security and the importance of the quality, safety and cultural acceptability of the food, plays a major role when evaluating food security in the Indian context.

“It is not just the quantity of food entitlement that matters but also the “quality of entitlement.” Thus, the highest state of food security requires not just secure and stable access to a sufficient quantity of food, but also access to food that is nutritionally of adequate quality, culturally acceptable, procured without any loss of dignity and self-determination, and consistent with the realisation of other basic needs. This transforms food security from a uni-dimensional to a multi-dimensional objective” (Maxwell & Smith, 1992, p.41).

Maxwell outlines four core concepts of “secure access to enough food at all the time” (Maxwell, 1992, p. 4). Sufficiency of food, defined as the calories needed for a healthy, active life is the first concept. Secondly, the access to food, defined by the entitlement to produce, purchase or exchange food; thirdly, security which is defined by the balance between vulnerability, risk and insurance. The final concept is time, which can be subdivided into chronic, transitory, or cyclical food insecurity (Maxwell, 1992, p. 4). Food security is a necessary but not sufficient condition for adequate nutrition. Other conditions are care, health etc. It is important to consider wider livelihoods when treating food security as a fundamental right.

From the earlier definition from the Food and Agricultural Organisation (FAO), four main dimensions of food security can be identified in-line with those identified by Maxwell: physical availability of food addresses the supply side of food security and is determined by the level of food production, stock levels and net trade. According to Dev, availability of food means being able to feed oneself directly from the productive land or other natural resources (Dev, 2003, p.

5). However, physical availability is not sufficient. The availability dimension needs to include the satisfaction of dietary needs (energy and nutrients including micronutrients like iron, vitamin and iodine). Available food needs to be culturally acceptable, which means that it needs to fit in with the prevailing food or dietary culture, be safe (in terms of toxic elements and contaminants), and be of good quality (in terms of taste and texture) (Dev, 2003, p. 5). Economic and physical access to food means an adequate supply of food at a national or international level, which does not necessarily guarantee food security to the individual. Economic access means that the associated costs are not as high as they compromise on other basic needs and physical access implies that adequate food must be accessible to everyone (Dev, 2003, p. 5).

Food utilisation is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals is heavily influenced by food preparation, the diversity of the diet and intra-household distribution of food. Together with good biological utilisation of food, this determines the nutritional status of individuals (FAO, 2008). Stability of the other three dimensions over time is the final dimension. One can still be food insecure even if food intake is adequate at present, if inadequate access to food exists periodically. Adverse weather conditions, political instability, or economic factors (unemployment, rising food prices) can also have an impact on food security. All four dimensions must be fulfilled at the same time for food security objectives to be realised (FAO, 2008).

In line with this, nutrition security and the biological utilisation of food need to be taken into consideration when the individual level of food security is measured. Nutrition Security is defined as the adequate nutritional status in terms of protein, energy, vitamins, and minerals for all household members at all times (Quisumbing, 1995, p. 12) and thus in principle, is more than food security (Quisumbing, 1995, p. 4). Weingärtner similarly defines FNS as follows: "Food and Nutrition Security is achieved, if adequate food (quantity, quality, safety, socio-cultural acceptability) is available and accessible for and satisfactorily utilised by all individuals at all times to live a healthy and happy life" (Weingärtner, 2005, p. 5). The biological utilisation means the ability of the human body to take food and convert it into either energy for daily activities or storage (Weingärtner, 2005, p. 6). Utilisation requires not only an adequate diet but also a healthy physical environment, safe drinking water and hygienic sanitary facilities and knowledge about food preparation (Weingärtner, 2005, p. 6).

1.2 ENTITLEMENT APPROACH

The Entitlement Approach to food security is of high importance in this research as the access to food is determined by food entitlements, which derive from human and physical capital, assets, stores and access to common property resources (Maxwell D., 1996, p. 2f). As food security is assessed via women being entitled to food ration cards, it is crucial to understand the approach in a broader context.

The risk of entitlement failure determines the level of vulnerability, hence the level of food insecurity, with risk being greater the higher the share of resources devoted to food acquisition is (D. Maxwell, 1996, p. 3). Noble prize winner Amartya Sen uses the Entitlement Approach for the analysis of famine, shifting away from explaining it in terms of food availability, but rather in terms of the ability of people to command food through the legal means available in the society (Sen, 1981, p. 433). It therefore depicts an alternative approach to famine, focusing on a person's commodity bundles – including food – and exchange entitlement mappings (Sen, 1983, p. 434).

A person's entitlements are considered as “different alternative commodity bundles that a person acquires through the use of various legal channels of acquirement open to someone's position” (Sen, 1983, p. 8). The Entitlement Set is the full range of goods and services that one can acquire by converting the endowments (assets, resources) through exchange entitlement mappings (Devereux, 2001, p. 246). The concept describes all legal sources of food, which are broken down to four categories: production-based entitlement (growing food), trade-based entitlement (buying food), own labour entitlement (working for food) and inheritance and transfer entitlement (being given food by others) (Devereux, 2001, p. 246). A person starves if the full entitlement set does not include any commodity bundle with enough food (Sen, 1983, p. 9). Starving can also occur with a change in the endowment, such as loss of labour power due to a disease, decrease of wages, increase of food prices and loss of employment, which then makes it no longer possible to acquire any commodity with enough food.

In a private ownership market environment, a person's entitlement set is determined by the original bundle of ownership and alternative bundles one can acquire starting from each initial endowment through the use of trade and production (exchange entitlement mapping) (Sen, 1983, p. 9). The exchange entitlement mapping thus depends on the legal, political, economic and social characteristics of the society and the person's position in it.

Sen's observation of starvation is extremely relevant: it is a characteristic of some people not having enough food to eat, as opposed to there not actually being enough food to eat (Sen, 1983, p. 1). He states that famines even occur if the food supply is sufficient; either because of a decline in the food exchange entitlement such as falling wages of livestock, rising of food prices etc., or through direct entitlement decline, such as loss of food crops through a drought, for example. Food insecurity thus affects people who cannot access adequate food irrespective of existing food availability (Devereux, 2001, p. 246).

The Entitlement Approach has been subject to criticism by many authors, such as de Waal, Nolan, Rangasami etc. Sen himself recognised four limitations of the approach which he did not elaborate on to a great deal. Devereux characterises these limitations as choosing to starve, starvation or epidemics, fuzzy entitlements and extra-entitlement transfers and he critically assesses the extent by which each limitation undermines or even invalidates the whole Entitlement Approach (Devereux, 2001, p. 245). It is unable to discuss this in further detail here.²

1.3 CONCEPT OF SOCIAL EXCLUSION

The Concept of Social Exclusion is one of the most important theoretical frameworks in this research. As rural India is marked by the practice of the caste system, social exclusion plays a major role and must be assessed when evaluating food-related government schemes. Origins of the concept, deprivations and relational features of the term need to be taken into account when talking about social exclusion.

The term social exclusion arose in France in the 1970s in the debate on social assistance, defining social exclusion as a rupture of social bonds, putting emphasis on the solidary nature of society (De Haan, 1999, p. 6). Similar to the original French definition, De Haan defines it as “the process through which individuals or groups are wholly or partially excluded from full participation in the society within which they live” (De Haan, 1999, p. 6). Social exclusion is thus the opposite of social integration, underlining the importance of being a part of the society. The concept emphasises the multidimensionality of deprivation, as people are believed to be often deprived from different things at the same time. They can be excluded from livelihoods,

² For more detailed information on criticisms of Sen's Entitlement Approach please see: Devereux, S. (2001). Sen's entitlement approach: critiques and counter-critiques. *Oxford Development Studies*, 29(3), 245-263; Nolan, P. (1993); Rangasami, A. (1985). Failure of exchange entitlements' theory of famine: A response. *Economic and Political Weekly*, 1747-1752; The causation and prevention of famines: a critique of AK Sen. *The Journal of Peasant Studies*, 21(1), 1-28; Waal, A. (1990). A Re-assessment of Entitlement Theory in the Light of the Recent Famines in Africa. *Development and Change*, 21(3), 469-490.

property, education, employment etc. (Silver, 1994, p. 541). The concept refers to exclusion/deprivation in the economic, social and political sense and focuses on social relations, processes and institutions that underlie deprivations (De Haan, 1999, p. 6f).

According to Sen, social exclusion has to be placed in a broader context of poverty as capability deprivation, in which poverty is defined as the lack of capability to live a minimally decent life (Sen, 2000, p. 3). Social exclusion forms directly part of capability poverty, which can take the form of social exclusion. Adam Smith concentrates on the deprivation involved in not being able to appear in public without shame as an example of capability deprivation that takes the form of social exclusion (Sen, 2000, p. 4). It emphasises the importance of taking part in the social life. Not being able to interact freely with others is an important deprivation in itself. Exclusion from social relations can lead to more deprivations with the potential of limiting further living opportunities; for example, exclusion from employment can lead to economic impoverishment which then can lead to deprivation, homelessness and undernourishment (Sen, 2000, p. 5).

Attention has to be given to relational features in a deprivation. Therefore, it is important to see whether a process called exclusion is playing a significant part in generating other deprivations (Sen, 2000, p. 10). Hunger, in relation to entitlement failure for example, can have different causes: hunger caused by crop failure which leads to a loss of food supply, or hunger resulting from unemployment through the loss of purchasing power. Both examples are forms of social exclusion, but have different casual patterns, with some being more essential than others (Sen, 2000, p. 11). Social exclusion thus can have constitutive and instrumental importance. Not being able to take part in social life can directly impoverish a person's life. In addition to this deprivation, it can cause further deprivations, which is the constitutive relevance of social exclusion (Sen, 2000, p. 13). Other deprivations are less harmful but can lead to negative outcomes: for example, not using the credit market is not bad, but to not have access to the credit market can lead to other deprivations through casual linkages, such as income poverty. Casual significant exclusions are not impoverishing in themselves, but can lead to the impoverishment of human life through casual consequences (like denial of social and economic opportunities) (Sen, 2000, p. 13). Additionally, there are different forms of exclusion: active and passive exclusion. The former takes place when immigrants are not given a useable political status for instance, and the latter, when deprivation is due to a social process where there was no deliberate attempt to exclude (Sen, 2000, p. 14). In this field study, social exclusion is defined as being

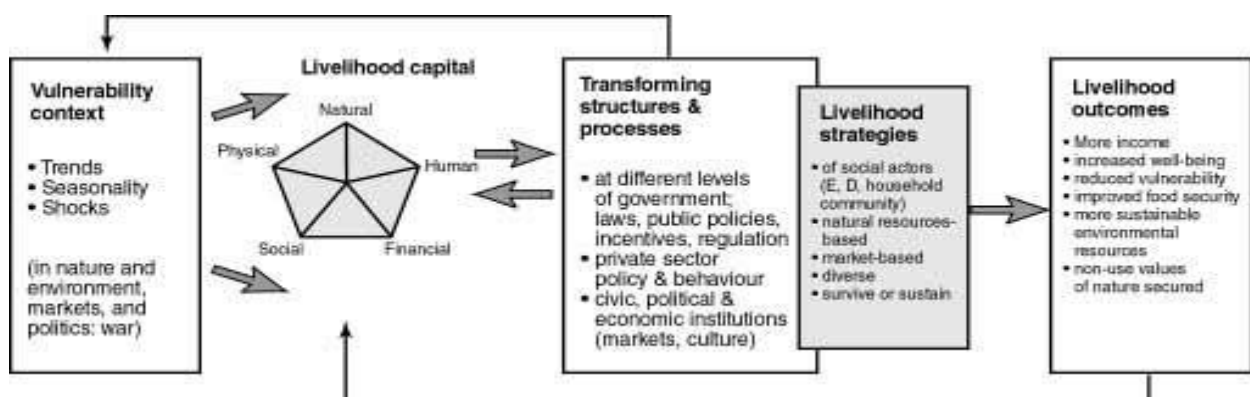
denied participation in a process or activity. Social discrimination is the inclusion in a process or activity but under highly unequal and unfavourable conditions.

1.4 SUSTAINABLE RURAL LIVELIHOODS APPROACH

The Sustainable Rural Livelihoods Approach is relevant in this field research as it takes relational features of not only different capitals, but the effect of institutions on livelihood outcomes into account; differing food security levels can be seen as a result of different combinations of capitals and livelihood strategies.

Sustainable livelihoods, as being people-centred and multi-level, are increasingly important in rural development and poverty reduction (Carney, 2003, p. 13). Sustainable livelihoods can be defined in relation to five key indicators which can be achieved through the access to different livelihood resources: natural, economic, human and social capital, which are combined in the pursuit of different livelihood strategies. The key question to be asked in the analysis of sustainable livelihoods is: “given a particular context (of policy setting, politics, history, agro ecology and socio-economic conditions), what combination of livelihood resources (different types of ‘capital’) result in the ability to follow what combination of livelihood strategies (agricultural intensification/extensification, livelihood diversification and migration) and with what outcomes?” (Scoones, 1998, p. 3).

Figure 2 Sustainable Rural Livelihoods, Source: FAO, n.d.



First of all it is crucial to ask what a sustainable livelihood is. According to Carswell, “definitions of sustainable livelihoods are often unclear, inconsistent and relatively narrow. Without clarification, there is a risk of simply adding to a conceptual muddle [...]” (Carswell, 1997, p. 10). Chamber and Conway propose the following definition: “a livelihood comprises the capabilities, assets and activities required for a means of living. A livelihood is sustainable when it

can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets while not undermining the natural resource base” (Chambers and Conway, 1991, p. 6). Stresses are pressures which are continuous, cumulative and predictable, while shocks are sudden, unpredictable impacts, such as fires or floods (Krantz, 2001, p. 7).

People follow different livelihood strategies through a portfolio of assets which is compiled of tangible and intangible assets and access: “tangible assets such as stores (food stocks, stores of value such as gold, jewellery, cash savings etc.) and resources (land, water, trees, livestock, farm equipment etc.), as well as intangible assets such as claims (for instance, demands and appeals which can be made for material, moral or other practical support) and access, which is the opportunity in practice to use a resource, store or service or to obtain information, material, technology, employment, food or income” (Scoones, 1998, p. 8).

It is further vital to analyse formal and informal organisations and institutions that have an effect on sustainable livelihood outcomes, as they mediate the ability to perform such strategies and accomplish or not such outcomes (Scoones, 1998, p. 3). Institutions, formal or informal, are regularised practices structured by rules and norms of the society which have persistent and widespread use (Giddens, 1979, p. 96). Understanding institutional processes allows the identification of restrictions and opportunities to sustainable livelihoods (Scoones, 1998, p. 12). Institutions mediate the access to livelihood resources, which affect livelihood strategy options, and thus sustainable livelihood outcomes.

2. THEMATIC FRAMEWORK

Having presented the major theoretical underpinnings of the field research, the following chapter will review the national and regional context, covering socio-demographic and geographic facts on India and MP. It provides insights into food security at a national and regional level. Furthermore, the PDS, the FSB and the MMS, as well as the caste system will be explained to provide sufficient knowledge on the foundations of this thesis.

2.1 NATIONAL CONTEXT: SOCIO-DEMOGRAPHY, GEOGRAPHY AND FOOD SECURITY IN INDIA

India is the second most populous country in the world with 1.2 billion people with the fourth largest economy (Library of Congress, 2004). It is one of the most diverse countries in the world in terms of ethnicity, religion and culture, occupying most of the South Asian subcontinent. India stretches eastward from Pakistan in the west to Bangladesh and Burma in the east, bordering China, Nepal and Bhutan in the north; the Indian Ocean to the south, the Arabian Sea to the west, and the Bay of Bengal to the east. The climate varies from tropical monsoon to temperate and has four seasons (Library of Congress, 2004). The terrain is characterised by upland plain in the south, flat to rolling plain along the Ganges, to deserts in the west and the Himalayas in the north (CIA World Fact Book India, 2014). The geographical and climatic circumstances influence socio-economic structures and have an impact on different levels of development. 72% of the population is of Indo-Aryan descent, 25% of Dravidian and 3% of Mongoloid descent (CIA World Fact Book India, 2014), which can be further categorised into various combinations of language, religion, and, very often, caste.

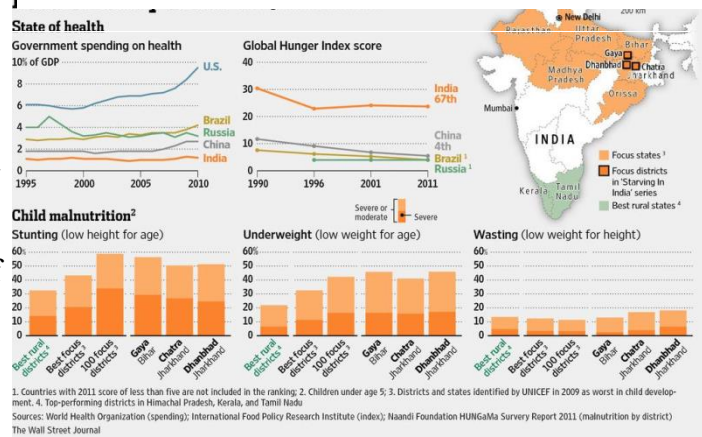
Figure 3 Map of India, Source: CIA The World Fact Book India, 2014.



India's recent growth and development has been a highly significant achievement. It transformed from chronic dependence on food grain imports into a global agricultural powerhouse,

now even exporting food. Life expectancy has doubled, literacy quadrupled and a sizeable middle class has emerged. India developed recognised pharmaceutical companies and a steel, information and technology industry (World Bank, 2014). However, major inequalities in terms of class, caste, religion and gender persist. Poverty rates in India's poorest states are three to four times higher than those in the more advanced states (World Bank, 2014). Even though primary education is universally accessible, results remain low and less than 10% of the working-age population has complemented secondary school (World Bank, 2014). India notes improved health indicators, but maternal and child mortality rates are still comparable to the world's poorest countries. This is reflected in the fact that India is home to a considerable amount of the world's malnourished children. Furthermore, infrastructural needs are also massive. Around 300 million people do not have electricity and those who have are confronted with frequent disruptions (World Bank, 2014).

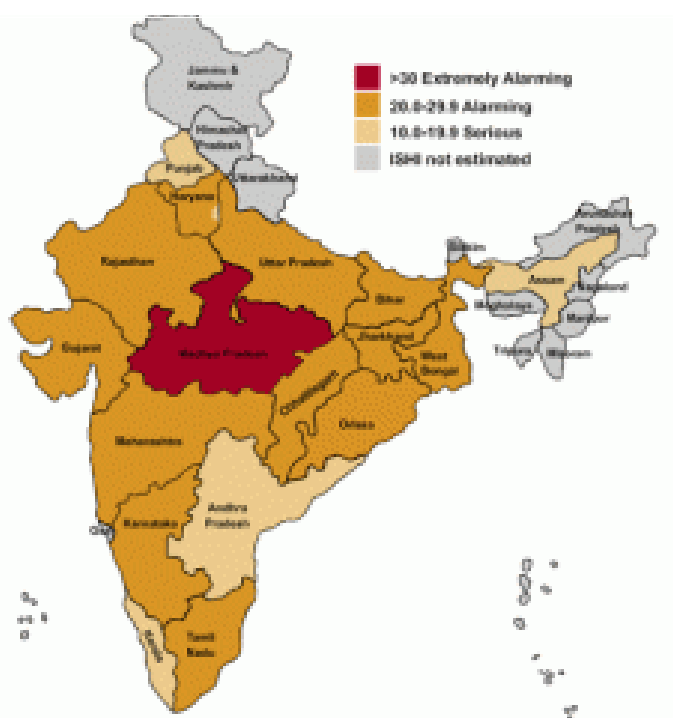
Figure 4 Food Security Crisis, Source: World Health Organisation, 2011.



2.2 REGIONAL CONTEXT: SOCIO-DEMOGRAPHY, GEOGRAPHY AND FOOD SECURITY IN MADHYA PRADESH

India's second largest state, MP, is located in the centre of the subcontinent and called the *Heart of India*. It is India's sixth-most populous state and has seen a huge growth in population over the last decade. More than 70% of MP's population live in rural areas and are engaged in the primary sector (UNDP India, 2011). The main crops grown are wheat, maize, rice and jowar among cereals. The commercial crops are cotton and sugarcane; and potatoes, onion, bananas and oranges are major products of the state (UNDP India, 2011). Periodic

Figure 5 Level of Food Insecurity According to State, Source: Menon et al, 2009.



droughts, insecure land tenure and dependence on seasonal agricultural labour make up the living conditions of the poor. MP is one of the most food insecure states in India, showing evidence of severe food insecurity. According to the India State Hunger Index, it falls in the extremely alarming category with one of the lowest nutrition and health indicators in the country. It is also the state with the largest number of Tribal population, making up one fifth of the states and almost half of India's population (UNDP India, 2011) and is consequently called the tribal state of India. Due to Tribals mainly living around isolated forest areas in MP with insufficient infrastructure, their living conditions are characterised by difficult access to services, agricultural inputs, credit and markets. Areas with Dalit and Tribal population represent the most deprived areas.

MP is also one of the bottom five states regarding women with a Body Mass Index (BMI) below 18.5 and noting the highest percentage of underweight children under five years (60%) and an Infant Mortality Rate of 62% (UNDP India, 2011). The literacy rate of 70.63% is lower than the national average of 74.04% and the female literacy rate of 60.02% falls far beyond the male literacy rate of 80.53% (UNDP India, 2011). With a Human Development Index (HDI) value of 0.375, compared to the national average of 0.467, MP is one of the least developed states in India (UNDP India, 2011).

2.3 PUBLIC DISTRIBUTION SYSTEM

Having outlined the national and regional context of the field work, it is necessary to review current food-related government schemes taking place in India and MP. The general term PDS not only refers to the targeted distribution of food grains in Fair Price Shops (FPS), but also to the Minimal Support Price (MSP) given to farmers. This thesis is only concerned with the food distribution in FPS. The

Picture 1 FPS Richhai.



PDS has been in existence since before the independence of India in 1947 (Tarozzi, 2005, p. 3). Originally it aimed at protecting consumers from food shortages and producers from price fluctuations (Tarozzi, 2005, p. 3). In the 1980s the scheme turned from only being available in urban areas to a general means of poverty alleviation and food security (DFPD, 2010). The main function of the scheme is to distribute rice, wheat, sugar and kerosene to

Picture 2 Food Distribution in FPS Richhai.



nutritionally risky people. It targets 330 million people through 499,000 FPS (Kattumuri, 2011, p. 11), covering three aspects: (i) ensure a MSP to farmers in support of their livelihoods; (ii) control market prices through stocking and controlled release and (iii) make grain accessible to the poor through subsidised sales in the FPS. The ultimate goal of the PDS is to enhance food security of poor families. However, there is widespread consensus about prevailing corruption, inefficiencies, and limited scope, preventing the system from reaching its goal (Tarozzi, 2003, p. 2).

The PDS is managed by the central and state governments. The central government is in charge of storage, transportation, allocation and procurement, whereas the states are responsible for the distribution of the subsidised products in the FPS and for the identification of the families living below the poverty line (BPL), ration cards and monitoring (Kattumuri, 2011, p. 11). In 1997 the government transformed the PDS, from a universal into a targeted one (Targeted Public Distribution System: TPDS), so that only those people with BPL cards can buy products at subsidised prices. The PDS aims at reaching 60 million families (Kattumuri, 2011, p. 12).

Figure 6 Food Security Schemes According to States, Source: KM House India, 2013.

States that have food security schemes	
ANDHRA PRADESH	35 kg rice at ₹1 a kg
CHHATTISGARH	35 kg rice at ₹2 a kg
KERALA	Rice at ₹2 a kg for BPL, universal PDS
KARNATAKA	30 kg rice at ₹1
MADHYA PRADESH	30 kg wheat at ₹1
ODISHA	20 kg rice at ₹1 a kg
TAMIL NADU	20 kg free rice a month
WEST BENGAL	Rice at ₹2 a kg in select areas

2.4 FOOD SECURITY BILL

On 1st March 2014 the National Food Security Act came into force in MP and covers a total population of 75% (Times of India, 2014). The implementation of the act is part of the national bill that was decided in autumn 2013 with the objective of increasing national FNS. An adequate quantity of quality food shall be made available at subsidised prices and increase the availability and access to food for the urban and rural population. It is therefore the world's largest food scheme to have ever been launched (Times of India, 2014). It is in the states responsibility to identify beneficiaries of the scheme and implement the programme in the different states. The new FSB replaces and ends thus the PDS, so that now individuals and not any longer whole households are entitled to the monthly rations. Apart from the new entitlement unit and the new quantities being made available, the FSB works the same way as the PDS did.

2.5 MID-DAY MEAL SCHEME

The MMS provides free lunch to children in public schools on all school days and aims at addressing hunger in schools by serving hot cooked meals to improve the nutritional status of children, encourage poor children to attend school and increase concentration, enrolment, retention and attendance rates. The scheme was launched in 1995 in MP (Planning Commission, Government of India, 2010, p. 2f). There is evidence that the MMS is beneficial in terms of social equity, employment for women and school enrolment for girls. It has increased not only annual enrolment, but daily attendance and enhances learning achievements through eradicating classroom hunger (Goyal, 2003, p. 4673). However, its implementation has proved problematic, and accountability is weak in poor rural areas (Kuttumuri, 2011, p. 14).



Picture 3 MMS Food Distribution Richhai.



Picture 4 MMS Food Distribution Richhai.

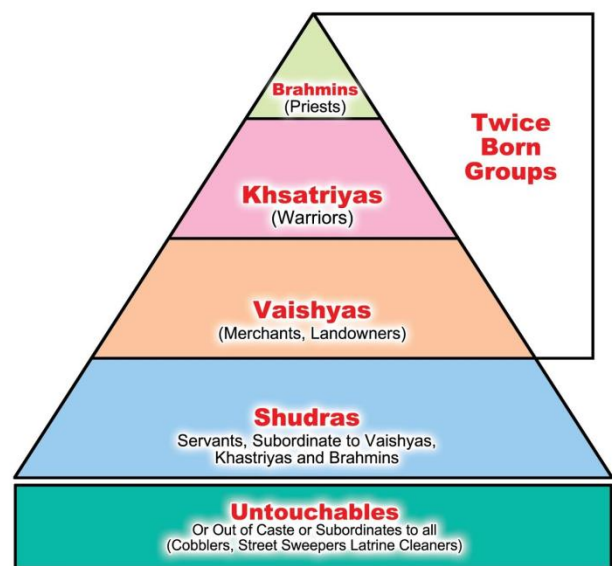
2.6 CASTE SYSTEM

The caste system is still practiced in the research area and is therefore in need of examination. This chapter gives an insight into the historical origins of the caste system and into compensatory discrimination policies practiced by the Indian government, having recognised issues related to the discrimination of lower castes and social equity.

The origins of the caste system derive from the ancient Hindu scripture, the Veda, around 2000 years ago and indicates the social hierarchy of the Indian society (Mendelsohn et al., 1990, p.

48). Following the Veda, the universe is organised into a strict classification scheme and a set of hierarchical relationships that are reflected in the organisation of society (Smith, 1994, p. 49). The relationship between the caste system and the structure of the universe had a deep religious justification. The caste system traditionally consists of four major categories (varnas) which also can be subdivided into hundreds of sub-categories (jatis): Brahmins, Kshatriyas, Vishays, Shudras and Outcastes/Untouchables. Around 16% of India's population are Scheduled Castes (SCs/Dalits) and around 8% belong to

Figure 7 Caste System, Source: Wordpress, 2014.



one of the 461 Scheduled Tribes (STs/Tribals) (Library of Congress, 2004). These groups are traditionally associated with certain professions, dividing society and strongly prohibiting marriage outside of the caste (Dumont 1980, p. 92-112). A person is born into a caste and remains in it; changing caste-belonging is almost impossible (Galanter, 1984, p. 8). Tribals traditionally lead a nomadic life and Dalits take-up the *nasty* jobs, such as street sweeping, burning the dead, collecting dead bodies and animals. This explains their physically distanced position to all other castes: both groups are *Untouchables*, at the bottom of the caste pyramid and have been subject to discrimination and extreme oppression (Mendelsohn et al., 1990, p. 5-20). They are thus among the most disadvantaged socio-economic groups in India (United Nations, n.d., India). Higher castes and *Untouchables* stay physically distanced to each other as it is believed that the lower castes can pollute and spiritually damage the higher castes (Galanter, 1984, p. 14).

As mentioned in the introduction, the Indian government practices compensatory discrimination policies, giving preference to historically disadvantaged population groups. Beneficiaries are SCs, STs and Other Backward Classes (OBCs), defined as a heterogeneous category of low-status castes (Galanter, 1984, p. 42). Reservations are provided to these groups in legislature, in government services, academic institutions, provisions of services such as scholarships, grants and loans, health care and legal aid. Special protection is also given to backward classes from being exploited (Galanter, 1984, p. 43). However, the government faces difficulties in measuring and selecting the subjective term of being *backward*. A caste in one state can be defined as *backward* and thus receive reservations, but in another state the exact same caste may not be considered *backward* and not receive any reservations. The reservation policy by the government explains the way the division of castes is perceived by society today, including the sample population. Today the following castes are generally recognised as the four main caste categories, which are then divided into hundreds of different sub-groups: the highest General Caste (GEN); then the OBCs; and STs and SCs belonging to the lowest castes. Only GENs are not included in the compensatory discrimination policies by the government. For clarification reasons and better readability the term SC and ST will here-in be referred to as 'Dalit' and 'Tribals' respectively. Literally speaking, Dalits and Tribals are considered outcastes of the caste system, but will still be defined as low castes according to the terms and perceptions used by the sample population itself.

2.7 CASTE-COMPOSITION IN BLOCK JAISINAGAR

It is important to recognise the caste compositions in all researched villages as it determines the extent to which caste-based social exclusion and discrimination exists on the micro level (in the village). SRIJAN works in nine focus villages in Block Jaisinagar – the block capital village in the research area, where the market place and a basic hospital for the surrounding villages are located. The sample villages Kanker Kuiya, Khamaria and Richhai are three out of these nine focus villages. The majority of Kanker Kuiya is comprised by Tribal population; the minority is made of High Caste people, whereas no Dalit families are present in the village. In Khamaria the majority is comprised of High Caste people and the minority of Dalit families; no Tribal families are present. High Castes make up the majority in Richhai, followed by the Dalit and Tribal minorities. In summary, Khamaria and Richhai are characterised by the majority of higher caste families, whereas Kanker Kuiya is comprised of the majority of a lower caste.

3. METHODOLOGY

3.1 RESEARCH OBJECTIVE AND RESEARCH QUESTIONS

This section will introduce the aim and objective of the research. This will be followed by the main research question and the sub-questions, including a conceptual model. Main methods and techniques for the conduct of the research will be outlined and finally risks and limitations will be reviewed

OBJECTIVE

Investigate how effective the PDS and MMS function in Block Jaisinagar with regards to inclusion and exclusion of women and their children in the schemes and assess the extent by which the PDS and MMS helps them to improve their FNS situation.

Two aspects of the PDS and MMS will be covered: firstly, the distribution of subsidised products in FPSs. The eligibility for ration cards needs to be investigated and whether having one actually secures access to the FPS products. Secondly, the access, participation and participatory empowerment and treatment and discriminatory procedures of women and children in the PDS and MMS will be discussed. First of all the characteristics and organisation of the schemes need to be investigated alongside who is included and excluded in them. Moreover, the particular FNS situation of those included and excluded in the PDS and MMS will be assessed through various measurable indicators. Only after it can be evaluated whether the schemes help women and their children to improve their FNS situation. Policy recommendations will be given to enhance future performance of the food schemes once the analysis has been completed.

MAIN RESEARCH QUESTION

To what extent does the Public Distribution System and the Mid-Day Meals Scheme in Block Jaisinagar, Madhya Pradesh, India, help women and their children to improve their food and nutrition security situation?

In order to be able to answer the main research question, the following sub-questions need to be addressed:

SUB-QUESTIONS

1. What are the characteristics of the Public Distribution System and the Mid-Day Meals Scheme and how are they organised?

2. Who are the beneficiaries of the Public Distribution System and the Mid-Day Meals Scheme in Block Jaisinagar and how is their food and nutrition security situation?
3. Who is excluded from the Public Distribution System and the Mid-Day Meals Scheme in Block Jaisinagar and how can future performance be improved?

The PDS and MMS serve as a framework for the analysis of the extent by which the schemes brings about change to women and their children in Block Jaisinagar and what differences exist between beneficiaries and non-beneficiaries of the schemes in terms of FNS levels. Characteristics of the scheme will also be analysed through secondary data and academic literature review.

3.2 CONCEPTUAL MODEL

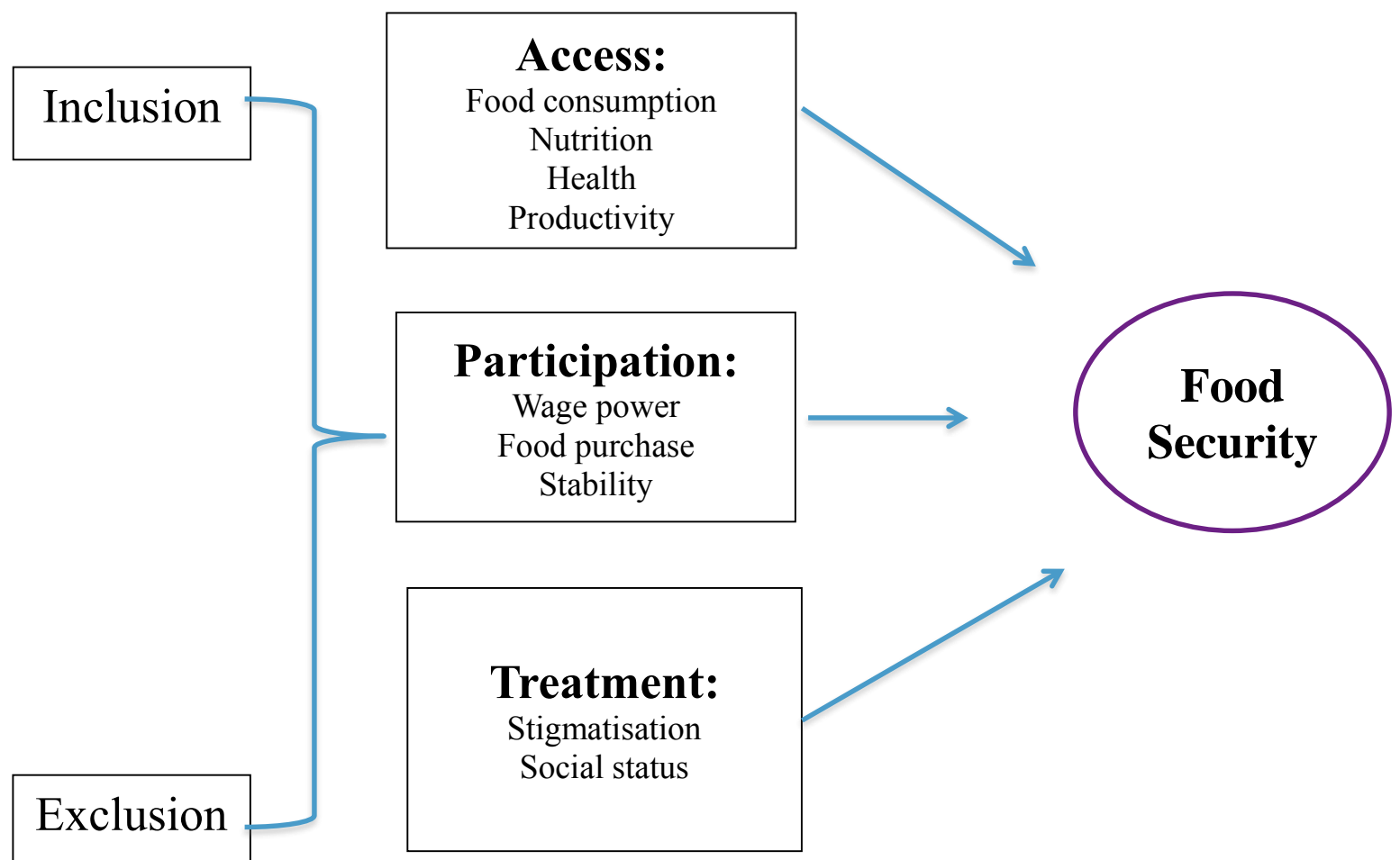
Different grades of inclusion or exclusion in the PDS and MMS are possible. Inclusion in the PDS happens through the entitlement to three different types of ration cards: Above Poverty Line (APL), BPL, and Yellow (AY) cards. Exclusion in the PDS refers to either non-eligibility of ration cards resulting in not having any type of card, exclusion errors despite official eligibility, or when a wrong entitlement is taking place, for example entitlement to an APL card when fulfilling BPL requirements. Full inclusion in the MMS denotes equal and just receiving of food every day; part-inclusion happens when children receive less food than others, receive food last, or only sometimes receive food. Exclusion denotes complete exclusion (children do not receive any food at all) or part-exclusion.

The conceptual model illustrates that the level of inclusion or exclusion impacts the access to and the participation, participatory empowerment and treatment in the schemes. A precondition for the access to the FPS is the eligibility for ration cards. Furthermore, the FPS needs to be at reachable distance to receive products at subsidised prices. The same applies to the MMS, meaning that children need to be able to access and attend the school to receive a cooked meal. The access has an influence on the food consumption, nutrition, health and productivity and concentration levels of the women and their children. For the PDS, participation means the physical act of receiving monthly rations in the FPS and for the MMS it refers to the employment of women as cooks or organisers in the MMS and the children's participation in the MMS.

If mothers work as cooks in the MMS they can increase both their own and their children's FNS

levels through wage power. The treatment of women in the FPS and the eating and seating arrangements of children during the MMS are potentially determined by their caste- belonging. Stigmatisation of women and children through discriminatory procedures are possible and need to be investigated. All these factors together directly and indirectly determine and influence the levels of FNS of women and their children.

Figure 8 Conceptual Model Food Security



3.3 SAMPLING TECHNIQUE

QUANTITATIVE METHODS

Three villages were sampled according to their caste composition. Caste-belongings need to be taken into account for the sampling due to the assumption that major caste-differences, in terms of wealth and FNS levels, may exist. Selection criteria for the villages of Khamaria and Richhai included the same heterogeneity of all castes within each village, but homogeneity of the villages in comparison to each other in terms of caste-belonging to ensure a comparable share of the castes and a small scale representation of the total population.

Furthermore, it was ensured that the higher castes make up the village majority, assuming that under these circumstances, caste-differences in the food-related government schemes would be more evident. The sampling of the third village, Kanker Kuiya, being of lower caste Tribal majority, followed a different basis to find out whether caste-based social exclusion and discrimination in the PDS and MMS might differ when the village majority is compiled of a lower caste. The percentage of each caste within each village was calculated and the different village sizes were taken into account to ensure a fair distribution of surveys conducted. Within each caste a random sample has been applied. The sample size was set at 45.

QUALITATIVE METHODS

Snow-ball sampling has been applied to encounter respondents for the in-depth interviews, semi-structured interviews, informal conversations, video documentation and focus group discussions (FGD). After encountering a pattern of exclusion within the PDS and MMS, key informants on important issues and problems raised by the survey have been approached as information providers.

3.4 DATA ACQUISITION

FIELD MAPPING

Three field maps of each village were compiled, containing geographical and socio-demographic information on the households and their locations, which were chronologically numbered first. The maps served as the basis for the sampling, providing data and all potential respondents for the Baseline Food and Nutrition Security Survey. It contained information on the identified female heads of the household living together with their children under 18 years old and their caste-belongings. Landmarks, such as schools, temples and if available the FPS were noted down. The illustration of the organisation of the villages and the house locations of

different castes helped familiarise with the spatial extent of the research area and gave an idea of its vitality and dynamics. Through recording the house locations of different castes, future respondents for the qualitative interviews were found. Moreover, potential issues to research were suggested (Desai & Potter, 2006, chapter 14).

INFORMAL CONVERSATIONS

First-hand information on the organisation and management of the PDS, MMS and the FNS status of the focus villages was gathered through informal conversations with several staff members of SRIJAN. No information on the functioning of the PDS and MMS in the research area could be obtained, neither through SRIJAN nor through the visits of the Government Block Office and the Block Resource Communication Centre, the only offices in the research area due to the unavailability of any primary data on due matter.

Informal conversations were held with all primary teachers in all villages, with the middle school teachers in Richhai and the Angewari teacher in Khamaria. They gave an insight into how well the MMS functions and what issues might have been aroused around the MMS in terms of caste-based social exclusion and discrimination. Information was also obtained on how the schools are organised, how many students officially visit and how many of them actually attend the school. It was also vital to find out what castes the students were from. Many informal conversations were also carried out with representatives of all castes, focusing on the lower castes – Dalits and Tribals – to investigate social exclusion and discrimination in daily and public life and with regards to the PDS and MMS.

PARTICIPANT OBSERVATIONS

To complement the informal conversations in the schools, participant observations were held during food preparation in the houses and distribution of the MMS in all three villages (three primary schools and one middle school). Moreover, all three FPSs were visited to directly experience and observe the distribution of the rations. General activities have been observed, such as water fetching or temple visits, to familiarise with the villagers, gain their confidence and observe potential irregularities in the interactions and behaviours of the different castes with each other.

SEMI-STRUCTURED INTERVIEWS

Semi-structured interviews were conducted with all MMS and Angewari cooks to understand organisational and managerial aspects of the MMS and investigate potential caste-based social exclusion and discrimination of lower caste children in the MMS. Highly important information could be obtained through several semi-structured interviews with respondents of different castes on the same matter.

PILOT STUDY

Before carrying out the final survey a pilot study was carried out in all three villages to check time management and feasibility.

BASELINE FOOD AND NUTRITION SECURITY SURVEY

Following the Food Security Concept of the FAO, the concept consists of four major dimensions: the access to food, the availability of food, the utilisation of food and the stability of food. A Baseline Food and Nutrition Security Survey was conducted to find out about the FNS situation of beneficiaries and non-beneficiaries of the PDS and MMS. The term beneficiaries mainly refers to people receiving products in the FPS, as it is assumed that all school children are eligible for the MMS. The study on the FNS levels was based only on the access to food and utilisation of food. The dimension of availability refers rather to the supply-side of food on international and national level. The stability dimension could not be measured due to time-constraints, as to analyse stability of food, a longer timeframe would have been needed.

Respondents were the female heads of the households, who did not only serve as information providers on their own FNS situation, but also on the situation of their children. Children in this research are defined as being under 18 years old and living together with their mother in the same household. The oldest child of the family receiving a MMS was interviewed directly. The female and child FNS situation was chosen over the household level due to intra-household power relations leading to potential imbalances of the FNS situation of individual members within one household. The surveys were carried out face-to-face, with the help of an English/Hindi translator.

Indicators for the access to food are existence of land and livestock, food production, employment, income generation for food purchases and inclusion in PDS and MMS amongst other

indicators. To assess the utilisation of food adequately the following topics needed to be considered: food consumption, knowledge on nutritious food, and sanitation and hygiene. A food frequency assessment was conducted to find out how often certain aliments are consumed: daily, a few times per week, weekly, monthly, on a festivity or never. The food frequency assessment does not measure calorie intake, but gives the possibility to measure the importance the respondents give to certain aliments. Consequently, based on the food frequency assessment, nutritional values of the diet were assessed.

This was complemented by the analysis of a typical daily diet of the mothers, and the male and female children separately from each other, in order to investigate food consumption habits – what kinds of aliments are consumed on a regular day. As hygiene and sanitation further influence the food intake and the nutritional status of the respondents, this was also included, as diseases can be prevented or transmitted through hygiene. For the assessment of the FNS levels of the mothers and their children, anthropometric indicators, such as the weight and height of all mothers and children, were measured. This was useful for the investigation of mother and child wasting, defined as low weight-for-height. Due to the inability to take and evaluate blood samples to investigate iron deficiency, this indicator has been omitted.

The second part of the survey aimed at investigating the access to the PDS and MMS, the participation and participatory empowerment in the PDS and MMS; and the treatment and discriminatory procedures in the PDS and MMS. The ultimate goal was to find out who the beneficiaries and non-beneficiaries of the schemes are, linking it to their individual FNS situation.

For the access to the schemes, indicators such as existence of FPS and MMS, were used. For the participation in the PDS, the existence and ease of the obtaining of ration cards, experiences in having difficulties with the entitlement, delays in the supply and for the treatment in the schemes discriminatory procedures in the entitlement process and FPS, as well as eating and seating arrangement of the children in the MMS were considered. As the utilisation of the scheme is the result of the household decision, characteristics of the household, such as income, existence of land and livestock, were also taken into account.

OPERATIONALISATION OF THE FOOD AND NUTRITION SECURITY CONCEPT

In order to measure to what extent the PDS helps women and their children to improve their food and nutrition security situation, two linear regressions with two different dependent variables were conducted, both referring to the inclusion of women into the PDS. The MMS could not be taken into account in the regressions. The FNS situation is measured in two ways: firstly, it refers to how nutritious and balanced the diet of a woman is and secondly, to a woman's BMI. The frequency of the foods consumed could not be captured. The food and nutrition security situation seeks to be explained by the independent dummy variables card (BPL or APL/No card) and caste (High Caste, Dalit or Tribal). The categories BPL or APL/No card were chosen, as only the BPL card provides edible foods and thus is the only card which can have a potential influence on the nutritional situation of the women.

In order to measure *nutrition* as the first dependent variable, the aliments from the food frequency section in the survey were grouped into the following nine categories with the aim of creating food groups that would explain a nutritious/balanced diet: iron rich aliments, vitamin-C rich aliments, protein rich aliments, dairy products, carbohydrates, normal vegetable, normal fruit, healthy fat and normal fat. Normal vegetable and fruit refer to vegetable and fruit, which do not contain a high concentration of vitamin C. The same applies to normal fat, which means that the fats in this section are not unhealthy, but contain less nutritious values than those in the healthy fat category. Milk and sugar are not considered in the calculations as they are only consumed in small quantities in tea. The first four food categories get a nutritious value of two, whereas the other categories receive a value of one. The aliments with the value two are considered to be more nutritious than those with a value of one. For every food group mentioned by a respondent, either one or two points can be obtained, depending on the value of the category. A total sum of 13 points can be reached, which means that the higher the points a respondent receives, the more nutritious and balanced the diet is. The second dependent variable is the BMI of the women, compiled of their height and weight.

EXPERT INTERVIEWS

All three shopdealers of all villages were interviewed before or after distributing the monthly rations in the FPS with the aim of comprehending organisational and managerial aspects of the functioning of the PDS and FPS. Complementary to this an expert interview was conducted with the Secretary of the Primary Agricultural Cooperate Society (PACS) to understand the transition from the PDS to the FSB. Additional information could also be obtained through an

expert interview with the Sarpanch of Richhai. The expert interviews of public representatives are of importance because they take the perspective of the government side on the food schemes into account and thus contribute to a more complete picture.

IN-DEPTH INTERVIEWS

Through only including women and their children into the research it was necessary to conduct in-depth interviews on the traditional role and position of the women in the villages in the research area. This was done with women throughout all castes and was complemented by two in-depth interviews with male respondents (one husband and one son) to take a male perspective into account. Further in-depth interviews have been carried out to supplement the information on caste-based social exclusion and discrimination experienced by low-caste women.

VIDEO DOCUMENTARY

A documentary film was shot focusing on social exclusion and discrimination of low caste women, giving them a private, protected space to express their views. In the first part of the documentary one of the most empowered Dalit women in the research area narrates highly personal experiences and feelings caused by social exclusion and discrimination in food-related government schemes, daily life and the role of women in the villages. In the second part of the documentary several Dalit women and a higher caste women talk about similar topics in form of a group discussion. The video recording was introduced in a preliminary interview through handing out an interview guideline and preparing the respondents.

FOCUS GROUP DISCUSSION

Complementary to the video documentation, two FGDs have been held in Khamaria and Kanker Kuiya, where women were given a protected space to elaborate on the same matters as in the video documentation. Each group was compiled of women from the same caste, with no males allowed, creating a comfortable space for the women to voice opinions. The discussions were introduced appropriately and concluded with a follow-up interview (Desai & Potter, 2006, chapter 16).

3.5 RISKS AND LIMITATIONS

After examining the methods applied for the field research, risks and limitations shall be reviewed. The lack of infrastructure in place or resources for non-speakers of the Hindi-language meant a translator had to be found in a city 50 km away, adding to the major day to day

limitations. As a consequence, language barriers existed and major problems with illiteracy were daily determinants of the research. Limitations also occurred in terms of corruption, making it challenging to verify answers. As the Indian society is highly male dominated, it was challenging to only interview the female head of the households, as husbands tend to answer on behalf of their wives. Furthermore, the female respondents had to ask their husbands and male elders for permission for the survey first, which resulted in many re-visits, when the male household members were absent.

Socially desirable answers can be noted down with regards to caste-issues (higher castes tending to deny caste-discrimination and lower castes fearing negative consequences when reporting caste-conflicts); intra-household power relations leading to lower FNS levels of women and their children, sanitation and hygiene; and in terms of the role and position of the women in the villages (in the presence of male household members). When interviewing Dalits and Tribals, the women feared atrocities and prosecution for raising their voice due to the discussion of highly sensitive issues. Therefore it was of high importance to create a protected space in order to distance the responses from social desirability.

Lastly, it was impossible to measure and assess the FNS situation before benefitting from the PDS and MMS. Thus, no judgement can be made on the change before and after the introduction of the schemes, but an examination of the included and excluded was possible. Another limitation, especially with regards to the use of linear regression methods as a means of analysing the quantitative data through SPSS, depicts the sample size of the conducted surveys. As the sample size is too limited, problems arise in terms of representation and generalisability. Thus the results are not reliable enough to be able to apply them to a greater context, but give an idea of potential correlations between the indicators.

4. EMPIRICAL CHAPTERS

The empirical chapters aim at answering the main research question: **To what extent does the Public Distribution System and the Mid-Day Meal Scheme in Block Jaisinagar, Madhya Pradesh, India, help women and their children to improve their food and nutrition security situation?** including the three sub-questions:

1. What are the characteristics of the Public Distribution System and the Mid-Day Meal Scheme and how are they organised?
2. Who are the beneficiaries of the Public Distribution System and the Mid-Day Meal Scheme in Block Jaisinagar and how is their food and nutrition security situation?
3. Who is excluded from the Public Distribution System and the Mid-Day Meals Scheme in Block Jaisinagar and how can future performance be improved?

The first part introduces organisational aspects of the PDS, the FSB and the MMS, as a basis to identify the beneficiaries and the non-beneficiaries of the PDS. The second part deals with caste-based social exclusion and discrimination towards lower caste women and children, as it heavily influences their inclusion in the food schemes. An in-depth analysis of the access, participation and treatment in the PDS and MMS will follow in the third section. Finally, the access and utilisation of food of the respondents will be assessed. Existing differences between benefitting and non-benefitting as well as between higher and lower castes women will be focused on.

4.1 INSTITUTIONAL CONTEXT

Firstly, one must understand how the food schemes function before identifying the beneficiaries and non-beneficiaries. Without obtaining knowledge on how the schemes are organised, no beneficiaries can be identified.

4.1.1 ORGANISATION OF THE PUBLIC DISTRIBUTION SYSTEM

The PDS is organised on state level in corporation with the Indian government, which provides certain products at subsidised prices to ration card holders in the so-called FPSs. Products sold in the shop are wheat, rice, sugar, salt and kerosene. The product-type and the quantities allowed depend on the type of entitlement. Three different card-types exists: the AY, BPL and the APL card. The AY entitlement brings the largest quantity of rations, followed by the BPL entitlement. The APL card only entitles the holder to kerosene. During the research only BPL and

APL card holders were encountered, which might be due to the fact that the sample population included only women with children under 18 years old, whereas the AY card entitles elderly people. The entitlement is organised per household, which is defined as eating from the same kitchen. The rations are sold at the beginning of every month over the time frame of a couple of days. Certain days are reserved for the distribution of different products, which means that BPL and AY card holders have to collect their rations over the period of several days. The shopdealer is employed by the Primary Agricultural Cooperative Society (PACS) and is responsible for the monthly distributions with the help of one or two villagers.

Not every village has its own FPS, but one exists per panchayat, where three to five villages come under (depending on the population size of the villages). Each panchayat has a specific quota of BPL cards to be distributed. Once the quota has been reached no BPL cards can be issued anymore. The requirements for the issuing of the ration card are a vote ID and a permanent residence proof. Applicants for a BPL card need the signature of the Sarpanch, Sachiv and the Tehsildar; for the APL card the signature of the Sarpanch is sufficient. A general form needs to be filled out and submitted. Even though the official duration for issuing the cards takes one day, corruption prologues the process to at least four to five months. The size of land determines whether a household receives a BPL entitlement: only people who possess no land or land under five acres are entitled to a BPL card.

Figure 9 Food Distribution According to PDS Entitlement (per household)

Card	Wheat	Rice	Sugar	Salt	Kerosene
BPL	16kg	3kg	1,5kg	1kg	5l
APL	/	/	/	/	2l
AY	30kg	5kg	1,5kg	1kg	5l

4.1.2 ORGANISATION OF THE FOOD SECURITY BILL

The FSB was enacted during the last month of the field research and thus a transitional phase from PDS to FSB was introduced. The distribution of the rations under the FSB take place in the same FPS as the rations of the PDS. The entitlement categories BPL and AY remain the same, but the APL card is eliminated. Whereas before the household was the entitled unit, receiving the same amount of rations irrespective of the number of family members, now each

individual is taken into account with regards to the quantity under the FSB. The old ration card booklets have been replaced by new FSB slips. Beneficiaries need to transform their old booklet cards into new slips in the nearby capital city of the district Sagar, to receive the new quantities of the FSB.

Figure 10 Food Distribution According to FSB Entitlement (per individual)

	BPL	AY	Total
Wheat	4kg	28kg	5kg per person
Rice	1kg	7kg	35kg (1-7 people) + 5 kg per person (7+ people)

Figure 11 Product- Comparison of FPS Price and Market Price.

	FPS Price	Market Price
Wheat	1 Rs. /kg	16 - 18 Rs. /kg
Rice	1 Rs. /kg	25 - 60 Rs. /kg
Sugar	13,5 Rs. /kg	36 - 38 Rs. /kg
Salt	1 Rs. /kg	6 - 10 Rs. /kg
Kerosene	15, 8 Rs. /l	Not sold in open market

4.1.3 ORGANISATION OF THE MID-DAY MEALS SCHEME

After having reviewed how the PDS and the FSB function, the MMS needs to be outlined. A warm meal is provided to school children on all school days from Monday through to Saturday in public schools. All children are entitled to two *chapattis* (wheat flatbread) or rice and cooked vegetables per meal. The MMS cook is part of a committee employed by the government, being responsible for the purchase of the needed ingredients at the market in Jaisinagar. The food is prepared in the house of the cook on an open fire, carried to the school by foot and distributed by the cook between one and two pm. All children sit on the floor in a row and receive the food in the plates they bring from home.

4.2 ACTORS

4.2.1 BENEFICIARIES

The following chapter will introduce the beneficiaries of the PDS, examining personal characteristics such as caste-belongings, age, educational levels and the ownership of land. The term beneficiaries in this research means BPL cardholders, as the APL card does not provide any food aliments, but only kerosene, which does not have an influence on the FNS situation of the women and children. This section only refers to the PDS because it is assumed that there are no non-beneficiaries in the MMS.

The beneficiaries are compiled of a heterogeneous group of Dalit, Tribal and High Caste women: 29% are Dalits, 29% are of Tribal descent and 42% are High Caste women. The first aspect about the beneficiaries is that all are married, living together with their husbands and having on average eight household members. The average age of the women is around 30 years old and they have an average number of three children with an average age of eight years old, of which 60% are boys and 40% are girls. More than half of the children are attending school, but only around 30% of the children receive a MMS. The main reason for those who do not receive one tends to be because they no longer attend school or attend a private school in which the MMS is not offered.

In terms of the educational levels of the beneficiaries, it becomes obvious that over half of the women are illiterate. Only 19% completed Middle School and not even 10% Secondary School. A person is entitled to a BPL card if they own under five acres or no land at all: 29% of the beneficiaries do not own any land and 57% own land under five acres. Interestingly, 14% of the benefitting women own land over five acres. It can be noted that

Figure 12. Caste-Belongings Beneficiaries PDS.

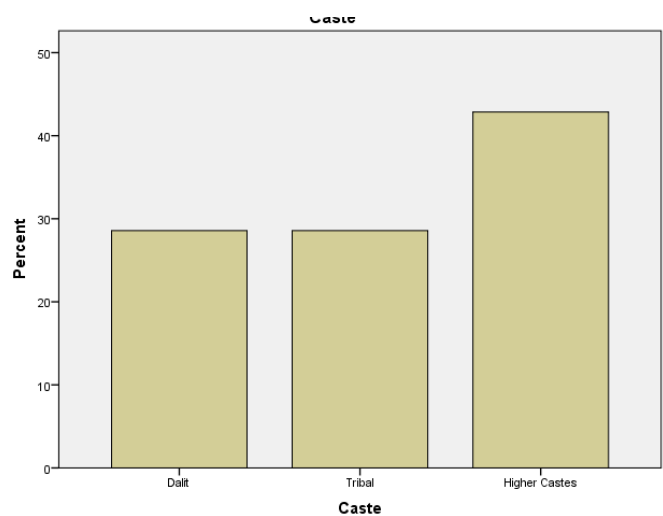
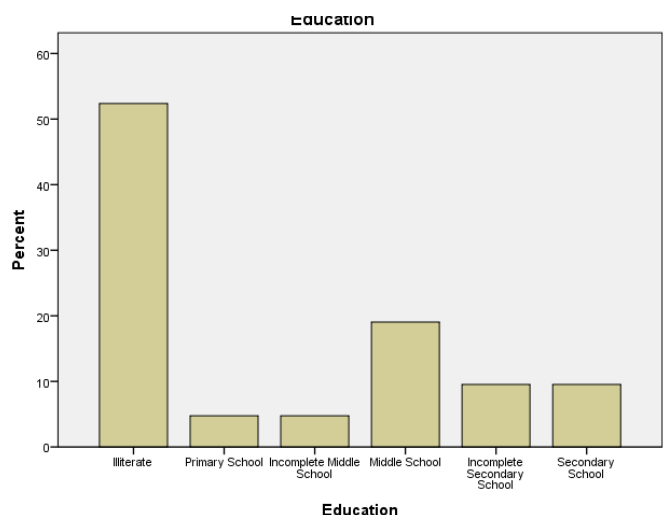


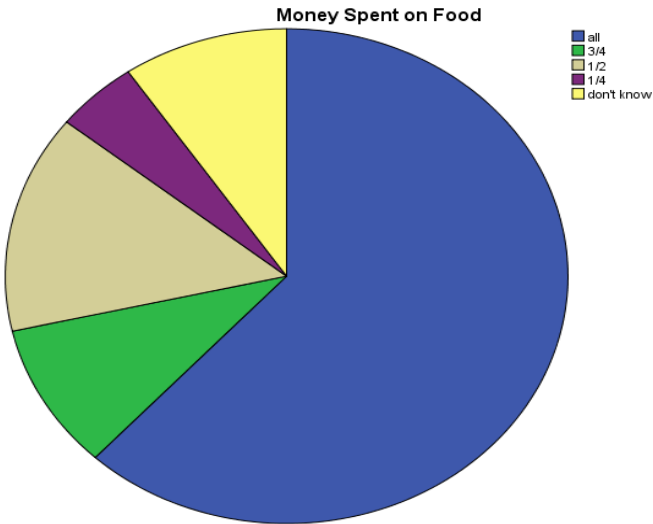
Figure 13 Educational Levels Beneficiaries PDS.



the beneficiaries own on average two productive animals, mostly cows or buffalos, providing them with milk.

Most of the beneficiaries, 33%, generate income through working as a labourer at other people’s field or at construction sides. Many women additionally role local cigars, called *bidis*, as an additional way of cash flow. Around 19% each, either work their own land and sell their agricultural products at the market, or combine this activity with additional labour work. Almost 30% of all beneficiaries have an income between 3.000 and 10.000 Rs, which is higher than the average income of the villagers. The share of income spent on food varies. Better off families spend around one quarter of their income on food, whereas poorer families spend between half and all of their income on food purchases. 62% of the beneficiaries answered that they are spending all of the generated income on food.

Figure 14 Money Spent on Food Beneficiaries PDS.



4.2.2 NON-BENEFICIARIES

Similarly as the group of beneficiaries, the non-beneficiaries are also compiled by a heterogeneous set of caste-belongings: 33% are Dalits, 25% Tribals and 42% are of High Caste. All of them are married and are on average 30 years old.

Figure 15 Caste-Belongings Non-Beneficiaries PDS.

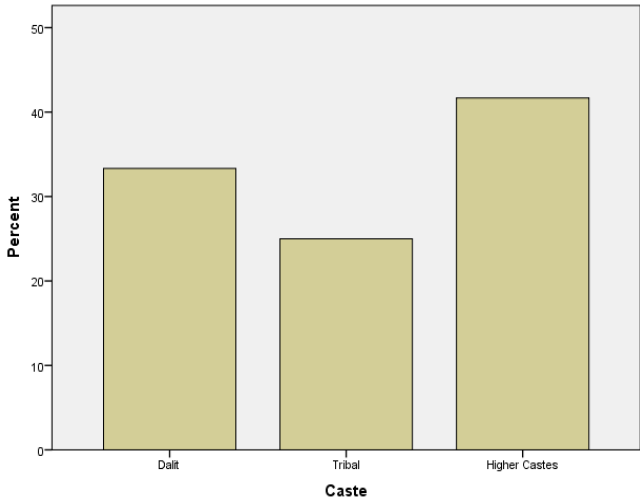
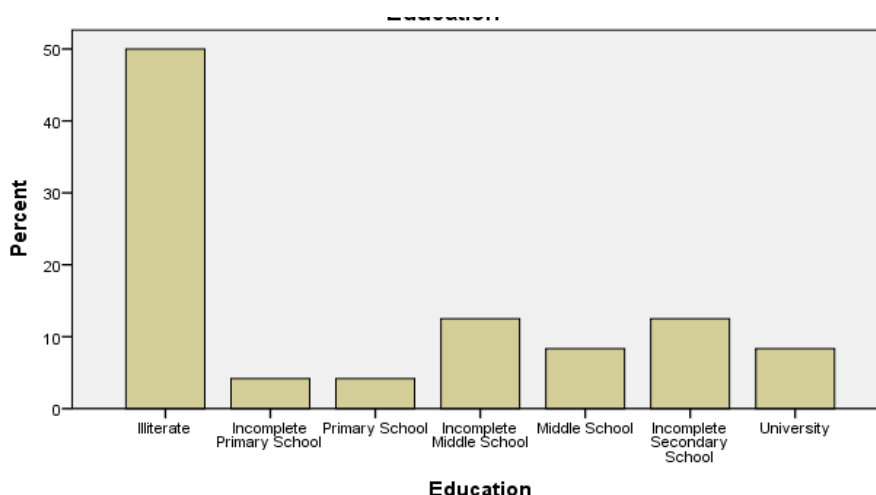


Figure 16 Educational Levels Non-Beneficiaries PDS.



In terms of educational levels it is noticeable that half of the women can neither read nor write and that only 13% reached the stage of incomplete middle school. 13% also started secondary school, but did not complete it. Interestingly, only among the non-beneficiaries, university degree holders could be encountered: 8% indicated that they went to university. These women all came from one of the wealthiest, higher caste families in the village.

Among the non-beneficiaries almost 30% do not own any land and 46% own land under five acres. This number discloses that over 75% of the non-beneficiaries are officially entitled to benefit from the scheme, but are clearly excluded from the PDS. It is alarming that three-quarters of the non-beneficiaries should in fact benefit from the scheme. Exclusion often occurs due to many reasons: women often lack knowledge about the scheme; lack purchasing power for bribes to the officials who issue them with ration cards – as indicated in the section on the PDS; or personal and caste-dominated relationships between applicants and scheme officials leading to exclusion. Only 25% who are actually not entitled to the scheme are correctly excluded.

Figure 17 Landownership Non-Beneficiaries PDS.

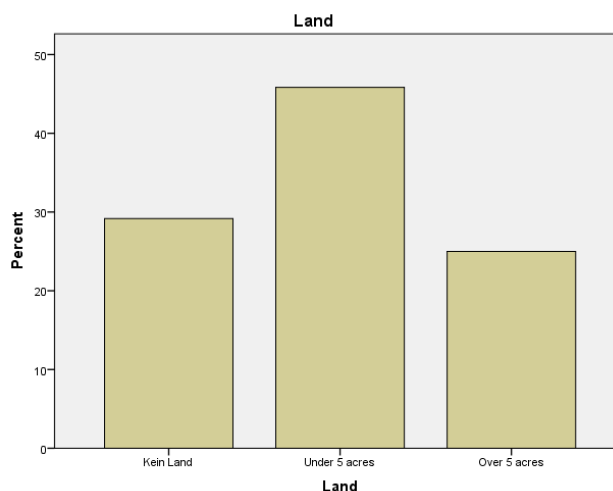
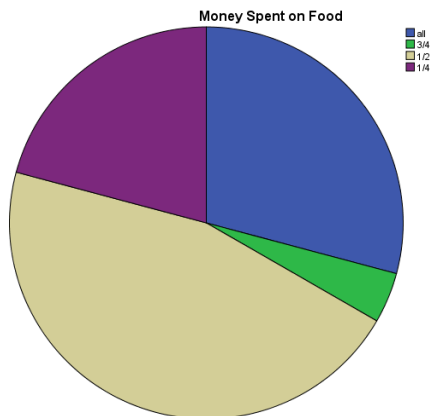


Figure 18 Money Spent on Food Non-Beneficiaries PDS.



The non-beneficiaries have an average of two cows and/or buffalos. Half of the non-beneficiaries work in the agricultural sector and the rest, generally in construction or agricultural labour and roll *bidis*. Most non-beneficiaries earn around 1250 Rs. per month, which is at the lower end of the income scale. One of the highest earners can also be found among the same group with income levels climbing up to 50,000 Rs, a number which is more than four times as high as the first mentioned income level. Almost half of the non-beneficiaries responded that they spend

half of their income on food and around 30% that they would spend all of their income on food purchases. This number indicates that the beneficiaries of the PDS spend more money in percentage on food purchases as compared to the non-beneficiaries.

4.2.3 EVALUATING SIMILARITIES AND DIFFERENCES BETWEEN THE BENEFICIARIES AND NON-BENEFICIARIES

Both the beneficiaries and non-beneficiaries are highly heterogeneous in terms of caste backgrounds, the variety in educational and income levels and the ownership of land. In both groups Dalits, Tribals and High Castes are included to a similar extent. It is alarming that three-quarters of all the non-beneficiaries are wrongly excluded despite being officially entitled to a BPL card which suggests that the food scheme faces severe problems in the entitlement procedure to ration cards. Almost 60% of the non-beneficiaries are low caste, Dalit and Tribal women who have no land or very little land.

The majority of the beneficiaries are of High Caste. The research will further indicate that they have a greater dominance in terms of wealth and social status, so their ability to be issued with a BPL card seems somewhat contradictory to the system. However, it is suggested that this monetary superiority is beneficial in attaining the benefits the scheme offers. Due to the similar heterogeneity of the beneficiaries and the non-beneficiaries questions arise about arbitrary inclusion and exclusion of women in the schemes bound to the official's personal preferences being responsible for the entitlement.

4.3 CASTE-BASED SOCIAL EXCLUSION AND DISCRIMINATION

“I wonder if we also are humans. You make a cut here in the arm and you will find the same blood. It is just God that has put us in this caste. If we were just a bit higher than this caste, how could they discriminate us like this?” (Anonymous Dalit women, Khamaria village, 2014).

The following chapter will provide an insight into social exclusion and discrimination of Dalit and Tribal women. Their lives are determined by social structures, which increase inequality, not only due to the fact that they are women but further for being *Untouchable*. The access, participation and treatment of low caste women within the food schemes is jeopardised due to social exclusion and discrimination, making the achievement of food and nutritional stability an even bigger challenge. In the MMS, this most commonly affects their employment as a cook and in the PDS, in the participation in black-marketing. Additionally, low-caste children are affected by such discriminatory procedures in the distribution of the MMS.

Social exclusion is evident in daily life with the use of separate facilities such as temples, wells, separate religious ceremonies and weddings, the sharing of food, house visits etc. This is to ensure that the higher castes do not come into physical contact with the Dalits and Tribals as it would result in *contamination* which only a bath could purify. If physical contact occurs by accident, lower caste women face verbal violence and harassment. The temples differ according to castes in terms of wealth. The same applies to water wells. In one village one open well was unusable due to a snake poisoning the water in it, which was cause for caste conflicts in that respective village causing a threat to the health of the lower caste families. “When we fetch water, they tell us to move our buckets away and sometimes they (higher castes) even throw away our filled up containers of water” (Anonymous Dalit women, Richhai village, 2014).

Picture 6 Higher Caste Temple.



Picture 5 Higher Caste Temple.



Picture 6 Dalit Temple.



Picture 7 Higher Caste Water Well.



Picture 8 Lower Caste Water Well with Snake in it.

The seclusion of caste is also visible in the layout of the villages: areas are often designated to certain castes so that the families can reside amongst each other with the difference in wealth being visible through the type of housing in the differing neighbourhoods. Caste differences are also exercised in a way in which they are physically visible: upon greeting higher caste women, low castes must make a respectful gesture. Such submissive gestures include bending down to touch near the feet – without actually touching, walking behind higher castes to demonstrate

their hierarchical prominence and remaining seated on a lower platform when they all congregate. Previously they would also have to remove footwear before passing a higher caste's house.

“ (...) when we go to the houses of them (higher castes) we have to sit on the ground and apart from this we cannot talk to them and cannot sit on the same level as them. If we go we have to sit on the floor and if we want to drink water, we have to cup our hands together and they throw the water into our mouths because we are not allowed to drink from their glasses” (Anonymous Dalit women, Richhai village, 2014).

Differences exist within the lower caste itself – i.e. between Dalits and Tribals. MP has a high number of Tribal population whose social status is perceived as significantly higher than the one of Dalits due to the low traditional professions the latter are associated with (cleaning streets, burning dead bodies etc.). Interestingly, Tribals often do not even consider themselves as a lower caste, reflected in the change of their surname to indicate a higher caste status. Some Tribals even consider themselves as high as the highest caste. Tribals generally do not acknowledge *Untouchability* practiced against them in a way that Dalits do, often denying any practices of social exclusion and discrimination.

Tribals are permitted to eat and drink from the higher castes whereas Dalits are strictly not allowed to touch even their utensils. When Dalits want to drink water of higher castes, they receive it thrown into cupped hands, ensuring physical distance is maintained to the glass and the person. However, higher castes do not accept food by Tribals and when they want to share food, Tribals have to arrange for the ingredients which the higher castes will use for cooking. Unlike Dalits, Tribals can enter the temples of higher castes and even use the same water well as them. They can also join their ceremonies and weddings, but when higher castes join Tribal ceremonies, the Tribals have to employ a higher caste to cook for themselves because they do not eat the food prepared by the Tribals, leading to Tribals generally avoiding to take anything of the higher castes to not put themselves in the degrading situation where they have to wash their dishes after having consumed something of them.

The village Kanker Kuiya was deliberately sampled due to the dominance of Tribal population with the aim of assessing whether caste-based social exclusion and discrimination differs when the village consists of lower caste majorities, contrasting with the high caste domination in Khamaria and Richhai. The research revealed that exclusion and discrimination towards Tribals is less severe in Kanker Kuiya as compared to Tribals in other villages. It can be concluded that

the situation of Tribal women is better in terms of employment opportunities and public life, if they compile the majorities in the village. Furthermore, it can be noted that even though Tribals get excluded and discriminated by higher castes themselves, they exclude and discriminate Dalits in the same way.

Through working with a High Caste translator it could be observed that despite his insisting that he does not follow and acknowledge the caste system, he still refused to eat his lunch in lower caste areas in the research villages. His reasoning was that the hygienic standards were too low and people who know him could judge him for eating there, thus insisting to have lunch in a High Caste area. It is interesting to experience the extent to which the norms of the society can have an influence on high educated people even outside the villages.

4.4 POSITION OF WOMEN IN BLOCK JAISINAGAR

As the research only focuses on the most vulnerable sections of the society – women and their children – gender aspects need to form part of the research. Especially when introducing the sample population, it is of importance to gain an insight on the position and role of the women in their rural livelihoods.

... “(A) woman belong(ing) to any caste, whether to GEN or OBC (High Castes) or Harijan (Dalits), is always trapped in a cage with many restrictions. Like even if she wants to eat, she cannot do that before her hubby (husband) and her children eat, however hungry she might be. And the second thing is that if she wants to go out, she cannot do so with her own wish; she cannot go to the market with her own wish whatever work she has to do, she has to do that with prior permission of her husband, also of her in-laws. She cannot even stand outside her house at the door” (Anonymous High Caste women, Richhai village, 2014).

A woman in a rural area like in Block Jaisinagar has certain duties and obligations she has to fulfil. She has to follow a strict moral code of conduct and faces severe pressure from her husband, family and the society in general. However, when only women congregate, they speak confidentially, expressing their standpoint, and laugh with others and talk out loud. Their body language changes immediately with the arrival of any male person they may not be familiar with; they become very shy or even silent and often pull the curtain of their *saree* over their face so that it is completely covered and cannot be seen. They sometimes lower their heads or turn their back towards the men to symbolise complete submission to them. A Tribal women expresses how women do not have the right to speak up:

“In the society and in the village the violence that takes place against women is suppressed. Women cannot talk about their problems. In every house every man keeps his woman down him” (Anonymous High Caste women, Kanker Kuiya village, 2014).

A woman’s restrictions do not vary along different caste-belongings and apply irrespective of whether she is from a lower or higher caste. In terms of FNS it is important to remark that women generally eat less than men and have the duty of feeding their husbands and male household members before eating themselves because they see the man as “equal to God”.

“We eat less than men. If something remains after the children are done, we may eat. If nothing remained, we may have to starve till the evening. The husband will always eat first. We will eat after he has eaten. Whether we are hungry or not our husband will eat first” (Anonymous High Caste women, Richhai village, 2014).

Women are often illiterate and uneducated due to their fathers not permitting them to attend school, mainly out of fear for their daughters’ welfare. They must ask permission from male elders before leaving the house and before talking to strangers. “And if they (husbands) don’t give us permission... what can we do? If we go, we will be beaten up” (High Caste women, Kanker Kuiya village, 2014).

Two in-depth interviews with male respondents (one husband and one son) revealed that men believe a women’s duty is to obey and succumb to the men because he is sustaining and nourishing her and she completely depends on him. Interestingly, the mother of the son reporting this, agreed with him that women need to be dominated. Another respondent expressed that men have been given all the rights to dominate the women; he is convinced that allowing a woman more freedom would have very negative consequences on society and the family unit, as it would destroy its integrity. He even goes one step further by saying that a women would then even start having physical relations with other men if granted freedom, thus requiring his domination to ensure she remains somewhat restricted.

4.5 PUBLIC DISTRIBUTION SYSTEM

ACCESS, PARTICIPATION/ PARTICIPATORY EMPOWERMENT AND TREATMENT/ DISCRIMINATORY PROCEDURES

After having gained an insight into caste-based social exclusion and discrimination, as well as into the diversity of the women benefitting of the scheme, the access, participation and treatment in the PDS and MMS will be examined thoroughly.

4.5.1 ACCESS

The access to the PDS depends on the entitlement to ration cards and the physical reachability of the FPS. The physical access is dependent on whether the FPS is allocated in the same village; if this is not the case, most beneficiaries need to walk many long hours to reach the shop under extremely hot weather conditions, carrying the rations without the support of a vehicle. Irrespective of a person's official entitlement to ration cards, the access to the PDS remains somehow unequal. Even though the card itself guarantees the rations once obtained, the entitlement to those depict the biggest problem in the access to the PDS. The cards are frequently object to arbitrary distribution by officials, such as the Sachiv and the Sarpanch. One Dalit women states that “they (the officials) issue them (BPL cards) to the rich people: they take the bribe and give it to them. We don’t have money to bribe, but even if we did have the money they still wouldn't issue it” (Anonymous Dalit women, Richhai village, 2014).

Major differences exist between different castes in the access to the scheme: High Caste women who generally have a high social status and are by far better off in terms of educational levels, the ownership of land and productive animals etc., have a higher purchasing power which provides them with the ability to bribe the officials in order to get a BPL card issued –



Picture 9 Ration Cards.

irrespective of whether they are actually entitled to one or not. Not every person has to bribe in order to get a BPL card, but it was reported that it is a common occurrence. Being of higher caste has not only major advantages in terms of higher purchasing power for providing unofficial payments, but it also enables them to maintain good contacts with the responsible officials, who are in almost all cases higher castes themselves. This opportunity is denied to lower castes due to the existing social hierarchy.

Some applicants, especially for a BPL card, face wrong entitlements: for example they receive an APL card which only provides kerosene and thus is almost comparable with having no card at all. This scenario on the whole indicates the situation of Dalit and Tribal women. High Caste women also face wrong entitlements, but often the other way around: although commonly only entitled to an APL card, they receive a BPL entitlement. Thus, this research sheds light on those facing unfair unfavourable and favourable entitlements to a BPL card.

4.5.2 PARTICIPATION AND PARTICIPATORY EMPOWERMENT



Picture 10 Food Distribution FPS Richhai.

Participation refers to beneficiaries who were able to obtain a BPL card and thus can participate in the collection of the food rations. Participatory empowerment means the employment and direct involvement of women in the FPS and the organisation of the ration distribution. Even though there is a 30% provision for reservation for women to be employed as shopdealers, no women were employed in the FPS – neither as a shopdealer or helper – nor did they have any influence on organisational aspects as wives of the shopdealers. This could be explained by the fact that some shops might be officially allotted in a women's name, but are run by someone else.

Thus, the PDS does not contribute directly to a potentially better FNS situation through women's employment as shopdealers or helpers. Direct influence of the PDS through employment only applies to those women who are married to a shopdealer, which are employed through their social status and the good contacts they have with those who employ. Moreover, the salary they receive is relatively high considering the

shopdealer only has to work a couple of days per month. Furthermore, he makes additional money through black-marketing practices, which will be elaborated in the next section on Treatment and Discriminatory Procedures.

During the physical participation of the ration collection, problems could be encountered, as some rations were held back and distributed in unjustified quantities. This will also be elaborated in the next section. The pie chart Figure 19 Frequency FPS Visits illustrates that 66% of the people participating in the PDS collect their rations every month. Only 23% almost never collect them. These are either not dependent on the ration distribution because they sustain themselves sufficiently or are only entitled to kerosene, which is less needed than food grains and often leads to people not even collecting it. The rations last on average only a couple of days and some women consider the rations to be helpful although the majority seems indecisive on whether the rations actually improve their food situation or not. By paying visits to all FPSs in the research area, it became obvious that only men engage into FPS-related activities and women do not visit the shop. There is a long queue leading up to the shop, at the entrance the ration card is shown to the shopdealer who records which rations will be distributed. The collector then proceeds to the shopdealer's assistant who measures the amount to be collected and the purchaser stores the goods in a container they brought from home.

Figure 19 Frequency FPS Visits.

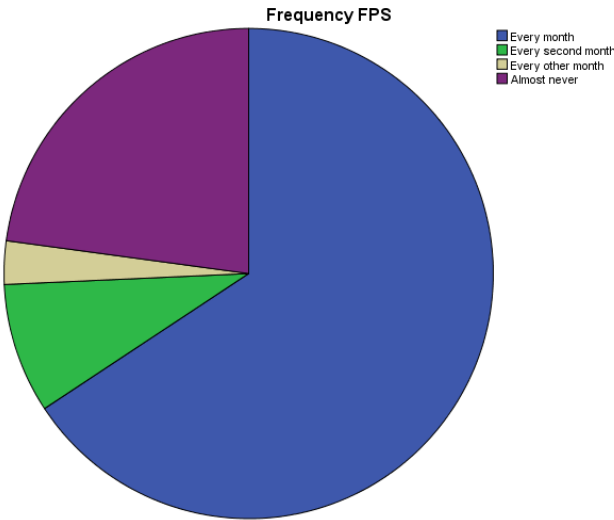
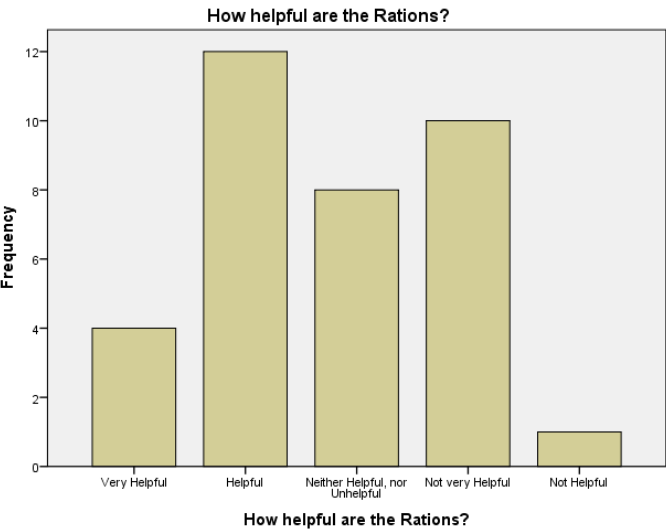


Figure 20 How Helpful are the Rations from the FPS?



4.5.3 TREATMENT AND DISCRIMINATORY PROCEDURES

Every card holder is supposed to receive the rations according to their entitlement. However, there is direct and indirect discriminatory procedures during the distribution. Some Dalits and Tribals reported that they receive less rations than the entitlement on their cards, whereas higher castes receive larger quantities than what they are entitled to. Black-marketing in the food distribution is also a highly common practice: only those with good contacts have the benefit of purchasing any leftover or unclaimed rations at subsidised prices or even get them for free.

“It also happens that if they (higher castes) have a good relationship with the shopdealer then they get some rations for free. If they are close and know each other, the shopdealers do not take any payment from them. And then when I asked for only 25kg, they refused saying that it was not in the stock” (Anonymous Tribal women’s husband, Kanker Kuiya village, 2014).

Sometimes rations are held back deliberately; the FPS pretends that the supply has not arrived yet and the collectors return home with nothing. The relationship between the shopdealer and consumer is influenced by the wealth and influence of the customer, which is in turn often a result of the caste-belonging. Higher castes are thus also benefitting from discrimination and the shopdealer is illegally profiting from backhand sales. None of the lower caste respondents participates in black-marketing because they lack the necessary good contacts with the shopdealers.

“If I need five kilograms of grain, I will get only five, and if he is a rich/upper caste person he will even be provided with more. That means that there is partiality, they (the shopdealers) will invite them (upper caste/rich people) without any card and give them a tank of kerosene where the card provides for five litres only (Anonymous Dalit women, Khamaria village, 2014).

The transitional phase from the PDS to the newly introduced FSB offers many opportunities for black-marketing. There is not a fixed date when the old slips of the PDS will no longer be accepted for collecting rations, so they will continue until the shopdealer himself decides that no old slips will be accepted any longer. Thus, he can retain many rations from those who did not renew their slips yet to sell these as black-market products. The higher castes therefore benefit again: firstly, as participants in the purchase of black-market rations and secondly as the shopdealer initiating and earning money from the sales. The Dalits and Tribals in the sample population could neither buy leftover rations, nor got employed as shopdealers or helpers. One shopdealer, who has been responsible for the food distribution in three villages, accidentally

and unintentionally revealed his monthly salary which amounts to double what the government provides him. Black-marketing enables him to accumulate more than most farmers will make in a month, through the five or six days he works in a month.

Further, the Sarpanch of Richhai village explained during the interview openly how the distribution of the BPL cards works, stating that corruption leads to people who do not have land not have a BPL card: "people with more than five acres land possess BPL cards due to being able to pay the bribe, whereas poor people cannot afford it." Interestingly, he does include himself into the corrupt officials, as applicants for the BPL card need his signature and consent for it to get issued.

4.5.4 DIFFICULTIES IN OBTAINING A RATION CARD

When interviewing the women about the difficulties faced when obtaining a ration card, many reported similar experiences. Many of those who managed to obtain a ration card had to bribe the Sachiv and Sarpanch between 500 and 2.500 Rs. Considering that the average salary is around 1.500 Rs., this exceeds what most women can afford. Many of those who did not manage a card often could not afford the bribes they asked for or would merely get rejected due to caste discrimination. The applicant's lack of knowledge on the procedure depicts a hurdle in the application, but some higher caste women were lucky enough to receive help from the side of the officials. However, Dalit women reported that they got rejected in many occasions as the officials were of the highest castes themselves. Delays of one to two years were reported before the cards were issued. Others stated that they had been trying for five to twenty years without any progress, even though they had met the requirements and submitted the form up to six times. Many had to come back several times and put pressure on the officials to accelerate the process. However, people often abandon their application as they do not have any hope for a change. In one case, the card of a women was arbitrarily downgraded to a card that entitled her to less, even though her domestic situation had not changed. As a result, she now has to live with less rations and does not manage well.

4.5.5 CASE STUDY ON UNFAIR ENTITLEMENT

The following case study gives an impression of the kind of difficulties Dalit women face in the struggle for a BPL entitlement. It gives an insight into their living circumstances and the kind of hurdles they have to take in the process of accessing the PDS. The woman's identity

will remain anonymous and will here-in be referred to as Poonam and is a Dalit woman from the village of Khamaria:

Poonam sits outside her house made out of cattle manure; her daughter-in-law is resurfacing the porch with fresh stool, putting her bare hand into the bucket and spreading the fresh, warm mass of stool onto the flat ground. She is sitting on a wooden bed frame wrapped in strings that act as a mattress and she holds on to her timber stick that supports her when she walks. Her entire family surrounds her, looking curiously at the interaction between her and the house guests. They wonder how the interview will be held without the interviewer speaking Hindi and the concept of using a translator seems somewhat foreign. It has been over 10 years now that she and her family are struggling for a BPL entitlement. They are landless and cannot produce any wheat for themselves. Her husband is handicapped and cannot work as a labourer on others people's fields, so their son and she need to work instead, without any support from the government. They neither get social benefits that they should be entitled to due to her husband's disability, nor any ration card. They have not even been issued with an APL card. They know they have the right to a BPL card; they are some of the poorest villagers, with no land, but still remain without a strong voice with which they can defend themselves. They complained to the Sachiv and Sarpanch several times, tried to bribe them for issuing a BPL card on many occasions, when they realised that fulfilling official requirements and going through the official procedure will not bring any change. They lack the power and money to bribe them an adequate amount and lack time to sort things out. What they offered is all they can afford. Higher castes in the village, who have land and money, she says, manage a BPL entitlement: "We do not even get one kilogram, but the higher castes they even manage quintals of wheat and rice in addition to what the BPL card provides them with."

Her family is not an exception. Her neighbour, as many others as well, faces the same problem as her family. When passing by the neighbour's house, two women are sitting on the floor, surrounded by two infants. One is rolling local bidis. She depends on rolling because she receives 100 Rs. (1, 20 €) per day for them. They do not have land either so her husband has to work other people's land. However, her family was lucky; she at least managed an APL card, but the kerosene does not even last the whole month. The bribe of 500 Rs. (6, 00 €) was rejected immediately. Others must have offered more than her husband because women do not go there. That is not their business. Luckily her grandson gets a warm meal from the nursery school - the Angewari - and the granddaughter is still being breastfed. At lunch time, five to six infants get

walked by their parents to the Angewari, getting their own plates filled. However, the Angewari does not function, she reports: “Children are supposed to be there from eight in the morning till four in the afternoon, playing and getting educated, but they only open sometimes for lunchtime”.

This case study provides a microcosmic view of the multiple villagers that are faced with the same struggle. The actions witnessed and heard in the case study of Poonam were replicated in many occasions with the respondents throughout the villages.

4.5.6 EVALUATING THE PUBLIC DISTRIBUTION SYSTEM

Summarising, there is competition and bribery around obtaining the BPL cards. Whether or not the BPL card actually helps to improve women’s and children’s FNS situations, households perceive it as beneficial and struggle to get a BPL entitlement. Even the rations of the highest possible entitlement for the sample population, are highly undiversified: the main aliments supplied are wheat and rice, both carbohydrate providers. No vegetables or fruit are distributed, which means that although the PDS has potential to increase food security, it will not improve nutrition security due to the lack of distributing vitamin rich aliments.

As wheat and rice are basic foods and almost all consumed on a daily basis, they satisfy most basic needs and enable beneficiaries to save money on the most essential aliments. The price of wheat at the market is 17 times higher than in the FPS on average and rice is about 43 times more expensive. The price difference is a high incentive for applicants of the BPL entitlement. However, there are strong doubts about the quantities made available, especially considering that the number of household members were not taken into account until the introduction of the FSB. In a country where the concept of joint families is a common practice, this makes the distribution extremely unequal.

The access to the PDS is unequal in terms of applicants for a BPL card. A considered number of beneficiaries of the PDS are better off families with sufficient land and productive animals, leading to some poorer, landless people being left out, sometimes due to a lack of financial capital available for unofficial payments. The wealthier families tend to be of high castes with those excluded lacking social and financial resources.

Furthermore, rations are sometimes distributed arbitrarily. Quantities given out can differ according to the wealth and caste of the person collecting it as opposed to what the ration card entitles them to. This especially applies in the practice of black-marketing, which not only allows the higher caste ration collectors to benefit, but also the shopdealers gain a surplus on their government salary. On the other hand the researched Dalits and Tribals cannot engage in such activity due to their low social status.

When interviewing the PACS society manager – the highest person responsible for the PDS and FSB – it became clear that a lack of knowledge and information flow exists with regards to organisational and managerial aspects of the food schemes. The respondent provided inaccurate information on the new quantities being distributed under the FSB, even though he was in possession of documents containing accurate information on the FSB. Lack of knowledge and information leads to wrong quantities being distributed in the FPS, as the society manager is responsible for passing on the information to the shopdealers. It can be concluded that the functioning of the PDS is undermined, as a considered number of applicants fail in the entitlement procedure, commonly due to incidences of corruption favouring higher caste families.

4.6 MID-DAY MEAL SCHEME

ACCESS, PARTICIPATION/ PARTICIPATORY EMPOWERMENT AND TREATMENT/ DISCRIMINATORY PROCEDURES

4.6.1 ACCESS

The access to the MMS refers to the physical reachability of the children to the school. As the villages researched are small, all schools are within walking distance for the children. Even though the MMS is officially provided to all children with no exception, lower caste children cannot access the MMS in the same way as higher caste children do, as elaborated in the treatment section.

4.6.2 PARTICIPATION AND PARTICIPATORY EMPOWERMENT

It was discovered that only women get employed as MMS cooks. Corruption plays a major role in the MMS in terms of who is employed as it is highly determined by their caste-belonging. A committee should be set up and be responsible for the organisation and cooking of the MMS.



Picture 11 MMS Cook Richhai.

The committee is required to compile the caste composition present in the village so that higher and lower castes are officially in charge of the MMS together. However, the function of including Dalit and Tribal women in the committee is the fulfilment of the official requirements. In practice, no low caste cook prepares the meal: in three out of four cases the MMS cook is of a high caste to ensure that all children can eat the cooked food – higher castes do not eat food prepared by lower castes because they would get *poisoned* and *polluted* by the food. The MMS cook belongs to a lower caste in only one school, but this results in the higher caste children not eating the *poisoned* food cooked by her. The only reason for the employment of a lower caste women as a cook in this case is due to the fact that the vast majority of inhabitants in the village are of lower caste.

4.6.3 TREATMENT AND DISCRIMINATORY PROCEDURES

Higher caste cooks are very open about social exclusion and discrimination practiced by them and about the manipulation of the group forming of the committee and in admitting that they have to make sure that higher caste children can benefit from the MMS, even if it is on the expense of lower caste women and children. Only the cook itself, but not the committee members who help organising the ingredients are receiving a salary. Therefore the position as cook

is a highly popular one, which is mostly denied to Dalit and Tribal women due to their social status, as a Dalit women from Khamaria village states:

“In the MMS we can form part of the school management society but will not do the actual cooking of the food. It will always be done by some upper caste person. Maybe on paper it is our name as a cook but we are not allowed to cook” (Anonymous Dalit women, Khamaria village, 2014).

Another Dalit women further describes the situation of low caste children in the MMS:

“Upper castes receive their meals first and only then the Harijan (Dalits) children will receive theirs...and they distribute it by separating our children and they also distribute it in a different way...they make them sit all together but they will provide the food to the upper caste children first and then to the SC (Dalit) children and in a way that they do not touch the dishes of them as if they are throwing the food onto their plate...Their spoons, bowls and cutlery are not supposed to get in touch with the once of the person distributing the food” (Anonymous Dalit women, Khamaria village, 2014).

Furthermore, the majority of the cooks are better off than the average village woman and benefit not only from direct employment, but from retaining food leftovers for their own families. They frequently fail to disclose the real attendance of the school: only around 50% of the children regularly attend. They order food for all registered children and then keep half of the ingredients for their own consumption.

Persisting unequal treatment is further manifested in the fact that in all four schools high caste children only eat when a high caste person is preparing the food. In two out of four schools major discriminatory procedures are still being practiced: high caste children sometimes receive their food first, as a consequence, Dalit and Tribal children sometimes only receive a complete meal when food is left over. This does not occur on a regular basis, but still happens every now and then. These children sometime lack any sort of vegetable in their weekly school diet.

During lunchtime it could be observed that the majority of the high caste children in the school where a Tribal women cooks, go home for lunch. However, one high caste boy is designated to command the Dalit children during their meals, who sit in a row on the floor, while he stands and gives them instruction on how to eat their lunch in an aggressive tone, making sure that

physical contact is avoided. His body language expresses arrogance, authority and superiority. When asking him why he would not join the children for lunch, he replies in a patronising and egotistical way that they are *Harijans*, indicating that they are Dalits, as though that would be self-explanatory. This behaviour is encouraged by the teacher, who is of High Caste himself.

Picture 12 MMS Food Distribution Kanker Kuiya.



4.6.4 EVALUATING THE MID-DAY MEALS SCHEME

The position as a MMS cook has great potential to improve the cooks and her children's FNS situation as it provides a good, stable income to purchase food is thus a highly popular position. Moreover, the cook retains leftover food and ingredients for her own consumption, including the food sent for children who do not attend the school and are thus no longer entitled to the MMS. Considering that in almost all cases the cooks only prepare food for half of the children due to low school attendance rates, their work is made easier. However, it is only one women, who gets employed as the cook. Again social status of the women and above all their caste-belonging decide on who is employed. Thus, in most cases it is the Dalit or Tribal woman who does not get this favourable position.

The MMS also has the potential to function as a discharge for the mothers of the school children, as she has to provide one meal less for her children, especially one which promises vegetable on all days. However, mothers have been complaining about the quality and the quantity of the food. Some children decide to not eat the food because they do not enjoy it. Children are often not satisfied by the little quantities provided and sometimes they only get chapattis without any vegetable. It can be concluded that Dalit and Tribal women and children benefit less from the MMS than High Caste women and children, due to the practice of social exclusion and discrimination towards the former in the employment of the MMS cook and through the occasional preference that is given to higher caste children during lunch distribution. It is suggested that higher caste children are less dependent on receiving a warm meal, as they have the power to reject the food because it is not cooked in the way they want it to be.

The distribution of warm meals in schools had previously been perceived as having a strong positive effect on the nutritional status of the children, encouraging children to attend school and increase concentration and enrolment, retention and attendance rates. However, this has generally not been the case in all schools in the region. Children often play truant and do not attend, go to school only to receive the meal, or even visit the MMS cooks house directly to be fed. Children have to bring their own plates to school, which are often dirty. Water is not provided to the children either. According to Drèze and Goyal, there is evidence that the MMS is beneficial in terms of social equity and the employment for women. The research however, reveals the opposite: the MMS gives the opportunity to practice the caste system, not only towards the women who seek employment but towards the children through giving preference to higher caste children in the food distribution and the physical practice of *Untouchability*.

4.7 FOOD AND NUTRITION SECURITY

After having reviewed the functioning of the PDS and MMS, the following chapter discusses the access and utilisation of food. It is necessary to find out whether food is produced for self-consumption or commercialisation purposes to either have better direct access to food or improve indirect access to food through income generation. After examining how food is accessed by the women, it is crucial to review how food is consumed. Through the food frequency assessment and a typical daily diet, consumption habits and nutritional values can be evaluated. It will further be assessed whether women owning a BPL card have better nutritional values than women who do not receive any food rations. As knowledge on nutritious food, sanitation and hygiene influence the quality of the food intake, these topics will also be addressed. In the

introduction of the empirical chapters, a distinction is made between the beneficiaries and the non-beneficiaries of the PDS. As the research disclosed that caste-based social exclusion and discrimination effect the inclusion of lower caste women in the PDS and MMS, it is interesting to find out what caste-differences in the food and nutritional status of the women exist.

ACCESS TO FOOD

Direct and indirect access to food exist. Direct food acquisition refers to on-farm production of food and self-sufficiency. The existence, size of land and the way it is cultivated needs to be taken into account, as well as the kind and number of productive animals owned by the women. Another indicator for the direct access to food is the inclusion in the PDS. Indirect access to food means the detour via income generation which creates the means to make food purchases/ the access to food possible. Aliments that are secured through the generation of income are purchased on the local market in Jaisinagar.

4.7.1 DIRECT ACCESS TO FOOD

EXISTENCE OF LAND AND PRODUCTIVE ANIMALS

The existence of land is one of the most valuable resources for women in the area. It either directly provides aliments like wheat, which is consumed on a daily basis, or it is used indirectly as a source of producing income through the commercialisation of crops on the daily market in Jaisinagar. The cultivation is highly undiversified: all farmers only grow wheat from October to March and soya beans from May to September due to a major lack of water in the area, which does not account enough for horticulture. Only very few people grow small quantities of potatoes and tomatoes in their gardens for their self-consumption, covering very little of their food needs.

As the ownership of land of the beneficiaries and non-beneficiaries has already been outlined, it is interesting to have a closer look at caste-differences in the same indicators: Higher caste women own more land than lower caste women. Over 71% of the Dalits do not own any land, compared to 25% of the Tribals. All High Caste women own land, compared to Dalits, of whom which only around 29% own land (all of them under five acres). An even higher percentage of High Caste women compared to Dalits with land under five acres, own even more land over five acres. The ownership of an irrigation system, which significantly improves the production, follows the same trend: almost half of all higher caste people have an irrigation system, but only 7% of the Dalit women own one.

Land Ownership						
	Dalit		Tribal		High Caste	
Amount of Land	Fre- quency	Percent	Fre- quency	Percent	Fre- quency	Percent
No Land	10	71,4	3	25,0	0	0,0
Under 5 Acres	4	28,6	6	50,0	13	68,4
Above 5 Acres	0	0,0	3	25,0	6	31,6
Total	14	100,0	12	100,0	19	100,0

Figure 21 Ownership of Land According to Castes (percent).

Animal Ownership						
	Dalit		Tribal		High Caste	
Number of Animals	Fre- quency	Per- cent	Fre- quency	Per- cent	Fre- quency	Percent
0	7	50	2	16,7	1	5,3
1	4	28,6	3	25,0	3	15,8
2	0	0,0	3	25,0	6	31,6
3	2	14,3	2	16,7	3	15,8
4	0	0,0	2	16,7	5	26,3
5	1	7,1	0	0	0	0,0
6	0	0,0	0	0	0	0,0
7	0	0,0	0	0	1	5,3
Total	14	100	12	100	19	100

Figure 22 Ownership of Productive Animals According to Caste (percent).

Most women own productive animals, such as cows or buffalos, but the products gained from the animals are too little to commercialise them at the market. Livestock provides just about enough milk for tea and is often regarded as a sign of wealth. However, similar figures to the ownership of land can be found with the ownership of productive animals: 50% of the Dalits do not own any productive animals, compared to around 17% of the Tribals and 5% of the High Castes. It can be concluded that the higher the caste, the more land and the more productive animals are being owned.

INCLUSION IN THE PUBLIC DISTRIBUTION SYSTEM

The number of BPL card holders amongst all castes is roughly the same. The percentage of Tribal women who own a BPL card is even higher than the one of High Caste women. However, the percentage of people who have no cards between High Castes is very low, whereas the percentage of no cards between Dalits and Tribals are comparatively high. Every Dalit women in the sample should have a BPL card because they either do not have land or have land under five acres, but only 43% actually own a BPL card. 75% of the Tribals should have a BPL card for the same reason, but only 50% have a BPL card. The opposite logic applies to the higher castes: only 13% are entitled to a BPL card, but almost half of all higher caste respondents own in fact a BPL card.

Figure 23 Ownership of Card-type According to Caste

Card						
	Dalit		Tribal		High Caste	
Card Type	Fre- quency	Per- cent	Fre- quency	Per- cent	Fre- quency	Per- cent
BPL	6	42,9	6	50,0	9	47,4
APL	3	21,4	2	16,7	9	47,4
No Card	5	35,7	4	33,3	1	5,3
Total	14	100,0	12	100,0	19	100,0

4.7.2 INDIRECT ACCESS TO FOOD

WAYS OF INCOME GENERATION

The main way of income generation for those who have land is farming. Almost 70% of the respondents commercialise their agricultural products at the market, in return of cash for food purchases. Those who do not own land, work as temporary labourers on the fields of others or on construction sites. Many women additionally role *bidis* as a means of generating additional cash flow. As outlined in the earlier section, higher caste women own more land than Dalits and Tribals, which means that they are likelier to be able to commercialise their agricultural products. Most of the labourers are Dalits due to the lack of having their own land. The work as a labourer is a very precarious employment form as the workers depend on landowners to employ them, which is highly unreliable and completely dependent on the harvesting season. It is merely temporary work without any sort of contract or stability. Problems arise outside the harvesting season as Dalits often do not know when they will earn money again. Landowners commercialise their products in a way that the incoming cash-flow is distributed over all seasons and their own share of wheat is retained so they do not have to buy any additional over the course of the year. Landless people do not only lack stable work and thus income, but also the insurance of at least having wheat for their family consumption.

Figure 24 Ways of Income Generation.

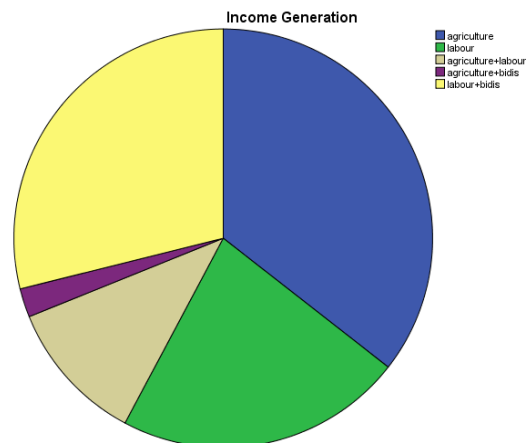
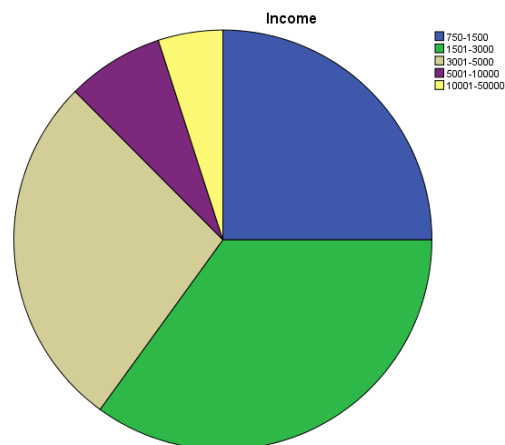


Figure 25 Levels of Income.

INCOME

The levels of income among all respondents range from 750 Rs. to 50,000 Rs. Most respondents earn between 1,500 and 3,000 Rs. Major differences in the levels of income exist: the lowest earners are Dalit and Tribal women and one of the people earning most are found amongst the High Caste women.



UTILISATION OF FOOD

After having looked at the dimension access to food, the utilisation of food will be examined. For the utilisation of food the focus lays on the consumption patterns of the respondents – which products are consumed with what frequency and what does a typical daily diet consist of. Based on the consumption patterns, nutritional values of the women can be assessed. As knowledge on nutritious diets and sanitation and hygiene influence the quality of the food, these aspects will also be included.

A balanced diet consists of the right nutrients in the right quantities. Macro and micronutrient intakes need to be consumed in a balanced way. Macronutrients are nutrients that provide calories or energy. As the McKinley Health centre states, “nutrients are substances needed for growth, metabolism, and for other body functions. Since “macro” means large, macronutrients are nutrients needed in large amounts” (McKinley Health Centre, 2014). The three macronutrients are carbohydrate, protein and fats. Micronutrients are vitamins, minerals and dietary fibre. They are only needed in small quantities, yet they are very important for a nutritious diet.

4.7.3 FOOD FREQUENCY ASSESSMENT

The table provides detailed information on the consumption patterns of the respondents, indicating what aliments are consumed in what frequency. No general statements can be made about the beneficiaries as a whole group with regards to the utilisation of food, as major differences due to differing social status and wealth exist. The distinction needs be made between different income levels of the women, which is heavily influenced by their caste-belongings.

Figure 26 Frequency of Food Consumption.						
Aliments	Daily	A few times per week	Weekly	Monthly	On festive days	Never
Rice	36,00%	36,00%	24,00%	4,00%	0,00%	0,00%
Wheat	97,80%	0%	0%	0%	0%	2,20%
Maize	2,20%	0%	6,70%	8,90%	8,90%	73,30%
Pulses	20%	44,40%	28,90%	2,20%	0%	4,40%

Potatoes	20%	44,40%	28,90%	2,20%	0%	4,40%
Jowar	0%	0%	0%	6,70%	2,20%	91,10%
Bajra	2,20%	0%	0%	4,40%	2,20%	91,10%
Tomato	97,80%	0%	0%	0%	0%	2,20%
Carrots	2,20%	24,40%	24,40%	35,60%	0%	13,30%
Aubergine	11,10%	44,40%	35,60%	4,40%	0%	4,40%
Green Beans	4,40%	33,30%	33,30%	17,80%	0%	11,10%
Peas	4,40%	33,30%	33,30%	13,30%	0%	15,60%
Spinach	2,20%	40%	35,60%	13,30%	0%	8,90%
Cabbage	0%	37,80%	33,30%	15,60%	0%	13,30%
Cauliflower	0%	33,30%	33,30%	22,20%	0%	11,10%
Sprouts	0%	8,90%	8,90%	42,40%	2,20%	37,80%
Turnip	0%	4,40%	2,20%	15,60%	2,20%	75,60%
Okra	0%	2,20%	2,20%	13,30%	2,20%	80,00%
Lentils	44,40%	26,70%	20,00%	2,20%	0%	6,70%
Chickpeas	0%	0%	2,20%	44,40%	4,40%	48,90%
Radish	26,70%	17,80%	11,10%	22,20%	0%	22,20%
Pumpkin	0%	8,90%	20,00%	46,70%	4,40%	20,00%
Coriander	97,80%	2,20%	0%	0%	0%	0%
Garlic	73,30%	2,20%	0%	2,20%	0%	22,20%
Onion	97,80%	2,20%	0%	0%	0%	0%
Chilly	97,80%	2,20%	0%	0%	0%	0%
Ginger	75,60%	4,40%	4,40%	13,30%	0%	2,20%

Vegetable Oil	73,30%	6,70%	4,40%	2,20%	2,20%	11,10%
Soya Oil	82,20%	0%	0%	0%	2,2	15,60%
Groundnut Oil	6,70%	2,20%	2,20%	6,70%	0%	82,20%
Banana	2,20%	2,20%	20,00%	53,30%	8,90%	13,30%
Apple	2,20%	4,40%	17,80%	37,80%	22,20%	15,60%
Oranges	2,20%	4,40%	17,80%	37,80%	20,00%	17,80%
Lemon	13,30%	8,90%	15,60%	42,40%	6,70%	13,30%
Pomegranate	0%	6,70%	4,40%	28,90%	2,20%	57,80%
Papaya	0%	6,70%	8,90%	51,10%	8,90%	24,40%
Grapes	0%	6,70%	13,30%	51,10%	13,30%	15,60%
Mango	31,10%	4,40%	11,10%	35,60%	4,40%	13,30%
Coconut	2,20%	4,40%	2,20%	31,10%	48,90%	11,10%
Milk	77,80%	6,70%	6,70%	4,40%	0%	4,40%
Butter	13,30%	4,40%	20,00%	13,30%	4,40%	44,40%
Butter Milk	8,90%	6,70%	20,00%	4,40%	4,40%	55,60%
Yoghurt	6,70%	0%	0%	11,10%	0%	82,80%
Ghee	17,80%	2,20%	15,60%	46,70%	2,20%	15,60%
Paneer	2,20%	0%	2,20%	13,30%	0%	82,20%
Sugar	97,80%	0%	0%	2,20%	0%	0%
Desserts	2,20%	0%	4,40%	13,30%	80,00%	0%
Dried Fruits	0%	4,40%	0%	4,40%	44,40%	46,70%

Tea	100,00%	0%	0%	0%	0%	0%
Coffee	0%	0%	0,00%	6,70%	0%	93,30%
Fish	0%	0%	2,20%	8,90%	4,40%	84,40%
Meat	0%	0%	0,00%	6,70%	2,20%	91,10%
Eggs	0%	0%	4,40%	8,90%	2,20%	84,40%

CARBOHYDRATE-RICH ALIMENTS

Carbohydrates are needed in the largest amount, as it is the body's main source of fuel (McKinley Health Centre, 2014). Looking at the consumption table, it is striking that 98% of the respondents consume wheat on a daily basis. The consumption of rice and potatoes is also relatively high: 36% of the women consume rice daily and 44% consume potatoes a few times per week. 74% never use maize as it is not very typical in the region. Carbohydrates are an important source of energy, which is especially important when doing physical work.

PROTEIN-RICH ALIMENTS

Protein is found in meats, poultry, fish, meat substitutes, cheese, milk, nuts, legumes etc. and is especially important for growth (McKinley Health Centre, 2014). Non-vegetarian dishes, including eggs, are rejected on a cultural basis in the research which leads to a major lack of protein. The extent to which vegetarianism is practiced in India depends on the region and prevailing religions and cultures. The research area is conservative Hindu; the sample population is exclusively Hindu. It is believed that animals are sacred and thus, only around 9% consume meat and around 15% consume fish and eggs with a frequency differing between on a festivity and monthly. No knowledge exists on the consequence of not consuming any meat or fish and thus no complementary foods are consumed aiming at compensating the lack of proteins through the vegetarian diet.

4.7.4 TYPICAL DAILY DIET

Highly unbalanced and unvaried dietary intakes are consumed on a daily basis among beneficiaries and non-beneficiaries of the food schemes and among respondents throughout all castes. A differentiation can be made between wealthier and poorer women, as wealthier women with higher purchasing power have the means to buy more nutritious and expensive food.

Among all respondents, only two meals are taken per day, as no breakfast exists as such. The first meal is taken at lunch time after one pm, even though the average villager starts the day at around six am in the morning. The first meal children receive is the MMS in the schools between one and two pm. A typical daily diet consists of tomatoes, potatoes, onions, lentils, wheat and/or rice. Milk is almost only used in tea and barely consumed purely. Dairy products, such as butter, butter milk and yoghurt are used very rarely, also resulting from insufficient milk. Fruits are very costly and thus are also not consumed frequently. Some better off families eat more fruits than the poorest ones due to better affordability. It can be summarised that the daily dietary intake is highly undiversified and repetitive. It is characterised by high carbohydrate intake and a lack of protein and vitamin-C, as the women consume wheat and rice as their main aliments with vegetable being consumed in very small quantities.

4.7.5 KNOWLEDGE ON NUTRITIOUS FOOD

Knowledge about healthy food and its preparation can strongly influence what aliments are eaten and the way they are consumed. Cultural acceptability of food determines if foods are consumed and appreciated or not. The research area provides a great example of culturally unaccepted food in form of non-vegetarian dishes, as previously indicated. As neither the PDS nor the MMS claim to contribute to knowledge extension, no distinction between beneficiaries and non-beneficiaries has to be made. No significant difference between the answers of higher and lower caste women with regards to knowledge about nutritious aliments could be noted.

Figure 27 Knowledge on Nutritious Food.

	Wheat, Rice		Fruit, Vegetable		Dairy		Green Vegetable		Dried Fruits	
	Fre- quency	Per- cent	Fre- quency	Per- cent	Fre- quency	Percent	Frequency	Per- cent	Fre- quency	Percent
No	25	55,6	10	22,2	21	46,7	30	66,7	38	84,4
Yes	18	40,0	33	73,3	22	48,9	13	28,9	5	11,1
Did not un- derstand	2	4,4	2	4,4	2	4,4	2	4,4	2	4,4
Total	45	100,0	45	100,0	45	100,0	45	100,0	45	100,0

When researching knowledge about nutritious, healthy diets among the women, it was striking that 40% mentioned rice and wheat as nutritious foods. 73% of all respondents consider fruit and vegetables as being healthy. Although the latter were also listed, it is surprising that primary carbohydrate deliverers, having little nutritious values compared to fruit and vegetables, are among the healthiest foods the women mentioned. It shows that little awareness and knowledge about nutritious aliments exists and that food is not cooked according to existing knowledge. In addition, around half of the respondents consider dairy products as good for their health. Only under 30% think that green vegetables are especially healthy and only 2% consider eggs as nutritious. In some cases, the women did not understand the word healthy and could therefore not answer the question.

Even though some knowledge exists on what is considered healthy, it is only applied little in daily cooking habits. Half of the women, for example, consider dairy products as healthy, however, almost none of the respondents actually consume milk purely and only few consume any dairy products, such as butter, yoghurt or butter milk frequently, due to a lack of milk production. As mentioned earlier, fruits are costly and thus consumed rarely although the majority of the women consider them as healthy. Green vegetables which are providers of iron, were also mentioned as nutritious but some of those are more expensive, which can lead to the preference of cheaper vegetables which contain less iron. It can be concluded that even though some knowledge may exist on healthy foods, it cannot be fully applied due to a lack of resources.

4.7.6 SANITATION AND HYGIENE

It is not merely the quantity but also the quality of the food that matters. A clean surrounding in terms of cooking and storage of foods are prerequisites for a healthy living. Diseases can be prevented or transmitted through unhygienic circumstances and bacteria. It is thus necessary to take the living circumstances and corporal hygiene of the respondents into account.

As no running water exists in the houses, water needs to be brought from outside, making it challenging to maintain any standard of hygiene. The food is always prepared in a traditional sense, without a kitchen and on the floor. It is cooked on an open fire, mostly outside on the porch of the houses. Although all houses have electricity, none of the respondents own a fridge. As the food is stored inside or outside the house in basic containers it was reported that cats and dogs eat parts of the leftovers throughout the night.

The dishes are almost never cleaned with soap or boiling water, but with the help of burning ashes. Boiled water is only used in winter, not for hygienic reasons but due to cold weather conditions. Even though the women take a daily bath, they and their children almost never make use of soap after using the bathroom or before and after preparing or eating food. Animals, like cows, goats, dogs and cats live very close to the families and where the food is prepared and stored, posing a source of dangerous bacteria and potential diseases.

4.7.7 EVALUATING THE ACCESS AND UTILISATION OF FOOD

The access to diverse food is poor. Firstly, the PDS only offers carbohydrates, but no aliments with nutritional values. Secondly, people who own land have a highly undiversified production, only cultivating two sorts of grains. The production and the direct access to food depends on the existence of land, which especially for Dalits and Tribals is not guaranteed. However, the market in Jaisinagar offers more diverse fruits and vegetables, but still poses the question of affordability. Women with a higher income invest in more nutritious food.

Food is utilised according to affordability and availability. As the access to food is not very diversified and the way it is used is also poor; little variance in how food is prepared and consumed can be noted. The food frequency assessment and typical daily diet shows that carbohydrate intake is very high and protein is very low, as almost no meat, poultry, fish or any meat substitutes are consumed. The same applies to cheese and legumes in terms of proteins and vitamins and minerals in terms of micronutrients. Living in the research area for three months and consuming the same aliments as the sample population, provided a good impression on how repetitive the diet is. Social desirability in the villages plays a major role in what kind of foods are consumed. Even though meat and eggs can be accessed in very rare occasions, these products need to be consumed secretly. No tolerance exists with regards to other people consuming any non-vegetarian dishes, including eggs, which makes it difficult for people to have access to protein, even if they decide on a non-vegetarian diet.

It can be concluded that wealthier women are more likely to consume healthier foods than poorer, landless women. The likelihood that the wealthier women are of High Caste is very high. However, it can be concluded that the utilisation of food throughout all castes is not very diversified; even High Caste women do not eat very diverse and healthy food, but the likelihood

is still higher, that they invest in more vitamin C-rich foods than Low Caste women due to higher purchasing power.

FOOD AND NUTRITION SECURITY OUTCOMES

Two linear regressions were conducted, both referring to the inclusion of women into the PDS. The MMS could not be taken into account. As the sample size is limited, the regression is not capable of answering the overall research question, but it gives an idea about possible causalities between the nutritional status and the caste belongings of the respondents. Even though the sample size is limited, significant values could be encountered, which can be used as a direction provider.

4.7.8 EVALUATING FOOD AND NUTRITION SECURITY OUTCOMES

Looking at the results of the linear regression, it become obvious that 31% ($p < .01$) of the variance in *nutrition* is explained by the caste of the women. Thus caste-belongings are significant and have an influence on *nutrition*. The amount of the variance that is explained by the independent variable is significantly different from 0. However, whether or not a woman owns a BPL card has no influence on *nutrition*.

The first dummy compares Dalits to Tribals and High Castes and shows a positive effect, the same way as the second dummy, which compares Tribals and Dalits to High Castes. Tribals and High Castes are an average of 2,367 points higher on the nutrition scale (1-13) than Dalits. High Castes and Dalits are 2,244 points higher on average on the nutrition scale than Tribals.

The regression with the dependent variable *BMI* showed that 20,5% ($p < .05$) of the variance in the *BMI* is explained by having a BPL card or not. The amount of the variance that is explained by the independent variable is significantly different from 0. Caste does not have an influence on the *BMI*, but whether or not someone has a BPL card has an influence on the persons *BMI*. People owning a BPL card have a higher *BMI* than people with either an APL card or no card. The difference between people with and without a BPL card is 2,515. The *BMI* is on average 2,515 higher if one possesses a BPL card.

Through evaluating the outcome of the two linear regressions, it becomes obvious that there is a strong correlation between the caste-belongings of the women and *nutrition*. However, the BPL card has no influence on *nutrition*. This result might be initially surprising, assuming that

a card, providing monthly rations should enhance a person's nutritional situation. Opposite to what the *nutrition* regression revealed, the BPL card has a strong influence on the women's BMI, but their caste-belongings are non-significant. It can be concluded that there is no correlation between *nutrition* and *BMI*, which at first appearance also seems slightly contradicting.

However, as nutrition is highly influenced by caste-belongings, it can be concluded that Higher Caste women, have a more nutritious and balanced diet than Dalit and Tribal women. As shown earlier, Higher Caste women generate more income than Dalits and Tribals, which allows for more nutritious food purchases, especially considering such expensive fruits provide a high source of vitamin-C. The amount of fruits consumed decreases along the caste line. The poorer a person, the less they consume fruits and iron-rich vegetables, as a result of lacking financial capital, using the Sustainable Livelihoods Approach. As Higher Caste women generate higher income due to owning more land than Dalits and Tribals, they can afford more diverse and expensive aliments at the market in Jaisinagar than Dalit and Tribal women. It could be observed that more nutritious aliments are more expensive at the market than basic foods containing carbohydrates.

The extent to which a diet is nutritious and balanced is further influenced by the opportunity of cultivating little quantities of horticulture for self-consumption purposes. The consumption of fruit and vegetable potentially increases when it does not have to be purchased. This opportunity, in Sen's terminology, is dependent on the entitlements of the women: on the ownership of an adequate size of land and on the ownership of an irrigation system, as the cultivation of horticulture needs more water than the cultivation of wheat and soya bean. Only few own an irrigation system, out of which very few are Dalits and Tribals. This could explain why Higher Caste women have a more nutritious and balanced diet than Dalit and Tribal women.

Furthermore, it has to be taken into account that the BPL card provides exclusively carbohydrates, namely rice and wheat, which obviously does not have a positive effect on a nutritious diet, but a positive effect on a healthy BMI of the women. The PDS thus can only increase food security of the women, but by no means their nutrition security. Poorer, landless women tend to mainly consume wheat as carbohydrate providers, but cannot afford rice, as the market price for rice is higher than for wheat. Women who have land sell parts of their wheat production and exchange it with other products at the market, such as rice. Ideally, rice and *chapattis* are consumed simultaneously, which increases the carbohydrate intake and can account for a healthier

BMI. Many people do not only receive BPL rations, but also have enough land to grow wheat, which means they receive carbohydrates from two different sources that could account for a healthier BMI.

Surprisingly, caste-belongings do not have an influence on the BMI. As explained earlier, the frequent consumption of high quantities of carbohydrates throughout all castes can account for a healthier BMI. However, a nutritious and balanced diet does not necessarily result in a healthier BMI.

BODY MASS INDEX

After having gained an inside into how food is consumed by the respondents, the BMIs of the respondents will be assessed. The height and weight of all mothers and children were taken in order to assess to what extent wasting prevails. Wasting means that a person has a low height-for-weight. The prevalence of wasting between High Caste, Dalit and Tribal women is roughly the same: 31% of the Dalit mothers, 38% of the Tribal and 35% of the High Caste mothers are wasted. 65% of all Dalit children, 73% of the Tribal and 56% of the High Caste children are wasted. The highest incident of wasting amongst the mothers can be found in the Dalit and amongst the children in the Tribal population. The linear regression showed that BPL card holders have a healthier BMI than respondents with an APL or no card.

4.7.9 EVALUATING THE BODY MASS INDEX

Wasting exists in all three villages, especially among the children. The biggest difference can be found between High Caste and Tribal children: the prevalence of wasting among high caste children is 20% lower than among Tribal children. The incidents of wasting among children is severely higher than among their mothers. Children have different nutritional needs than adults and need high caloric intake to grow. The access to adequate nutrition seems to be insufficient for children's bodies to cope with the lack of protein, vitamin C and calcium to grow and gain sufficient weight. The consumption patterns showed that women of all castes first satisfy their most basic food needs with consuming mainly carbohydrates, which is of high importance for farmers as it provides them with the energy they need to work on the fields or on construction sites. The frequent consumption of carbohydrates can account for a healthy BMI. The BMI does not necessarily make assumptions about how nutritious a diet is, but about a healthy balance between the height and weight of a person. Weight is especially gained through carbohydrates, which could explain why no major caste differences among women of different castes exist.

5. DISCUSSION

The research showed that many BPL cards are allocated incorrectly. Failures in the entitlement to food, using Sen's Entitlement Approach, determine the level of vulnerability and thus the level of food insecurity (D. Maxwell, 1996, p. 3). Dalit and Tribal women and children are at greater vulnerability risk than their Higher Caste counterparts. Their nutritional values tend to be lower than the once of Higher Caste women. Even though the entitlement to food is supposed to be measured by the lack of financial and natural capital, it is practiced in a way that the lack of financial capital often leads to a lack of food entitlement.

Another important dimension of ineffective food schemes is social exclusion: in the context of Dalits and Tribals, social exclusion has to be seen as an approach to poverty. Adam Smith's definition of not "being able to appear in public without shame" (Sen, 2000, p. 4f) is a good example for social exclusion and thus of deprivation and describes the situation of lower caste women in the research area. Their exclusion leads to deprivation that limit their access to food and other living opportunities. Fewer incidents of land and the consequent unstable employment leads to economic impoverishment and sometimes even to the deprivation of a BPL card. Thus, relational features between social exclusion resulting from the caste system and the access to food have to be taken into account (Sen, 2000, p. 10).

The concept of social exclusion further emphasises correctly the importance of taking part in the society. Social exclusion practiced in the research area clearly leads to other deprivations: Dalit and Tribal women face exclusion in the village communities, in private and public life and experience difficult access to the PDS and MMS or even face exclusion from the food schemes, leading to further deprivations, for example, exclusion from employment. This is evident in the case of Dalit or Tribal women who cannot get the position of the MMS cook due to being from a low caste, which can lead to economic impoverishment and food insecurity. Thus, facing social exclusion because of low caste belonging can result in higher poverty indicators due to unequal access to facilities and services.

The key question to be asked in the analysis of sustainable livelihoods is as follows: "given a particular context, what combination of livelihood resources (different types of `capital`) result in the ability to follow what combination of livelihood strategies with what outcomes?" (Scoones, 1998, p. 3). The combination of human, social, natural and economic capital – in the

context of the Indian government having implemented food schemes – results in following the livelihood strategy of increasing food security through obtaining a BPL ration card. As Sen states in his Entitlement Approach, one can acquire alternative bundles, starting from each initial endowment through the use of trade and production (Sen, 1982, p. 9). The original bundle, land, enables women who own it to achieve alternative bundles such as income, through the use of production and trade at the market. Consequently, natural capital in form of land and productive animals leads to higher financial capital through the commercialisation of agricultural products.

It further needs to be taken into account that formal and informal institutions determine the access to different types of capital. Institutions in this context, as regularised behaviour structured by rules and norms of the society, is the practice of the caste system which heavily influences and determines the level of financial, social and human capital. Connecting it with the Entitlement Approach, the original bundle of ownership (endowment) of being of a higher caste leads to higher social capital. The combination of higher financial, natural and social capital particularly enables applicants to obtain a BPL card. In this particular context, social capital means the network of higher caste women that enables them to benefit from their good contacts with PDS and MMS officials. Together with higher purchasing power for unofficial payments for BPL cards and black-marketing, the livelihood strategy of increasing food security can be reached.

This discussion has demonstrated how social exclusion is directly linked to the level of social, natural and human capital of the sample population, especially with regards to Dalit and Tribal women, heavily influencing the access and participation in the PDS and MMS. A sustainable livelihood is difficult to achieve with the strong practice of the caste system in the research area.

6. CONCLUSION

This chapter will bring the evaluation of the PDS and MMS, with regards to inclusion and exclusion mechanisms of women of different castes, together with their access and utilisation of food. The extent to which the PDS and MMS helps women and their children to improve their FNS situation will be evaluated.

This research has shown that the PDS and MMS lack efficiency, especially with regards to the equal inclusion of women with differing financial backgrounds and caste-belongings. Many of the beneficiaries of the PDS are wealthier women who own land and have the means to provide unofficial payments to government officials in order to issue a BPL card. In many cases, these beneficiaries are higher caste women who are not only in a favourable position in the PDS, but also have lower poverty indicators than the excluded ones from the PDS. Higher caste women have higher educational levels, own more land and productive animals and have a higher income than non-beneficiaries.

In many cases it is Dalit and Tribal women who are excluded from the PDS and in contrast to higher caste women lack natural and financial capital, with the latter denying them the opportunity to bribe for a BPL card. Corruption in the implementation of the PDS and caste-preferences related to wealth by officials responsible for the conduct of the scheme, weaken the effective functioning of the PDS, failing to target those who depend on it the most: landless Dalit and Tribal women. In contrast, rather than targeting the more vulnerable population groups in a special way, Dalit and Tribal women cannot guarantee their fair share of the food schemes under the current circumstances. They are in many incidents unable to take the first hurdle, the entitlement, when struggling to access the PDS. The newly introduced FSB seems to improve quantity problems, as the amount of household members are now taken into account. However, it also depicts a pitfall, as the lack of knowledge on distributional procedures can also enhance unequal distributions and the practice of black-marketing by shopdealers.

Although there is evidence that only 16% of the resources allocated towards the PDS reach the poor (Economist, 2010, p.19), there is in theory corrective measures, such as open ended appeals, which create the opportunity of separate examinations of PDS applications, or Gram Panchayat meetings, aimed at completing the BPL list in a public gathering to minimise the inclusion of un-deserving and the exclusion of under-deserving people. These measures have in fact

not been encountered during the field research.

The MMS similarly favours not only higher caste children but also higher caste women: the research has shown that in almost all cases, women preparing the food are of high caste to make sure that High Caste children do not get *polluted* and *poisoned* by lower caste cooks. Thus, Dalit and Tribal women cannot benefit from the employment as cooks, denying them the opportunity to improve their FNS status through income generation and through keeping food leftovers from the MMS. Higher caste women get employed as cooks due to their high social status and good contacts to the people employing, while being better off than Dalits and Tribals in general terms.

Dalit and Tribal children sometimes get discriminated against in the MMS during lunchtimes: it happens that they do not receive any food, less food or only food when food is leftover, as preference is occasionally given to higher caste children in the distribution of the food. These forms of discrimination towards children and women are handled very directly with total transparency. The children are treated in a patronising and downgrading way by children of higher castes to make sure that the social hierarchy is maintained. Social exclusion and discrimination of Dalits and Tribals is practiced in all spheres of daily and public life, as the caste system still prevails highly in the research area. *Untouchability* and physical demonstrations of hierarchy need to be practiced by Dalit and Tribal women and children to avoid physical and verbal harassments and violence executed against them. Caste-based discrimination includes the use of separate water wells, temples, separate seating when all castes come together and above all the strict prohibition of sharing food and water.

Irrespective of caste-belongings, women experience major disadvantages and limitations in daily life due to the dominance of male figures and their husbands. They need prior permission for every step they take, before they leave their house or take any decision. In terms of food and nutrition security it means, that women only eat after their husbands and all male household members are fed, as it is their duty to serve the men first, no matter how hungry they might be.

Large differences among the respondents exist and effect the full caste line. The higher the caste, the more the women have in terms of educational levels, land, productive animals, income etc. Above all, the social status of High Caste women is significantly higher, which influences these indicators. As illustrated, Dalit women particularly face major limitations and discriminations in daily life, which requires them to struggle for even the use of basic facilities like

fetching water, as they have to make sure they fetch it in an *adequate* way. The differences between different castes are obvious to the women themselves; it is made sure that differences are emphasised and especially physical distance is maintained. *Other-ing* in language and body language is a common practice and underlines how 'the others' are different to 'them'.

When evaluating the access to food, it needs to be distinguished between food in general and nutritious food. The access to aliments like carbohydrates is given through either the PDS, agriculture or food purchases. However, the access to diverse, nutritious foods is rather poor, accounting for unbalanced diets among the women. Food is utilised in an unbalanced, undiversified way resulting from poor access to nutritious food. Thus, it can be concluded that the PDS in form of the BPL ration cards, helps women and their children to secure carbohydrate intake. However, it does not account for a more nutritious diet as the BPL does not provide any vitamins. It therefore increases food security among the beneficiaries to a highly limited extent, as the quantities are too little to have a major positive impact on food security outcomes, but does not have any positive effect on nutrition security. Similarly, the MMS functions as a discharge for the mothers as they have to provide one meal less for their children going to school, but does not account for a more nutritious diet of their children.

7. RECOMMENDATIONS

Recommendations shall be given with regards to the final of the third sub-question: how can future performance of the PDS and MMS be improved? In order to make the PDS and MMS have a more supportive and development-orientated role in the women's and children's lives, corruption and High Caste preferences need to be eradicated. Overcoming these issues would demonstrate the first and most important step to ensure a fairer distribution of BPL entitlements. Continuing practices of *Untouchability* and caste-based social exclusion and discrimination prohibit change. Integrating community involvement and decentralised procurement could help reduce corruption, as well as applying very careful eligibility criteria of shopdealers and cooks, such as reliability, honesty, and general acceptance to people (Kattumuri, 2011, p. 16). Focusing on a fair distribution of positions between applicants of different castes need to be applied when employing officials responsible for the distribution in the PDS and cooks for the MMS. Benefits of the social network, which turn against Dalits and Tribals, could thus be abolished.

The introduction of technology, such as digital cameras in order to monitor FPSs and storage rooms (Saxena, 2010) could undermine practices of black-marketing and work against dishonest, corrupt shopdealers. Furthermore, the development of an effective redressal mechanism through the provision of a toll free number to register complaints could help improve the future performance of the PDS (Kattumuri, 2011, p. 16). The ability to effectively complain would increase transparency and an adequate monitoring system would improve effectiveness.

Policies on food security need to simultaneously address nutrition security, especially in a country which is home to a high number of malnourished people. The newly introduced FSB should include the distribution of more nutritious food aliments such as iron-rich vegetable and fruits, which would have a direct positive impact on the nutritional values of the mothers and their children. Taking into account that the prevalence of wasting among children is high, improving nutritional values should be set on the government's agenda. In light of the FSB it is highly important to improve the information flow on how to conduct the new scheme, especially in terms of the new quantities and distributional criteria. Support should be given to the women with regards to transforming their old PDS ration cards into the new FSB booklets to decrease opportunities for black-marketing through avoiding that rations are being hold back.

Despite continuing practices of social exclusion towards lower caste women and children, it

needs to be drawn attention to the fact that the Indian Government has made a huge effort in providing significant protection to both, Dalits and Tribals, under its constitution and has made significant progress since its independence in 1947 in protecting weaker sections of the society through several positive discrimination and affirmative action policies and the Central Atrocities Act, which cannot be elaborated here. In line with this, these discriminatory compensation policies for lower castes should be expanded from the public sector to the food sector. Better practice of reservations made for Dalit and Tribal families in the PDS could significantly improve their access to the PDS and MMS and could thus have a more positive effect on their food security situation. Active monitoring of the implemented policies are needed, especially in rural areas like Block Jaisinagar.

Improving the access to water would enable farmers to cultivate horticulture. Horticulture would help to self-consume some of the products and commercialise more products at the market in exchange for cash income, which can be invested in nutritious food purchases. Knowledge and awareness on nutritious and healthy diets need to be created. The host NGO, SRIJAN, could implement nutrition workshops, aimed at creating more knowledge and awareness on food aliments, for the women as they are familiar with the sample population. Sanitation and hygienic circumstances could be improved to enhance the quality of the dietary intakes.

8. WORK SCHEDULE

Week	Activity
0 (03 Feb)	<ul style="list-style-type: none"> - Arrival in New Delhi - Stay in the capital for 6 days to get acclimatised to local customs
1 (10 Feb)	<ul style="list-style-type: none"> - Arrival in the field location Jaisinagar - Official start of the field research - Getting to know the field location, the NGO SRIJAN with its personnel and the local circumstances - Getting informed about organisational aspects of the work of the NGO - Visit of several villages around Jaisinagar together with NGO staff, getting introduced to villagers and to the work which has been done in the different villages - Having several informal conversations with staff members and women in the villages - Getting informed about organisational aspects of the PDS and MMS, the distribution of rations and the location of FPS and the existence of schools serving MMS - Gaining valuable first-hand information relevant for the research, which could not be gathered through literature - Working on construction of survey
2 (17 Feb)	<ul style="list-style-type: none"> - Collecting census information of villages through SRIJAN - Finalising sampling technique/sampling - Organising house listing information of sampled villages through village resource person of each of the three villages - Hire of research assistant/translator: first meetings and instruction of work procedure - Finishing with the construction of the survey aimed at assessing the FNS levels and access, participation and treatment in the PDS and MMS - Organising of written translation of survey from English into Hindi - Concretisation and planning of the first steps

	<ul style="list-style-type: none"> - Participant and direct observation to get to know to field location better - First semi-structured interview with ST women from one of the sampled villages about the organisation and management of the PDS and MMS, problems/issues/conflicts around those - Taking part in the activities, meetings of the NGO SRIJAN and looking out for more key informants
3 (24 Feb)	<ul style="list-style-type: none"> - Travel to Pench National Park to take part at SRIJAN Retreat 2014 (meeting of all SRIJAN colleagues from different field locations to exchange work experience and share projects from different locations) - Meeting the head of the NGO, active exchange of own research with professionals of different locations, getting new ideas and professional support for the research procedure - Getting new insights into the work of the different field locations - Visit of Block Office and Block Resource Communication Centre, Jaisinagar for data collection
4 (3 March)	<ul style="list-style-type: none"> - Mapping of first village Khamaria: identifying the female head of the household, noting down name, caste and numbering the houses after drawing the map of the village - On base of that: random sample - Conduction of pilot study - Conduction of first surveys - Semi-structured interviews with MMS and Angewari cook - Participant observation of MMS and Angewari food cooking and distribution in Khamaria - Informal conversations with Primary and Angewari teacher in Khamaria
5 (10 March)	<ul style="list-style-type: none"> - Active conduction of surveys - Expert interview with Shopdealer in Banjaria (FSP for Khamaria) - Participant observation of ration distribution in Banjaria - Accurate documentation of information and use of notebook

	<ul style="list-style-type: none"> - Analyses and assessment of collected data, noting down important observations - Encountering key informants on entitlement problems of ration cards: more semi-structured interviews
6 (17 March)	<ul style="list-style-type: none"> - Mapping of second village Kanker Kuiya - Conduction of first surveys in Kanker Kuiya - Conduction informal conversations and participant observation - Semi-structured interview with MMS cook in Kanker Kuiya - Participant observation of cooking procedure and distribution of food during MMS in Kanker Kuiya - Informal conversation with Primary Teacher in Kanker Kuiya - Active conduct of surveys
9 (24 March)	<ul style="list-style-type: none"> - Conduction of in-depth interviews on social exclusion and discrimination in Kanker Kuiya and Khamaria - Search for participants for the FGD in Kanker Kuiya - Introductory interviews with the participants of the FGD - Carry out the FGD in Kanker Kuiya - Follow up interview of FGD in Kanker Kuiya - Accurate documentation of information and use of notebook - Analyses and assessment of collected data
8 (31 March)	<ul style="list-style-type: none"> - Search for participants of the FGD in Khamaria - Introductory interviews with the participants of the FGD - Carry out the FGD in Khamaria - Follow up interview of FGD in Khamaria - Mapping of third village Richhai - Introductory informal conversations in new village Richhai - Semi-structured interview with MMS cook for Primary and Middle School in Richhai - Participant observation of MMS in Primary and Middle School in Richhai

	<ul style="list-style-type: none"> - Informal conversation with Primary and Middle School Teachers in Richhai
9 (7 April)	<ul style="list-style-type: none"> - Active conduct of surveys in Richhai - Semi-structured interview with Sarpanch of Richhai
10 (14 April)	<ul style="list-style-type: none"> - Finishing with the surveys in Richhai - Accurate documentation of information and use of notebook - Analysis and assessment of collected data - Expert interview with Shopdealer in Bamhori Ghat (FSP for Kanker Kuiya) - Participant observation of ration distribution in Bamhori Ghat - Semi-structured interview with Society Manager of PACS
11 (21 April)	<ul style="list-style-type: none"> - Encountering video participants - Introductory interview and preparation of video participants - Recording of video documentation - Assessment of video documentation - Reflection on collected data and information, especially of the video documentation
12 (28 April)	<ul style="list-style-type: none"> - Carry out semi-structured interviews in all villages - Conduction of in-depth interviews in Richhai - Accurate documentation of information and use of notebook - Analysis and assessment of collected data
13 (5 May)	<ul style="list-style-type: none"> - Expert interview with Shopdealer in Richhai - Getting literal translation of video documentation and FGD from Hindi into English - Participant observation of ration distribution in Richhai - Collection and complementing of last information through semi-structured and in-depth interviews - Reflection on missing data - Writing of internship repor

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10. APPENDIX I

LINEAR REGRESSION OUTCOMES

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,557 ^a	,310	,260	1,801

a. Predictors: (Constant), Card_NEW, CasteDummy2, CasteDummy1

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	59,833	3	19,944	6,150	,001 ^b
	Residual	132,967	41	3,243		
	Total	192,800	44			

a. Dependent Variable: nutrition

b. Predictors: (Constant), Card_NEW, CasteDummy2, CasteDummy1

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,278	,871		3,763	,001
	CasteDummy1	2,367	,635	,529	3,728	,001
	CasteDummy2	2,244	,664	,480	3,379	,002
	Card_NEW	-,289	,539	-,070	-,536	,595

a. Dependent Variable: nutrition

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,453 ^a	,205	,147	2,59134

a. Predictors: (Constant), Card_NEW, CasteDummy2, CasteDummy1

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	71,147	3	23,716	3,532	,023 ^b
	Residual	275,316	41	6,715		
	Total	346,463	44			

a. Dependent Variable: BMI

b. Predictors: (Constant), Card_NEW, CasteDummy2, CasteDummy1

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	18,544	1,254		14,794	,000
	CasteDummy1	,273	,913	,046	,299	,766
	CasteDummy2	-,189	,956	-,030	-,197	,845
	Card_NEW	2,515	,776	,452	3,243	,002

a. Dependent Variable: BMI

Correlations

		BMI	nutrition
BMI	Pearson Correlation	1	-,153
	Sig. (2-tailed)		,316
	N	45	45
nutrition	Pearson Correlation	-,153	1
	Sig. (2-tailed)	,316	
	N	45	45

APPENDIX II

SURVEY

Baseline Food and Nutrition Security Survey

I am a student from Utrecht University in the Netherlands, following the Masters International Development Studies. I am researching the effective functioning of the Public Distribution System (PDS) and the Mid-Day Meal Scheme (MMS) in villages around Jaisinagar with the support of SRIJAN. Part of my research is to investigate the organisation and characteristics of the PDS and MMS, linked to the food and nutrition security levels of the inhabitants of the villages. Your answers and corporation will help me evaluate the effective functioning of the PDS and MMS, as well as understand the food security situation in this particular area. Please do not hesitate to ask me any question and let me know if you have any queries. Your answers will be treated confidentially. Many thanks for your participation! Rana Kamali

A. Personal Details

Village

Age

Marital Status

- Married
- Separated/divorced
- Widowed
- Single

Educational level

- I cannot read and write
- Primary school
- Incomplete primary school
- Middle school

- Incomplete middle school
- Secondary school
- Incomplete secondary school
- University

B. Household Level

Caste

Ration card

- Below Poverty Line (BPL) card
- Above Poverty Line (APL) card
- No card.

Reason: _____

How many children do you have?

Please indicate the gender (m/f) of each child starting from the youngest to the oldest one.

- Child 1: age_____ sex_____
- Child 2: age_____ sex_____
- Child 3: age_____ sex_____
- Child 4: age_____ sex_____
- Child 5: age_____ sex_____
- Child 6: age_____ sex_____
- Child 7: age_____ sex_____
- Child 8: age_____ sex_____

Please indicate for each child whether they attend school (yes/no) and receive a Mid-Day Meal (yes/no) starting from the youngest to the oldest one.

- Child 1: school _____; MMS _____
- Child 2: school _____; MMS _____
- Child 3: school _____; MMS _____
- Child 4: school _____; MMS _____
- Child 5: school _____; MMS _____
- Child 6: school _____; MMS _____
- Child 7: school _____; MMS _____
- Child 8: school _____; MMS _____

What is the total number of people living in your household? (Eating from the same kitchen.)

What basic facilities do you have at your disposal? (Multiple answers possible.)

- Electricity
- Potable water
- Irrigation system

C. Economic Situation

Do you own land? If applicable, please indicate the size in acres and how you cultivate it.

Do you own productive animals (cows, buffalos...)? If applicable, please indicate what animals and their quantity.

How do you generate income? Please indicate which household member generates which income.

How much income do you receive for every single income generating activity per month?

Is there anyone who is a member of your household who lives and works elsewhere, but contributes to the household income?

No

Yes. Additional income in Rs:

Have there been any changes in income over the past 6 months? Please elaborate.

How much of the income you generate do you spend on food?

All

Three quarters

Half

One quarter

Other:

If applicable, how much of the food you produce covers your and your children's food consumption necessities?

All

Three quarters

Half

One quarter

Other:

D. Public Distribution System

If the Fair Price Shop is not in your village, how do you get to the shop? Please indicate duration.

How easy was it for you to obtain your ration card?

	1	2	3	4	5	
Very easy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Very difficult

Have you experienced any difficulties when obtaining your ration card (corruption, delays...)?

If applicable, please elaborate.

How regular does your household go to collect your rations from the Fair Price Shop?

- Every month
- Every second month
- Every other month
- Almost never
- Never

Have there ever been any exceptions or difficulties when obtaining your monthly rations from the Fair Price Shop? If applicable, please elaborate.

Have you ever experienced other people getting higher quotas than they are entitled to? If applicable, please elaborate.

How long do the rations from the Fair Price Shop last for your household?

How helpful are the rations from the Fair Price Shop for you and your children's food consumption?

	1	2	3	4	5	
Very helpful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Not helpful

If applicable, what effect does it have on you and your children's food situation if the rations from the Fair Price Shop do not arrive/ arrive incomplete? Please elaborate.

E. Mid-Day Meal Scheme (Questions 1 to 4 to be answered by the oldest child visiting the village school.)

How are the eating and seating arrangements during the meals?

How does the distribution of the meals take place? (Organisational aspects.)

Do certain children receive their meals first, or receive more food than others? If applicable, please elaborate.

Are there children who do not eat? If applicable, please elaborate.

Have there ever been issues/conflicts around the Mid-Day Meals? If applicable, please elaborate.

F. Food Consumption

Which of the following aliments do you and your children consume? (Frequency: A: daily, B: a few times per week, C: weekly, D: monthly, E: on a festivity, or F: never.)

- rice__wheat__maize__pulses__potatoes__jowar__bajra__tomato
- carrots__aubergine__green beans__peas__spinach__cabbage__cauliflower
- sprouts__turnip__occra__lentils__chickpeas__raddish__pumkin__coriander
- garlic__onion__chilly__ginger__vegetable oil__soya oil__groundnut oil__bnana
- apple__oranges__lemon__pomegranate__papaya__grapes__mango__cocout
- milk__butter__butter milk__joghurt__ghee__paneer__sugar__sweats

- dried fruits ___ tea ___ coffee ___ tobacco ___ fish ___ meat ___ eggs
- Other:

Which of the aliments mentioned above come from your own food production? Please list.

What did you personally eat yesterday throughout the whole day? Please list everything you ate and drank in a chronological order.

What did the male children eat yesterday throughout the whole day? Please list everything they ate and drank in a chronological order.

What did the female children eat yesterday throughout the whole day? Please list everything they ate and drank in a chronological order.

What is the difference in the food consumption between the different household members?

- My husband/the adult male household members eat more
- My husband/the adult male household members eat foods me/the children do not get to eat
- The children eat different than the adults
- The male children eat more than the female children
- Pregnant/lactating women eat different
- There is no difference

If there is only little food in the house, who gets to eat first?

Are there foods you cannot effort due to a lack of resources? If applicable, indicate which.

What aliments do you consider as nutritious, as being good for the health?

Now I am going to read you several statements that people have made about their food situation. For these statements, please tell me whether the statement was always true, often true, sometime true, almost never true, or never true for you and your children in the last 6 month.

I worry about whether my children and I have enough food to eat.

- Always true
- Often true
- Sometimes true
- Almost never true
- Never true
- Other:

The food my children and I have just does not last.

- Always true
- Often true
- Sometimes true
- Almost never true
- Never true
- Other:

Me and my children have to cut the size of our meals or skip meals because there is not enough food to eat.

- Always true
- Often true
- Sometimes true
- Almost never true
- Never true

Other:

Me and my children are hungry but do not eat because there is not enough food to eat.

Always true

Often true

Sometimes true

Almost never true

Never true

Other:

G. Sanitation and Hygiene

Where do you get the water from you cook with and drink? (Multiple answers possible.)

Hand pup

Tube well

Open well

Rivers/lakes

Other:

Where do you store your food?

How often do you clean your kitchen per week completely? (All dishes, pots, pans...).

Once a week

Twice a week

Three times a week

Four times a week

Five times a week

Six times a week

APPENDIX III

GOVERNMENT CENSUS ON SAMPLED VILLAGES

State Name: MADHYA PRADESH (23)

District Name: Sagar (427)

Sub-District Name: Sagar (03449)

Village Name: Kanker Kuiya (460787)

No. Of HouseHold : 101

Population	Person	Male	Female
Total	523	266	257
In the age group 0-6 years	87	31	56
Scheduled Castes (SC)	67	29	38
Scheduled Tribes (ST)	236	123	113
Literates	325	195	130
Illiterate	198	71	127
Total Worker	223	150	73
Main Worker	191	144	47
Main Worker - Cultivator	63	63	0
Main Worker - Agricultural Labourers	64	62	2
Main Worker - Household Industries	42	2	40
Main Worker - Other	22	17	5
Marginal Worker	32	6	26
Marginal Worker - Cultivator	0	0	0
Marginal Worker - Agriculture Labourers	8	6	2
Marginal Worker - Household Industries	24	0	24
Marginal Workers - Other	0	0	0
Marginal Worker (3-6 Months)	32	6	26
Marginal Worker - Cultivator (3-6 Months)	0	0	0
Marginal Worker - Cultivator (3-6 Months)	8	6	2
Marginal Worker - Agriculture Labourers (3-6 Months)	24	0	24
Marginal Worker - Household Industries (3-6 Months)	0	0	0
Marginal Worker - Other (3-6 Months)	0	0	0
Marginal Worker - Cultivator (0-3 Months)	0	0	0
Marginal Worker - Agriculture Labourers (0-3 Months)	0	0	0
Marginal Worker - Household Industries (0-3 Months)	0	0	0
Marginal Worker - Other Workers (0-3 Months)	0	0	0
Non Worker	300	116	184

State Name: MADHYA PRADESH (23)

District Name: Sagar (427)

Sub-District Name: Sagar (03449)

Village Name: Khamaria Buzurg

No. Of Household : 91

Population	Person	Male	Female
Total	428	250	178
In the age group 0-6 years	52	29	23
Scheduled Castes (SC)	154	88	66
Scheduled Tribes (ST)	5	3	2
Literates	255	176	79
Illiterate	173	74	99
Total Worker	180	129	51
Main Worker	8	3	5
Main Worker - Cultivator	1	1	0
Main Worker - Agricultural Labourers	0	0	0
Main Worker - Household Industries	0	0	0
Main Worker - Other	7	2	5
Marginal Worker	172	126	46
Marginal Worker - Cultivator	57	54	3
Marginal Worker - Agriculture Labourers	44	42	2
Marginal Worker - Household Industries	54	22	32
Marginal Workers - Other	17	8	9
Marginal Worker (3-6 Months)	171	126	45
Marginal Worker - Cultivator (3-6 Months)	57	54	3
Marginal Worker - Cultivator (3-6 Months)	44	42	2
Marginal Worker - Agriculture Labourers (3-6 Months)	53	22	31
Marginal Worker - Household Industries (3-6 Months)	17	8	9
Marginal Worker - Other (3-6 Months)	1	0	1
Marginal Worker - Cultivator (0-3 Months)	0	0	0
Marginal Worker - Agriculture Labourers (0-3 Months)	0	0	0
Marginal Worker - Household Industries (0-3 Months)	1	0	1
Marginal Worker - Other Workers (0-3 Months)	0	0	0
Non Worker	248	121	127

State Name: MADHYA PRADESH (23)

District Name: Sagar (427)

Sub-District Name: Sagar (03449)

Village Name: Richhai

No. Of Household : 258

Population	Person	Male	Female
Total	1036	560	476
In the age group 0-6 years	163	100	63
Scheduled Castes (SC)	414	229	185
Scheduled Tribes (ST)	110	64	46
Literates	603	351	252
Illiterate	433	209	224
Total Worker	448	277	171
Main Worker	201	138	63
Main Worker - Cultivator	21	19	2
Main Worker - Agricultural Labourers	155	113	42
Main Worker - Household Industries	14	0	14
Main Worker - Other	11	6	5
Marginal Worker	247	139	108
Marginal Worker - Cultivator	28	28	0
Marginal Worker - Agriculture Labourers	150	92	58
Marginal Worker - Household Industries	41	0	41
Marginal Workers - Other	28	19	9
Marginal Worker (3-6 Months)	128	54	74
Marginal Worker - Cultivator (3-6 Months)	17	17	0
Marginal Worker - Cultivator (3-6 Months)	44	18	26
Marginal Worker - Agriculture Labourers (3-6 Months)	39	0	39
Marginal Worker - Household Industries (3-6 Months)	28	19	9
Marginal Worker - Other (3-6 Months)	119	85	34
Marginal Worker - Cultivator (0-3 Months)	11	11	0
Marginal Worker - Agriculture Labourers (0-3 Months)	106	74	32
Marginal Worker - Household Industries (0-3 Months)	2	0	2
Marginal Worker - Other Workers (0-3 Months)	0	0	0
Non Worker	588	283	305

