

# THE ROLE OF WOMEN IN A MIXED CROP-LIVESTOCK PRODUCTION SYSTEM IN NORTHERN INDIA: HOW CAN THE GENDER GAP BE CLOSED?

*A case study of building resilience towards climate change  
through strengthening adaptive small-scale farming systems in  
rainfed areas in Madhya Pradesh, India.*

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Award ceremony at BOKU University Vienna for the Inge Dirmhirn prize on 14/05/2012. **Bernadette Mayr is the 4<sup>th</sup> from the left** (BOKU, 2012)

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**University of Natural Resources and Life Sciences Vienna**

Centre for Development Research &

Department of Sustainable Agricultural Systems



# **The Role of Women in a Mixed Crop-Livestock Production System in Northern India: How can the gender gap be closed?**

A case study of building resilience towards climate change through  
strengthening adaptive small-scale farming systems in rainfed areas in Madhya  
Pradesh, India

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## **1. Introduction**

### **1.1. Theoretical Background**

Over the past few decades, the status and situation of women is being discussed widely by institutions, states, civil society and political parties. The first time that the situation of women was perceived in such a broad international context might have been during the United Nations decade dedicated to women from 1976 to 1985. Similarly, the following World Conferences on Women contributed to regular public discussions on women's issues and their status in society (UN, 1976). In 2000, the United Nation declared Millennium Development Goals to consider the role of women in overcoming poverty and other grievances as crucial. Currently, the improvement of the poverty status of women is being addressed in many of the goals (UN, 2010). While action plans and projects have been released and progress on some goals and different regions have been made many women still lack equal opportunities or access to resources (UN, 2010).

In rural areas women's power and resources are especially low and households headed by women are among the poorest of the poor. But why do so many women lake behind in many areas of development? The perception of certain defined roles for men and women are deeply rooted in society and vary widely within and between culture, religion, class and region. Traditional perceptions often determine the possibilities, opportunities and power of both men and women (FAO, 2009). Women additionally face the burden of multiple roles as wives, mothers, daughter-in-laws, homemakers, farmers, workers, entrepreneurs and community members or among political roles. Each of these roles are connected with certain expectations of behavior and interaction and many of those roles or expectations restrict and hinder women from development. Some of them are even contradictory or diverge from inside and outside the household (Seebens, 2011). Focus group discussions carried out by the World Bank (2011, in World Bank 2011) identified women's roles as largely associated with family care and home production while the men's roles are associated with income generating activities and decision-making. The high burden of household duties and care for family members keeps women at home and hinders them from monetary income-based work outside the home which weakens their bargaining



power in decision making processes (Seebens, 2011). Indeed household duties are clear examples of gender divided work distribution, but such distribution can also be identified within livestock and crop work (FAO, 2011). The fact is not only that gender equality matters inherently, but that the misallocation of resources and opportunities of women's skills and talents come at a high economic and social cost price and also influence the development of children and the whole family (World Bank, 2011).

The proportion of labor contribution by women to agricultural activities, although it varies within countries, is for India quantified at 32% (Singh and Sengupta, 2009). Women have less access to productive resources and opportunities compared to men. According to the Food and Agricultural Organization of the United Nations (FAO, 2011), closing this gender gap would increase yields on farms by 20-30% and could therefore raise the agricultural output by two and a half and up to 4% which could reduce hunger by 12 to 17%. Because of this, there is an urgent need to empower women and close the gender gap in agriculture. Education, ownership of assets, access to economic opportunities as well as opportunities to earn an income have been identified by participants of the World Bank's (2011, in World Bank 2011) group discussion, as the key factors to improve one's own well-being as well as that of the family. These discussions were carried out in different regions, including India, with participants from different locations, age and income brackets.

The following case study describes the situation of women in the selected study region. It will generate detailed information about the agricultural structure, work distribution and access to material and immaterial resources that will help to better understand the actual situation of women and unlock social structures and custodies for outsiders. Furthermore challenges and obstacles women are confronted with will also be analyzed and finally a comparison between households headed by women and by men will outline differences in the situation's of those households.

## **1.2. Personal approach**

I grew up on a farm in Upper Austria and spent much of my time during my earlier childhood helping with agricultural work. The production of food and the maintenance of the environment always appeared to me as an important and desirable task, however

stressful and hard the work may sometimes be. To gain fundamental knowledge about agriculture I chose it as my field of study. Referring to my basic education on agriculture I deepened my knowledge in the field of agriculture and food economics. I found it especially interesting to gain insights in the international food trade structures and standards of production in different areas of the world. Recent crises unlocked correlations and interactions between food markets and other commodities and brought the terms of trade, the production and social standards in different areas of the world in a broader public focus.

After gaining knowledge about Austrian and partially European agriculture, for a more holistic idea of agriculture, I was seeking a more detailed picture of the agricultural production in a developing country. Especially interesting for me were the understanding of social structures and specific country production conditions. I have travelled previously to Latin America and Africa and therefore for my master thesis, I wanted to take the chance to go to an Asian country. The extreme contrasts, the high diversity in agricultural and climatic conditions and the unique cultural and social constitutions made India particularly interesting to me.

## 2. State of the Art

### 2.1. The status and role of women in the Indian context

#### 2.1.1. Development of India's women's movement

The role and status of women in India has changed over time. Ancient perceptions point to women in India holding a high status due to female deities being honored, however due to societal changes their status became more and more dismissed during India's medieval era. The worsening of the situation was the influence of Indo-Aryan nomadic people around 1500 BC (Aharon, 1999-2005.), especially before and during the implementation of the caste system, where discriminating practices against women more frequently occurred. Examples include: *Sati*, the burnings of widows, *Purdah*, the covering of the face and bride burning or *Dowry* deaths. It should not be left out that throughout history there were different views among regions, some included respecting and dignifying women, a few southern states did Jainism (Mishra 2006, Basu s.a.).

When British colonists arrived, they perceived the poor oppression and poverty of women in Indian society as a justification for colonization and saw themselves as the "protector" of women against the brutal patriarchal practices (Sinha, 1995). Women's issues had been mainly discussed by elite upper caste Hindu men, and male European colonists criticized and spoke out against the caste system and the inferior status of women and accompanying practices (Gangoli, 2007). At the beginnings of the nineteenth century the "**women's questions**" meaning the problems of women's education, widow remarriage and sati, dominated public discourse. Such discussions challenged traditions, religion and fought for education and legal frames and can be seen as the **first wave** of the feminist movement (Mishra, 2006).

With the enormous engagement of Indian women and support of British women as well as British and Hindu men, the prohibition of sati was declared by law in 1829 (Gol [Government of India], 1829). Further achievements of the social reform movement were the establishment of the Widow Remarriage Act in 1856 (Gol, 1856), the Child Marriage Restraint Act in 1929 (Gol, 1929) and in 1927 the All Indian Women's Conference and many

other movements (Basu, s.a.). However Indians have not always supported social reforms aiming to improve the situation of women, due to the fact that it was first seen as a colonial intervention in their gender relations (Sen, 2000).

While women became increasingly engaged in different social and political fields, their institutional construct of an “Indian women” could no longer be applied to all women. The loss of hegemony allowed them to lose power, but made it possible for other women to seek new gender identities (Sen, 2000).

Women played an important role in the Indian independence movement. Women’s organization and questions were part of the anti-colonial nationalists movements and were both valued and exploited by Gandhi and Nehru (Forbes 1998/2000 in Günther 2009). Since independence, women in India command, as stated in the constitution, fundamental rights such as equality for men and women (Article 14), prohibition of discrimination and right of “positive discrimination” for women and children (Article 15), and equal opportunity (Article 16) or equal pay for equal work (Article 39d) (Gol, 1949). Additionally, the post-colonial women’s movement managed to mobilize for protests against violence, legal discrimination and better living conditions, even though women came from different castes, classes, communities as well as from urban and rural background, representing a wide range of Indian women (Rajan, 1999 in Sen, 2000).

The **second wave** of feminism was in the late seventies and early eighties, and many different groups were engaged on different topics such as dowry deaths or the role of women in family and society (Sen 2000, Basu s.a.). To improve the situation of the poor, SEWA (Self Employed Women’s Association), was founded in 1972 to help women in the informal sector with trainings and skill improvement (Basu, s.a.). In 1974, the Indian government published a report called “Towards Equality”, in which it analyzed the status of women since independence. The result was shattering, revealing that the position of women had worsened since independence (Guha et al. 1974 in Gangoli 2007). Laws on equality had been implemented but not applied (Basu, s.a.). The question on women also became an international focus when the United Nations declared the years 1975 to 1985 as the international decade of women. The goal was to encourage equal opportunities in education and employment, as well as focus on ending violence against women (Gangoli,

2007). Additionally in 1985 India founded the Department for Women and Child Development, which in 2006 became an own Ministry (Gol, 2012).

After the UN Mid Decade Conference in Copenhagen in 1980, women's studies in India were established to take on research and teaching on feminists perspectives (Basu, s.a.). Since 2007, the Five Year Plan of the Indian government (GOI, 2008) showed that gender represents a crosscutting issue. Its aim has been to guarantee, in regard to their affiliation of caste, community, religion or geographical region, all rights for women.

All the main parties have women wings and although women in urban areas are better organized, women in rural areas are also connected and campaign for safe drinking water, education, skill training, health or sanitation. Many movements have set up trainings or self-help groups to support women with skills and knowledge. What has been reached up to now is a different consciousness of women in Indian society (Basu, s.a.).

Moreover, today, the women's movement in India is divided, to be successful in bringing forward feminists politics, it is necessary to manage to overcome class, caste and different communities (Rajan, 1999 in Sen, 2000).

### **2.1.2. Classifications and different roles of women**

First the differences and meanings of the terms sex and gender should be clarified. According to Oakley (1972), sex differences refer to innate biological distinctions between men and women while gender differences arise from the socially constructed relationship between men and women. According to Moser (1989), affect these biological distinctions the distribution of resources and responsibilities between men and women, and are shaped by ideological, religious, ethnic, economic, and cultural determinations. Moser (1993) further classifies the different roles of women into three main categories - namely the reproductive role, the productive role and the community managing role. The reproductive role comprises giving birth to children but also non-biological given responsibilities such as care giving for children, elders or sick as well as household duties. The productive role is defined as work for 'payment' either in cash or in any material and comprises independent labor, family labor or wage work. The community-managing role is characterized by caring for collective consumptions such as water, health care or education. Community managing

tasks are voluntary and unpaid and can also be understood as the public reproductive role. Each of those multiple roles as mothers, wives, farmers, entrepreneurs or agents in political roles implies interaction with different actors always expecting a certain kind of behavior (Seebens, 2011).

Gender roles are defined by society and impose certain kinds of behaviors, tasks and responsibilities that society considers as appropriate to men, women, boys and girls. Often those expected roles exclude or restrict men and women (FAO, 2009). As Østergaard (1992) emphasizes, just because it is the biological nature of women to bear children, it is a false assumption to say it is natural that women are in charge of the entire domestic and child carrying tasks within a family. As she says it is only used to additionally burden women with more work and calls it the sexual division of labor. This is especially so with the intra-household work distribution, which sticks to the traditional role of women and marginalizes women for 'biological reasons'. Roles and work distribution differ from culture to culture and are results of social and economic changes. Generally, a distinction between intra-household roles, roles within the household, for example as wife, and extra-household roles, roles outside the household, for example at work, can be made. It is important to keep in mind that those roles can positively or negatively influence each other. For example if a woman goes outside the home to do productive work, her income can positively influence her status within the household, however, it can contribute to a higher workload and higher demands on women (Seebens, 2011). Such roles or norms of behavior are controlled by society, in which a peer group or the husband and family's behavior can change from different regions or over time due to a change in social or economical situation. It is important to understand where such changes or the control of those norms comes from (Seebens 2011, FAO 2011). Mason and Smith (2003) indicate that the community mindset or expectations may have a higher impact on women's restrictions than the one's of the husband or family. Following those assumptions, Kevane (2000, in Seebens 2011), states that changing extra-household norms might be more effective than increasing the bargaining power of women within a household. Given that norms are designed and defined by society it is difficult to change household norms by policy. Seebens (2011) sees in times of crisis a higher possibility to change norms and noted that due to immigration or urbanization, new household types and empowerment of women have already taken place.

### **2.1.3. Historical and contemporary gender paradigms in Indian society**

Social behavior is influenced by the norms and values of a society and is an important component of the culture. The belonging to a certain gender, caste (for a brief note about caste in India see Box 1), tribe or religion, still plays an important role in Indian society and each of those fields brings restrictions for women (Reddy, 2004). Their inferior gender status as female compared to male becomes visible through lower literacy rates, lower employment rates, lower wages for equal payment, poor health and nutritional status and high infant female mortality (Chanana, 1990 in Reddy, 2004). Their subordinate position to men can partially be explained by the patriarchal society in which they live. While their status was still high in ancient times, constraints came during the Brahmanical period and women were predominantly related to domestic fields.

Today the caste system still imposes various restrictions on the lives of many women affecting their choice of employment, diet, occupation, the purdah – the covering of their head or the general seclusion of women or their choice of spouse (Jensen, 2005). Although the interactions between castes are more relaxed today, with concern to the purdah, and especially concerning eating in public restaurants, the acceptance of new occupations, more diverse landownership and the access to resources for low caste women in rural areas is still difficult (Sekhon, 2000 in Deshpande, 2010).

Religious beliefs and practices can have a huge impact on the behavior of an individual or a group. Religion plays a particularly crucial role in the Indian context (Reddy, 2004). Women are especially affected because they are often seen as the bearer of religious traditions and religion has a high influence in their private and public life (Gautam, 2001).

Violence on women occurs in different ways inside or outside the home. Violence within the home is experienced from the spouse or dowry deaths. Outside the home women often face sexual assault or rape, which is often underestimated and has an obvious negative impact on the wellbeing of women and their children (Gautam, 2001). India additionally offers an adverse sex ratio which reflects the women's low status in society (Reddy, 2004). According to Sen (1992), due to poor access to health, mistreatment and sex-selective abortion, there are millions of girls absent in India.

The most alarming result of the Indian State Hunger Index for Madhya Pradesh (MP) related to malnutrition among children and adults, which is widely dispersed in MP. Data on the National Family Health Survey (NFHS) show that 59.4% of children below four years of age and in rural areas suffer from moderate or severe malnutrition. Data from the National Nutrition Monitoring Bureau (NNMB) 2000-2001 show that 63.9% of children between one and five years of age in rural MP are undernourished and in 1996 about 53.3% of adults showed chronic energy deficiency. Inadequate food consumption, inaccurate child feeding or weaning practices as well as gastrointestinal and respiratory infections are main causes for low absorption of nutrients (Radhakrishna and Venkata, s.a.), contributing to hunger.

**Box 1: Caste in India**

Caste is a social systematic ranking and transferred from birth with a low mobility rate to a higher level of social status. Although nowadays, banned by law, it is still visible and widely influences the lives of people throughout India. The caste system originates in the earlier *varna* system, where society was organized into four social groups based on their purity and/or pollution. According to Dumont (1980) the pure and the polluted must be kept separate. Therefore interpersonal relations (i.e. eating, marriage or occupation) outside of an individual's own caste were restricted. The purest were the Brahmins (priests and teachers), followed by the Kshatriyas (rulers and warriors), the Vaishyas (traders and farmers) and the Shudras (servants and menial workers), the later comprising other backward castes (OBC) today. OBCs today comprise former Untouchable castes that converted to other religions. The scheduled castes (SC) (also named as Untouchables, Dalits, Harijans or Outcastes) remain outside that system and therefore account for the least pure, or polluted. Another group outside the caste system are the scheduled tribes (ST) (Adivasi) meaning communities who did not accept the caste system and mainly resided in forests and jungles. Over time the *varna* system was combined with the *jati* system reducing the system into more specific categories. Currently there are over 3,000 castes and 20,000 sub-castes (Dumont, 1980 in Robert Jensen 2005, Aharon 1999-2005). According to the 2001 census of India around 16% of the Indian population consists of scheduled castes and around 8% of scheduled tribes (GoI, 2001).



#### 2.1.4. Women-headed households

To begin, the differentiation and clarification of women-headed households is necessary. Women-headed household can be distinguished between *de facto* and *de jure* households. De facto comprises households in which the male is, due to working arrangement often absence, but still due to economic viability or social interventions, such as decision making, involved. In a de jure household the women are without a partner i.e. widows, divorces or women who were never married (World Bank, 2000). Additional to the common reasons for becoming a women-headed household such as death, divorce or separation, changes in working patterns, traditional occupations or changes in agricultural practices contribute to an increase of such households (Lingam, 1994).

One main question in which the literature on this topic is intensively engaged in is whether women-headed households are more vulnerable and in general poorer than men-headed households. Results from different studies are fairly inconsistent and the results strongly depend on the data used. For instance, a study conducted by Rajaram (2009) uses data from the National Family Health Survey (NFHS) and focuses on poverty measures such as housing conditions, wealth index and standard of living instead of data based on consumption expenditure. Here the use of long-term indices should help to better illustrate the situation of women-headed household. He points out that calculations based on housing condition and wealth indices show that women-headed households are better compared to men-headed households. In contrast, based on the standard of living, women-headed households seem to be worse off. Within women-headed households, as Seebens (2011) notes, studies often show that de jure households suffer from economic and social disadvantages more often than de facto households. Several studies confirm that de jure households are poorer in comparison to de facto because de facto households that receive remittances from their husbands (Chen et al. 2005).

But all of those indices are unable to examine the political, cultural, social or intra-household status and limitations for women-headed households. Widows often face social constraints due to traditions and practices reducing their well-being and status in society. After the death of their husbands, in some areas widows are expected to live for some time in seclusion, often staying at home, as well as changing their diets (Chen, 2000). Sometimes

they are not welcomed at ceremonies or rituals because they are connected with bad luck. Sati, which is the most extreme practice against widows, was never common, and is luckily no longer legal (Jensen, 2005).

Due to the rare off-farm income possibilities in rural areas women-headed households highly depend on agriculture as their livelihood. In some areas women are facing difficulties in maintaining control over their husbands land. Additionally agricultural work requires physical hard work, which becomes more difficult with age. The generally higher status of women in the southern compared to the northern regions of India is believed to be due to a greater economic contribution of elder women. Agriculture in the south is characterized by rice production, which is a less strength-intensive crop compared to wheat which requires plowing and is prevalent in the north (Chen 2000, Jensen 2005). The intra-household status can additionally depend on the bargaining power of the women, depending on their intra-household property or economic contribution.

The study by Jensen (2005) confirms that economic factors have at least some influence on the well-being or status of widows. To improve the status and well-being of widows or women living on their own, he suggests raising more awareness for economic opportunities, microenterprises programs and age-sensitive hiring schemes.

## **2.2. Women in Indian agriculture**

### **2.2.1. Local agricultural structure and its impact on women**

Madhya Pradesh (MP) is one of the biggest federal states of India and is still very agriculturally oriented. During the years 2009-2010 the area sown was around 15 million hectares where about 58.77% were food crops and half of that was double cropped<sup>1</sup>. 1.1 million hectares are under current and old fallow land, 1.1 million hectares are cultivable waste-lands and 1.3 million hectares are under permanent pastures or grazing land. Around 3.4 million hectares are not available for cultivation (GoMP [Government of Madhya Pradesh], s.a.).

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<sup>1</sup> Double cropped means two or more crops are grown on the same land in the same season or at the same time.

Madhya Pradesh is a kharif or rainy season crop dominated state, where a high amount of paddy (rice), jowar (sorghum), maize, bajra (millet), tur (pigeon pea), urad (black gram), moong (green gram), soybean, groundnut and cotton is grown. The main rabi, or summer season crops are wheat, graham, lentil, peas, mustard and linseed (GoMP, s.a.). Kharif crops are sown in autumn, whereas rabi crops are sown in spring (NIC [National Informatics Centre] Etawah, s.a.).

During 2009-2010 the total for food grain production, dominated by wheat and rice, with 50.5%, and pulses with 26.7%. The state's area under soybean production accounts for 56.5% of the country's total area under soybean and makes it an important non –food crop (GoMP, s.a.). Agricultural practice is, to a great extent, still traditional and, rain fed, with 65% of the total land holdings belonging to small or marginalized farmers however only comprising 26% of the land (GoMP s.a., Catalyst Management Services Pvt Ltd, 2009). With an average landholding size of 0.88 of a hectare, small and marginalized farmers lag behind the state's average of 2.22 hectares. The productivity of almost all crops are lower than the national level, main reasons mentioned are the lack of adequate irrigation and thus the high dependence on monsoon season as well as the low use of inputs such as fertilizers (GoMP, s.a.).

Climatic conditions in Madhya Pradesh are suitable for cattle, poultry, sheep, goat and pig rearing. According to the eighteenth livestock census, indigenous cattle population increased by 15.3%, the buffalo population by 20.5% and a significant growth of 49.7% was seen in crossbred cattle registration. With 18.5 million head of cattle, Madhya Pradesh has the highest cattle population in India and in 2008 – 2009, milk production rose by more than 25%. Compared to the 17<sup>th</sup> animal census, goat population rose by 25.8% and poultry by 61% and is much higher than the national average growth rates (GoMP, s.a., Gol, s.a.). Besides small and marginalized farming, large food parks are being established in different districts of Madhya Pradesh. Those food parks have all the facilities needed for agro industry and have command over excellent rail and road connections (Madhya Pradesh Trade and Investment Facilitation Corporation Ltd., 2010).

For such an increase of agricultural productivity the improvement of irrigation facilities is crucial. 70% of the cropped area is still rain fed area. Due to uneven distribution of rainfall,

absence of rain and drought conditions, agricultural yields are reduced almost every year. The highest amount of water is harvested during monsoon season, from July to August. The nine major rivers in the area are Mahi, Narmada, Tapti, Chambal, Ken, Betwa, Sone, Tons and Wainganga. Madhya Pradesh contains an irrigation potential of more than 11 million hectares. In the year of 2009 - 2010 the irrigated areas from all sources were 6.9 million hectares, which was about 45.7% of the net sown area (GoMP, s.a.). Indeed, after every five-year plan carried out by the government there is an increase of irrigation, but the potential and the actual irrigated area still show huge gaps. Possible irrigation systems are gravity irrigation from storage tanks, wastewater use, diesel pump, pedal pumps, dam or canal irrigation. The implementation of permanent irrigation such as canals or dams often involves high expenses and support from the government. While diesel or electric pumps seem an easy solution, the availability and money for diesel or the limited access to electricity can cause insufficient irrigation (CARD, 2010).

About one third (30.72%) or 94.690.000 km<sup>2</sup> of the geographical area of the state is covered by forest, this makes Madhya Pradesh the state with the largest forest cover in India. Especially for the rural and tribal population forest plays an important role in generating additional income for their livelihood. This includes not only timber and fire wood, but also “Non Timber Forest Products” (NTFP), such as fodder, fiber, tendu or temburni leaves for making Indian cigars, which play an important role. Depletion of forest can result in the reduction of livelihood opportunities for the poor (GoMP, s.a.).

While the share of agriculture in the gross state domestic product shows a steady decline 71% of the population is still dependent on the primary sector including agriculture, forestry and fishing. Around 71% of the state’s working force is directed to agriculture or related services while it only accounts for 31% of the state’s economy (GoMP, s.a.).

As agriculture is a highly gender sensitive sector recent developments and policies have had a huge impact on the lives’ of many women. Agriculture has undergone various changes since independence and especially during the last decades. While there was a steady growth in agriculture after independence, the Green Revolution during the 1960s and 1970s with the increased use of fertilizers, pesticides and high-bred seeds brought a big push in yields. The liberal policy of the New Economy, the opening of the markets and the introduction of

the SAPs (Structural Adjustment Policies) at the beginning of the 90s brought severe structural changes. Through the opening of the unprotected domestic market, subsistence farmers could not compete in the international market and a decrease in all agricultural sectors and their sub-sectors, except from forestry, followed. A shift from food crops to non-food crops and within food crops to non-cereals took place (Gautam 2001, Amarnath and Prasad 2009).

Apart from the impacts that the historical development and policy changes had on the agricultural sector, women were especially affected by the agricultural workforce, which shifted from cultivators to agricultural laborers. In 2004-2005, around 84% of women in rural areas were engaged in agriculture, either as cultivators (farmers), but more often as laborers. During the last few decades these numbers were declining more sharply for men (67%) than women. About 30% of women were engaged as casual workers while only around 23% of men were (Amarnath and Prasad 2009, Srivastava and Srivastava 2009). The on-going feminization of agriculture can be traced back to mainly two interrelated reasons. First, men more often move away from rural areas, towards more urban areas and secondly they go into more diverse jobs fields in the non-agricultural sector while women stay in the agricultural sector and face a higher amount of work (Srivastava and Srivastava, 2009). Additionally the overall decrease of women's participation in agriculture can be traced back to the modernization of agriculture. Crop production, with previous high female labor participation, intensified and modernized their production due to mechanization and the introduction of fertilizer and pesticides. The use of those tools and utilities make women's work, such as weeding, unneeded. The new jobs requiring skills, which women don't have, and are usually taken over by men (Singh and Sengupta, 2009), so women are confronted with new challenges and hurdles in agriculture.

### 2.2.2. Identifying gender gaps in Indian agriculture

It is difficult to make any general statement about the **gap in work distribution** concerning agriculture because roles and the distribution of work are strongly dependent on the household structure, the cultural context and of course concern agriculture in the geographical sense. One statement that can be made is that, depending on the family structure, women generally spend more time for household duties, childcare or care for

elder or sick people, than men do. (Ilahi, N. 2000). Studies carried out by Hirway and Sunny (2011) and Gross and Swirski (2002) additionally confirm that women, compared to men, rather work in the unpaid or informal sector and are more likely to have irregular, poorly diversified and scattered work. Doss et al. (2011), recommends detailed data about time use differences between men and women for the application of time use surveys, but this would also show that the surveys can only be used for a certain region and are never nationally representative.

Following Singh and Sengupta (2009) using data from the 2001 Census, the agricultural sector, with 75.38% of the woman workforce, highly female dominated. However, this being so, women verses men, are rather more engaged as agricultural laborers than as cultivators and therefore as farmers. Even within the agricultural work, strong gender divisions in the type of work for livestock or crop production are visible. Women are mainly involved in jobs that are more time consuming, need more patience and where less muscle power is required (Singh and Sengupta, 2009).

Similar working discrepancies are being confirmed concerning household duties. The Report of the Time Use Survey conducted by the Indian Government (1998-1999) reveals that women spend around 29 hours per week on household duties such as cleaning, cooking, washing, and shopping while men only spend 2.11 hours. Concerning the time for childcare and care for elder or sick, women spent around 4.47 hours per week while men only 0.88 hours (GoI, 2000 in Hirway and Sunny 2011). Main reason for the above presented and common work distribution is namely the low literacy rate of women, making it difficult for them to gain higher skilled jobs as well as, social constraints ascribed by lower mobility (Singh and Sengupta, 2009).

Women throughout different regions lack equal **access to productive resources** such as land, livestock, transport, credit, energy and **immaterial resources** such as knowledge, training or technology transfer for operating on agricultural lands. While the gender gap varies within regions and assets one can generalize that women face a systematic discrimination toward access due to social, political or cultural constraints. These gaps cause productivity losses of products rural people actually need (FAO, 2011). In some cases even when women hold assets in their name they have no control or decision making power

(Singh and Sengupta, 2009). Giving women access to resources and therefore empowering them, is crucial because it shows positive spillover effects for their children and other family members. Examples from India and other countries show that women more likely spend their money on basic household needs while men also spend some of their earnings for alcohol or tobacco (Dwyer and Bruce, 1988). Research from Duraisamy (1992, in Agarwal 2002), reveals that in rural India children are more likely to attend school and get better health services when their mothers in charge of more assets. Other results by Swaminathan et al. (2012), show that women's ownership also influences their mobility and decision making. Without any question land is the most important asset due its dual role for the rural population. First of all as a productive asset, land gives options for various livelihoods and access to credits or other services and symbolizes security against poverty. Secondly, it is still an important basis of power and social status (Mearns 1999, Agarwal 2002).

There are mainly three ways of getting access to land, either through inheritance, through the state or through the market all of which pose problems for women. To buy land as a woman is not very common, due to the fact they mainly have limited options to save so much money. Sometimes, through programs, the state gives land to people but it is mainly given to males. The main proportion of land is given by inheritance (Agarwal, 2002). Inheritance law and customary practice play the main role in the unequal distribution of land. In India it is still common to give land in the patrilineal<sup>2</sup> line, there are only few matrilineal exceptions. The Hindu Inheritance Law, which was modified in 2005, provided equal rights for daughters (PWESCR, 2011). That fact that not many women make use of their right is explained by the view of their brothers, as source of security if their marriage fails. Within a survey of rural widow's, Chen (2000) found that, even if it was their legal right, the majority of women did not receive their inheritance as daughters. However the situation is better in the south, and can be explained by the patrilocal<sup>3</sup> residence of the married daughter. Giving land to a daughter is, in the parent's perspective, lost land, and if given to the son's family, the land will stay within the family. The situation for widows was slightly better around 50%, who inherited from their husbands, but this is not commonly

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<sup>2</sup> Patrilineal means ancestral property is passed only through the male line.

<sup>3</sup> Patrilocal means that the woman joined the husband in his natal home.

noted formally in the village land records. In other studies it was often noted that the widow's share was recorded with their sons. Very often the share for widows is seen as their responsibility and often controlled by their sons. Often women when becoming a widow are too old and physically not strong enough to work on the fields (Chen 2000, Agarwal 2002). Under the expected and upcoming increase of women-headed households, the importance for women in gaining access to land, is being stressed. In India de facto women-headed households are estimated to increase up to 20 to 35% (Agarwal, 2002). Additionally, due to their lack of literacy, low mobility and high domestic work, it will be difficult for them to get jobs in the non-agricultural sector. So for women to secure their livelihood, it will be crucial to secure their rights and access to land (Agarwal, 2002).

In many developing countries and especially in India women **lack** various needed social, cultural and traditional custodies such as **equal access to education** (Velkoff, 1998). This lack of literacy influences women's ability to gain access to various important resources and assets necessary for managing their livelihood and gaining productivity. Following King et al. (2001, in Balakrishnan and Fairbairn-Dunlop, 2005), a basic education is necessary for developing skills and taking part in economic activities. If this is not so, women will always face exclusions. While women play a crucial role in agriculture their access to extension services is minimal in comparison men (World Bank, 2009). Their access is widely hindered by various obstacles. The main reason for such poor access to information and training for women is a result of the different priorities of extension services often directing their work and research in technologies on big scale farming, cash crops and export oriented production. Often they share the common attitude of the male being the head of the household and therefore the main recipient of information. It also often is assumed that men and husbands pass on information to the females in the family. However, often practical constraints such as lack of time due household duties or the care for children, as well as the reduced mobility of women are left out in the planning of trainings. Additionally there is a huge lack of female extension officers which may be a key reason in leaving out the perspectives of women concerning difficulties in agricultural production and limitation of participation at trainings due to cultural constraints. Because of the low literacy rate, training materials are often not adequately designed for women (Karl et al. 1997). The feminization of agriculture, resulting from an increase of the migration of men to urban



areas, predicts that more women will become head of the household (Lingam, 1994) and will be in charge of maintaining the farm. To adapt to these new work patterns, it is crucial to improve the access for women to extension service and training.

According to Karl et al. (1997) what needs to be done is building awareness for women's share in agriculture and their contribution to food security. Therefore it is crucial that gender-disaggregated data is collected and policies are being implemented. Extension research and policies need to reconsider their focus and include the needs of women and landless farmers. They also need to be more aware of the issues at hand and trained to better include and promote women. Therefore, special guidelines need to be implemented and training material need to be adapted to the requirements of women. Women themselves should be trained as extension agents and women's access to higher agricultural education needs to be asserted.

A first positive step to a better integration of women in job markets has been the in 2006 launched Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) which in recent years strongly influenced the job market on the countryside. The aim of the program is to supply the rural population with 100 days of work during the lean season to create working opportunities and therefore improve food security, distress urban migration and to empower women. Women's empowerment is particularly important and therefore a 30% quota is reserved for women. Some worksites have been equipped with child care facilities and equal payment was assigned, depending on the federal state, for men and women. In 2006, because the MGNREGA was carried out in the 200 most underdeveloped districts of India it now has a national coverage. During 2009-2010, 48% of the participants were women. In Madhya Pradesh in 2006-2007 as well as during 2009-2010 the share of women was at 44%. Effects of the MGNREGA strongly depend upon the local characteristics of economy and job possibilities as well as on the local wage levels. For many women this was the first time they participated in paid work. The positive feedback of the MGNREGA was recorded as the jobs being, amongst other things, close and no skills were necessary (Sudarshan, 2011).

Concerning the decision making power, in particular the approaches of Manser and Brown (1981) and McElroy et al. (1981) made clear that within a household interests, can be

oppositional and that different household member will try to influence decisions for their interest. In the process of decision-making and with that, often the enforcement of interests bargaining power, is very important. Family members who direct resources such as land, regular income, knowledge or authority within their community, also command more bargaining power, and thereby have more decision making power. On the contrary, bargaining power can often be determined by social norms (Seebens, 2011). There are several studies supporting this assumption. Garikapati (2009) and Allendorf (2007) found out that women, who, for instance own land or have access to productive assets, have a greater say in decision making and this empowerment often shows positive spill over for children and their nutrition or other household members than women who rarely have a regular income, high societal status or hold a land title (Sethuraman, 2008). Whitehead and Kabeer (2001, in Seebens 2011), noted that indeed there are different interests within household members but in households with extreme poverty the focus for decisions lie on the joint interest of the family.

### **3. Research objectives**

#### **3.1. General objectives**

The general objective of this study is to illustrate the current situation of women living off small scale-farming or agricultural related activities and to identify the gender-based disparities that could hinder women's development and empowerment. Therefore an overview of the local agricultural structures and primary occupations of men and women are outlined. Furthermore the aim of the study is to illustrate women's access to material and immaterial resources such as land, money or knowledge. Special attention is being paid to work distribution within different agricultural fields. To more accurately show the amount of daily work that is completed by women, visible, daily routines are being laid out with timeframes. Another point of interest is decision-making patterns within the families, as well as the analysis of women's social involvement. Finally, a comparison between women- and men-headed households will give information about whether women-headed households are more vulnerable than men-headed households.

#### **3.2. Research questions**

What is the role of women in a mixed crop-livestock production system in Northern India?  
How can the gender gap be closed?

Q1: Which roles and duties do women currently take in the agricultural sector?

Q1.1 How do women in women-headed households (WHH) and men-headed households (MHH) participate in agriculture?

Q1.2 What is the structure of local agriculture?

Q2: How is work distributed and decisions made within the family?

Q2.1 How are daily routines for men and women organized?

Q2.2 How is the work distributed between men and women?

Q2.3 How is decision-making dealt with within the family?

Q3: What is access to material and immaterial resources like for women?

Q3.1 What is the distribution of landownership between men and women?

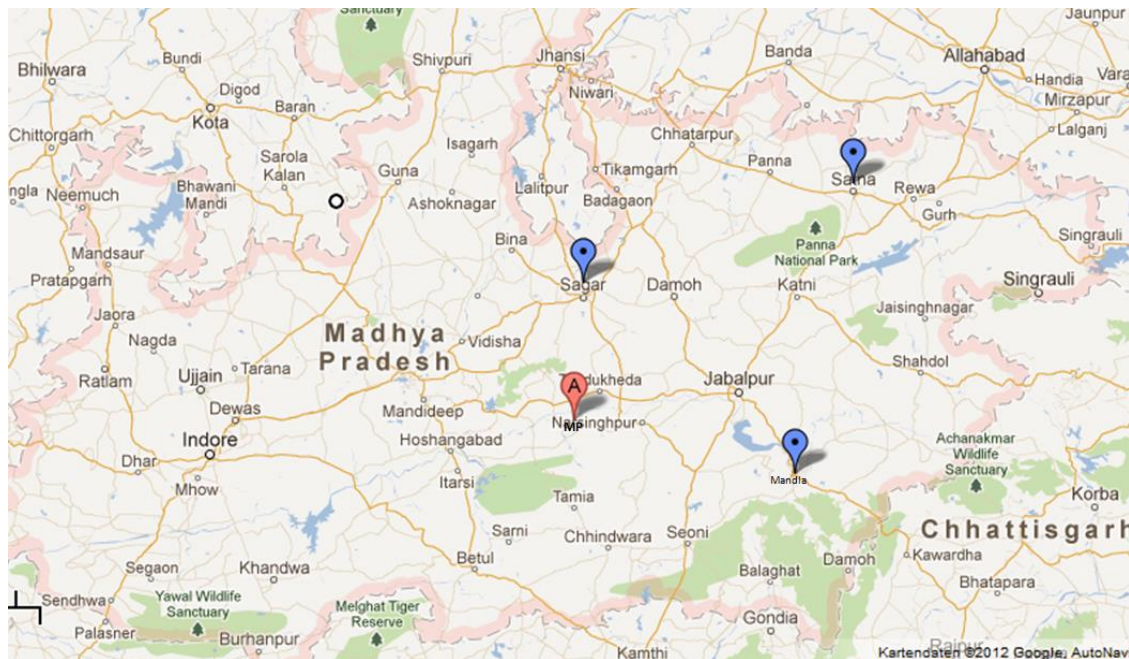
Q3.2 How are women involved in financial matters?

Q3.3 How do women have access to knowledge, the labor market and society?

## 4. Methodology

### 4.1. Study area

The research area was defined as the study area of a Caritas project. The interviews and focus group discussions (FGDs), as well as some of the experts-interviews took place in three different districts Sagar, Satna and Mandla in the state of Madhya Pradesh, in central India. Other expert-interviews were carried out in New Delhi.



**Figure 1: Study Region: Madhya Pradesh – Sagar – Satna – Mandla**  
(designed with google maps, 2012).

Madhya Pradesh is the second largest state of India with a population of more than 72.6 million people and an approximate area of 300.000 km<sup>2</sup>. Around 52 million people, 72.4% of the population, live in rural areas which make them directly or indirectly dependent on agriculture (NIC Satna 2012, UNDP 2011a, GoI, 2012b). The state is divided into eleven Agro Climatic Zones and three different Agro Ecological Zones (GoMP, s.a.). A large part of the state is situated on a plateau around 490 meters above sea level and surrounded by the mountain ranges of Vindhya and Satpura (UNDP, 2011a).

The Sagar district lies within the north-central region of Madhya Pradesh, and has a population of approximately 2.3 million and an area of 6300 km<sup>2</sup>, and in its southern region

it is crossed by the tropic of cancer. Sagar is known as a major agricultural trade center with oil and flour milling, saw-milling, cotton weaving, ghee processing and other industries such as bidi<sup>4</sup> companies, railways and engineering (NIC Sagar, s.a.). The district of Satna is situated in the mid-northern part of Madhya Pradesh with around 2.2 million people and an area of about 300.000 km<sup>2</sup> (NIC Satna, 2012). Mandla is characterized as tribal district and situated at the east-central part of Madhya Pradesh with a surface of 8.700 km<sup>2</sup> and a population of approximately one million people (NIC Mandla, s.a.).

The climate of the state is strongly influenced by the Arabian Sea monsoon season. Seasons can roughly be divided within the hot season, going from mid-February to mid-June with maximum temperatures up to around 45 degrees Celsius. The rainy season begins from mid-June to September, with temperatures varying from 30 to 40 degrees Celsius and the cold season going from November to mid-February with temperatures around 10 to 30 degrees Celsius. October represents the transition month from rainy to cold weather. Most rain falls within the month of July and August where humidity can go up to 75%, while during the hot season humidity can fall to 25% (NIC Mandla s.a., NIC Satna 2012).

The population of Madhya Pradesh consists of up to 20% of Scheduled Tribes (ST) and 15% of Scheduled Castes (SC). About 40% of the tribal population of India lives in Madhya Pradesh and, mostly in forested areas (UNDP, 2011a). The Sagar population constitutes about 75% of SC and Other Backward Castes (OBC) and a high population of tribal people, whereas Mandla is generally known as a tribal district (NIC Sagar s.a., NIC Centre Mandla s.a.).

India ranks 134 out of 189 countries in the Human Development Index (HDI)<sup>5</sup> and belongs to the “medium human development” countries. The India State Hunger Index (ISHI)<sup>6</sup>, published in 2008, calculated for 17 major Indian states covering 95% of the population, appointed Madhya Pradesh as the only state, concerning the hunger situation, that was in the category “extremely alarming” while eleven other states were in category “alarming”.

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<sup>4</sup> Bidi or beedi is another term for Indian cigars.

<sup>5</sup> The HDI rank countries by the level of „human development“ and uses the variables life expectancy, education and per-capita gross national income (GNI).

<sup>6</sup> The ISHI measures hunger on the variables child malnutrition, child mortality and the proportion of people who are calorie deficient.

One of the main reasons for the poor ranking is the fact that 60% of the children are malnourished. According to the Planning Commission for India, 36.7% of the population in Madhya Pradesh, are assumed to have lived below the poverty line during 2009-2010 (Gol, 2012a).

Madhya Pradesh oversees different economic branches. Minerals such as coal, coal-bed methane, bauxite, manganese, lime-stone, dolomite, laterite, rock phosphate, iron and iron ore are present in MP. Within India, Madhya Pradesh controls the largest reserves of copper and diamonds. Industrial based economies such as the auto industry, cement, consumer goods and pharmaceuticals have a large pool of industrial labor, and included in industry are a large number of agro-based industries. Moreover, a high economic potential is seen in the tourist sector, with the regions high amount of forests and the interesting wildlife as well as historical and religious sights attracting domestic and international tourists (GoMP s.a., Gol s.a.).

The performance of agriculture and the industrial sector is rather moderate regarding the unique resources, topography and climate the state disposes. Madhya Pradesh commands over large areas of productive, but not cultivated land. The underdevelopment of infrastructure demonstrated by bad roads, lack of or insecure access to power, negatively influences irrigation and trade. According to the one-year plan of the Government of Madhya Pradesh, action must be taken in determining the cost of cultivation, sustaining agricultural productivity through improving soil fertility, technologies and better access to stable markets (GoMP, s.a.).

## **4.2. Research partner and sampling strategy**

The field-work was carried out within the Caritas program “Building resilience to climate change through strengthening adaptive small-scale farming systems in rainfed areas in Bangladesh, India and Nepal (SAF-BIN).” The project is co-funded by the European Commission (EC) and belongs to the “Global Program on Agricultural Research for Development (ARD)” (EU [European Union], 2011). ARD projects address agricultural development challenges of developing and emerging countries. The EC feels that small-holder farmers (SHF) will play an important role in achieving food security and hence

reaching the Millennium Development Goals (MDGs) the EU firmly commits to (Caritas Austria, s.a.).

The project is carried out by Caritas Austria and its project partners: Caritas India, Caritas Nepal, Caritas Bangladesh and the University of Natural Resources and Life Science (BOKU). Associate partners are the Action for Food Production (AFPRO), The Sam Higginbottom Institute of Agriculture, Technology and Science (SHIATS), The Bangladesh Rice Research Institute (BRRI) and Local Initiatives for Biodiversity, Research and Development (LI-BIRD) (Caritas Austria, s.a.).

The overall project aim is to help small-holder farmers in rainfed agro-ecosystems to better adapt to changes caused by climate change and hence contribute to an improvement in food security. The project duration is five years and will be carried out in India, Nepal and Bangladesh. In every country three appropriate districts have been chosen, with the exception of Nepal choosing four, in which ten villages have been selected to participate in the project. In every village, on-farm research and documentation of innovations in traditional food production, distribution and consumption systems will be carried out by SHF collectives (Caritas Austria, s.a.). The estimated results are the understanding of and a broader use of innovations, improved food and nutrition security due to higher productivity, diversification and adaptation as well as inclusion of crosscutting issues such as gender, health or cultural identity. These goals should be achieved through an international multi-stakeholder approach involving farmers, SHF collectives, civil society, organizations, agricultural researchers, extension agencies and policy makers (Caritas, s.a.).

The sampling area of my research has been chosen within the villages taking part in the SAF-BIN project. Due to a tight time budget the number of respondents had to be limited and defined before starting with the sampling. In each of the three districts twenty-four individual interviews in five to six different villages, depending on the availability of interviewees, were carried out. The interviews were organized by the regional project coordinator and his co-workers coming from those villages. The interviews took place in mostly public schools, at community places or at some co-workers or interviewees houses. The translation was done by the project coordinator and was supported by his co-workers.



Seventy-seven individual interviews with MHH and WHH were conducted. Five of them were pre-tests. The sample was chosen randomly and designed to be carried out with 36 WHH and 36 MHH. Due to the lack of availability of interviewees this was not possible. In many cases mostly married women, living in MHH were available for interviews so the sample consists of 46 women from MHH and 26 from WHH. Based on the research question interviews were only carried out with women. To not exclude the male opinion, FGDs were carried out with men as well.

The completed expert interviews included professionals such as Dr. Jyotsna Chatajce, director of the Joint Women's Programme in New Delhi, Vice President of the YWCA (Young Women's Christian Association) of India, Mr. Yogesh Kumar Dwivedi, team manager for agriculture and small farmer's agribusiness initiative at Action for Social Advancement (ASA) in Bhopal, MP and Ms Mungreiphy Shimray, team leader of the gender section of Caritas India.

Concerning the research WHH always stood for a household where the husband is absent either because due to death or because the women lives separated from her husband. If a son was present, and even if he was already married, the household still counted as WHH. Adversely a MHH meant a household with the presence of a husband or a couple living in informal coalition<sup>7</sup>.

### **4.3. Research design**

The literature review, as revealed in the previous chapter shows strong involvement and great contribution of women in the agricultural sector. While these facts are presented through many reports and studies, the circumstances and complex social structures that lead to marginalization and underdevelopment of women are often left out. Additionally the role, status and situation of women vary widely within region and class and strongly depend on the social traditions in which one is embedded. This research seeks to describe the current situation of women in the agricultural sector in the three study regions with a focus on work distribution and access to productive and reproductive resources including a short description of the local agricultural structures and the female involvement in the

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<sup>7</sup> This was never the case because all of the MHH were married.

community. A comparison between men and women as well as WHH and MHH should help to illustrate differences in WHH and MHH and identify main issues and disadvantages women must deal with.

To answer the research questions a holistic, in-depth investigation is needed. Therefore, according to Feagin and Orum (1991), a case study approach is adequate. A critical point in the case study approach is the unit of analysis. Selection of cases is done to maximize the most useful outcome that can be reached during the available time (Yin, 1994). To minimize the disadvantages of the small sample size, a multi-perspective analysis, so called triangulation, forms an important part of the case study. Therefore the opinion as well as the interaction of different stakeholders is taken into account and supplemented by the use of several methods (Feagin and Orum, 1991).

To meet the research objectives, quantitative and qualitative tools were used. To fulfill the requirements of standardization the interviews, FGDs and expert interviews were carried out with the same tools and methods. Quantitative tools were used to gain general information about the agricultural structure, work distribution, economic and social situation as well as access to resources. Qualitative tools were applied to gain in-depth information about the daily work distribution and routine, decision-making and social arrangements. Furthermore qualitative methods were used to gain knowledge about the work and different strategies of NGOs working on women, the empowerment of women and women's issues related to agriculture.

Intensive literature review using national and international reports, magazines, monographs as well as reports from other studies was carried out before the field research and built the framework of the research. Local information sources such as libraries, project and workshop papers and presentations complemented the literature research. Local project staff was consulted before the beginning of the field-work and helped to adapt research aims and methods to the local practices.

Data was collected during 5<sup>th</sup> of August and 10<sup>th</sup> of October 2011. Interviews and FGD were carried out within the usual environments of the interviewees either in the villages or concerning NGOs, in their offices. In order to get a common understanding of the purpose of the interviews and FGD's, the questionnaire as well as the FGD's, guide-line was

discussed and adapted with the general and regional coordinators during a project meeting in Bhopal, Madhya Pradesh. After completing the data collection, first results and impressions were being discussed in a meeting with the overall project coordinator of the SAF-BIN project as well as the gender agent of Caritas India.

#### **4.4. Methods**

During the field-work qualitative and quantitative data was collected. Qualitative data was collected through formal group discussions (FGD`s) and expert interviews. Quantitative data was gained through individual interviews. Additional information from informal conversation in the field and with project coordinators, observations and experiences were noted down in a research diary. Furthermore after the field research I could gain more information about the study region and the project itself while participating in a one-week workshop held for the Caritas co-workers in Jabalpur, Madhya Pradesh.

To build rapport with the people and to make them feel more comfortable in order to get correct answers the acquaintance project coordinator from the particular project region helped to carry out the interviews and FGD`s. At the beginning of every interview or group discussion I was introduced to the interviewees by the project coordinator who always acted as my translator. The aim of my research and the connection to the just newly implemented SAF-BIN project was explained to the interviewees. Questions concerning the project, as well as myself and the aim of the research could be raised and were answered or discussed openly. Permissions for recording FGDs, interviews with members of NGOs or for taking pictures were obtained prior to contact. Photographs of every interviewee and FGD were taken, developed and given to the participants as thanks for the time they shared.

##### **4.4.1. Pretesting**

Pretests are crucial to see whether the tools used are accurate in meeting expected results and should be carried out under the same preconditions as the actual analysis. Main factors that should be taken into account are the reliability and validity to the research, the comprehensibility of the question, the clearness of categories and the concrete problems of investigation (Atteslander, 2010). Five pretests were conducted, all of them in the first study

region. After that, with support from the project coordinators, the questionnaire was slightly adapted to local contexts to better meet the research goals.

#### **4.4.2. Structured interviews**

Structured interviews were used to mostly gain information about the status of agriculture, access of resources and assets, education and trainings and basic information about decision making and work distribution as well as economic situation and social relations. For the structured interviews, a questionnaire with open-ended and closed questions was used based on Atteslander (2010) and Oppenheim (1996). Various question techniques, answering forms and control questions with different scales like nominal, ordinal and metric scales were used to gain different data. The interviews were conducted face-to-face and only with women.

#### **4.4.3. Semi-structured interviews**

Semi-structured interviews comprise advantages of standardized and non-standardized interviews. An interview guideline was designed beforehand and helped to guide the interview and make sure that at the end of the interview all the important questions were covered. The order of the questions is flexible according to the narrative of the interviewee. This interview method was chosen for expert interviews, and made sure that questions for the different experts could be adapted to their experience and work focus (Bernard 2006, Gläser and Laudel 2009). The experts were chosen due to their long-term experience in gender work at village and institutional and governmental levels. The information gained from the semi-structured interviews complements the information from individual interviews as well as from FGDs to provide a holistic analysis of the situation.

#### **4.4.4. Focus group discussions**

A group discussion can be seen as a conversation within a group concerning a certain subject. The information trying to be gained is an “unofficial” opinion, which is not built within a group but more easily communicated within group discussions than during individual interviews. The main aim was to get an inside view of the daily routine and therefore about the work distribution between men and women. For a FGD it is crucial to create an authentic and comfortable situation in which to initiate an honest discussion.

Therefore FGDs were carried out at a neutral community place in the villages or at some farmers' homes. To prevent the domination of one gender and to make sure answers are spoken out freely, without being affected by social structures, FGDs were carried out separately for men and women. It is presumed that social reality cannot be generated through individual interviews but only through public or social group situations (Lamnek, 2005). From such interaction, questioning and differing opinions that came from the interviewees, the participants of the FGD could reflect on their own work distribution and opinions on certain topics. Additionally, observations of how participants interacted and behaved in groups were noted and were helpful in better understanding the social structure.

To make sure that all the FGDs were carried out the same way and all the important aspects were covered, a manual was developed and later modified within a meeting with the gender agent of Caritas India. During the FGDs, participatory methods such as brainstorming and a timeframe were being developed showing the daily work and distribution of resources of men and women. The FGDs were carried out after finishing the individual interviews in a study region. On grounds concerning the availability of participants, both people who had been interviewed and some that had not been interviewed participated in the discussions. The number of participants varied from seven to fifteen and the duration of a discussion lasted from one to one and a half hours. Finally, FGDs furthermore supported the triangulation of data.

#### **4.4.5. Observations**

Observations are not used as a key method but help to interpret the gained data and better understand social interactions (Bernard, 2006). Observations from FGDs, interviews and visits in the villages, have been noted down in a research diary.

#### **4.5. Research challenges**

The research was carried out without any difficulties and with the great support from the project coordinators and their field assistant within the villages. Nevertheless some observations for the interpretation of the results need to be taken into account.

The patriarchal structure of society mentioned in previous chapters was reflected upon from time to time during the interviews in the villages. Also important is that all individual interviews were translated by men. While the project management tried to improve the inclusion of women in the project team and help with assistance, there was a scarcity of confident and qualified women. Some places lacked adequate locations for the interviews, which were carried out on school grounds, community places, next to temples, in houses or yards. Some of these settings made it difficult to insulate the interviewees from external audiences, making it unable to answer the questions in confidence. From time to time there were difficulties with understanding the local dialect, which sometimes made it necessary to consult locals, mainly co-workers, to help with the translation. To alleviate those circumstances, project coordinators paid special attention to those disruptive factors and tried to eliminate them. Sensitive questions concerning marital status, social relations or the relations and differing opinions between men and women required trust and empathy from both sides.

#### **4.6. Data storage and analysis**

Qualitative data gained through expert interviews and FGDs, were documented by voice recorder in order to provide support for the written notes. Outcomes from the FGDs were coded and assigned into adequate categories and stored with Microsoft Word. Additionally flip charts and photographs documented the findings of FGDs. The expert interviews were transcribed and also stored with Microsoft Word. Qualitative data was mainly analyzed following the approaches of Mayring (2008).

The descriptive analysis from quantitative data was carried out with PASW Statistics 18 (Predictive Analytic Software) following Toutenburg and Heumann (2008) and Bühl (2010). For nominally and ordinally scaled variables I chose the Chi-Quadrat Test for testing the independence of two variables or indications of a relationship among the variables. Crosstabs illustrated the frequency distribution of two independent variables. With four, in addition to crosstab and the Chi-Quadrat Test, Fisher's Exact Test was carried out. Due to the small sample size, many variables didn't fulfill the conditions for statistical tests.

For testing the standard normal distribution of metric variables the Kolmogorov-Smirnov Test was used. For normally distributed variables the T-Test was used to compare arithmetic means of two independent samples. For abnormally distributed variables the Mann-Whitney-U-Test was used.

The p-value shows the likelihood of significant differences and is labeled as \*\*\* for significance at 0.001 level, \*\* for significance at 0.01 level and \* for significance at 0.05 level. Due to the small sample size and the case study approach outcomes cannot be taken as statistically representative results for a wider range and cannot be generalized. If results showed significant differences between WHH and MHH or men and women, it is indicated in the results. Even though certain tests showed significant differences between the sample groups, results can only be understood as tendency and description of the three study regions.

After the field research I crosschecked and supplemented my first interpretations in a meeting with the general project coordinator and the gender agent of Caritas India.

## 5. Results

The results are divided mainly into three parts. Firstly the local agricultural structure including a description of the available agricultural properties and main occupations of the respondents is presented. For a better description of the living situation additionally a brief insight on the food security situation is given. Secondly the work distribution within different activities and decision taking pattern is analyzed. Thirdly the access to material resources such as land or money as well as immaterial resources like knowledge and involvement in the social structures are illustrated.

### 5.1. Female involvement in agriculture

**Q1: Which roles and duties do women currently take in the agricultural sector?**

**Q1.1 How do WHH and MHH participate in agriculture?**

**Q1.2 What is the structure of local agriculture?**

#### 5.1.1. Participation in agriculture

To make any statement about the possible participation of women in agriculture and to identify differences for women headed households (WHH) and men headed households (MHH) it is important to consider the composition of the sample. Twenty-six women live in WHH<sup>8</sup> of those two live separate from their husbands whereas 24 are widows. Women living in MHH (n=46) are all married. All women within the sample have children only four women live households where no male is present. In both groups, the relative majority of women are between 36 and 50 years old. Three women in WHH are younger than 35 and eleven are older than 51 years. There are fourteen women in MHH aged between 20 and 35 years and eight who are above 51 years. The average age for MHH is 42.2 years and WHH 50.3 years. With an average difference of around eight years, WHH are significantly older than MHH ( $p=0.003^{**}$ ). There are significant differences in the average size of a MHH with 6.96 members compared to 4.69 members in WHH ( $p=0.001^{***}$ ).

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<sup>8</sup> WHH means “single” and comprises widows and separated women.



Forty-one women belong to scheduled tribes (ST) such as Adivasi, seven to scheduled castes (SC) like Dalits and 24 to other backward classes (OBC). The information about social factors of the sample will help to better understand the presented results. That the situations and social structures for women as well as for men are difficult and complex was noted by Dr. Jyotsna:

*'Well, the situation of women in India is mixed and it is worse in the villages and in the slums ... There the men and women are equal sufferers because of poverty, because of caste discrimination, because of religious discrimination and because of the fact that they have no proper information, they don't know and the culture and tradition and religion is the only designing factor in their life's. So what happens is that they are ruled by their old traditions, practices, rules and laws and they do not, even they do see every day by radio by television that women are equal, ..., it does not have any impact on them, because for them, it is existence which is the most important, to life, to survive.'*

Figure (2) gives an overview of the main occupation of women and men<sup>9</sup>. As indicated three-fourths of women (75%, n=54) are engaged in subsistence farming as well as almost three-fourths (73.7%, n=45) of men. None of the interviewees does farming on a big scale and can make a living out of farming as only income source. The second most frequent occupation for women (58.3%, n=42) and men (73.7%, n=45) is wage labor<sup>10</sup>. The duration of wage labor has not been evaluated but women indicated that men, compared to women, on average go more often for wage labor. Indicated reasons therefore were the higher mobility of men that their physical power helps them to get jobs easier and due household duties women more often need to stay at home. With around 58% (n=42) significantly more women work in the forest product sector where only around 30% (n=19) of men do (p=0.003\*\*). The forest product sector comprises making Indian cigars and collecting firewood. For twenty women (27.7%) and ten men (16.3%) making Indian cigars is a major income source. Fire wood is significantly more often collected by women (30.5%, n=22) than by men (14.7%, n=9) (p=0.040\*). Only three women (4.1%) and three men (4.9%) have a job

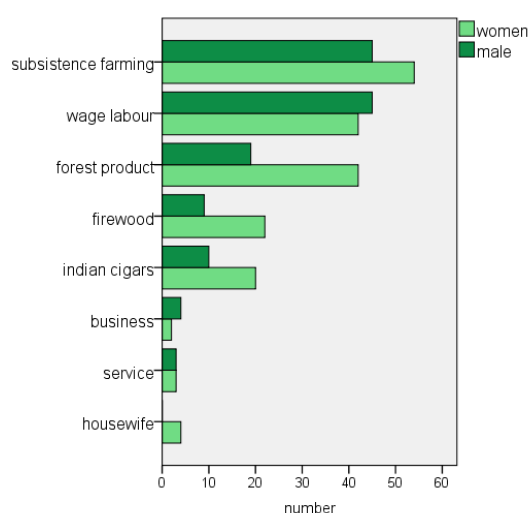
<sup>9</sup> For a more detailed comparison between WHH and MHH, in case of a widow or a separate woman, if available, the data of their eldest son has been used.

<sup>10</sup> Wage labor comprises irregular work, mostly on a daily basis, in either construction but mainly farming.

in service. Males work as teacher ( $n=1$ ), staff worker in school ( $n=1$ ) or in a company ( $n=1$ ). Women are engaged as domestic worker ( $n=1$ ) or in the preparation of the midday meal for school kids ( $n=2$ ). Out of the three women working in service, two are literate. Two women (2.7%) and four male (6.5%) have a business wherefrom they partly make their living. The two women are engaged in the brick and tile making as well as two of the male. Furthermore one male does fishing and one sewing. Within the sample there are four women only engaged in household activities two coming from WHH and two from MHH aged between 26 and 62 years.

Due to unfulfilled test conditions differences in the work distribution between WHH and MHH could not be analyzed statistically. Although participants at FGDs, women as well as men, noted that households with only one adult face a higher workload and all the responsibilities lie within that person. While men often get support with child care and housework, females mostly have to deal with the responsibility for children, household, work and other challenges. Widows mentioned that they additionally feel a lack of information and security. They face those challenges with doing more work and mostly the help of their children.

On average women are engaged in 2.04 different activities for their primary occupation while men are engaged in 1.8 different activities.



**Figure 2: Primary occupation of women (n=72) and men (n=61)**

Evaluation from the NGO side of possible occupations and the working role of women in agriculture by Mr. Jogesh:

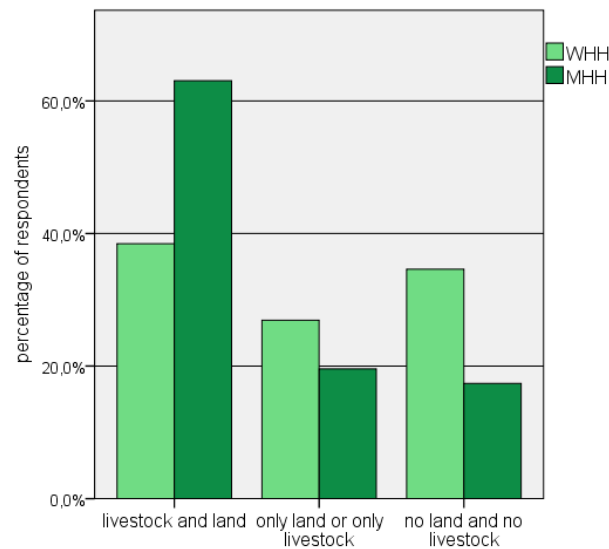
*'... we believe that in the rural areas in India there are not very much opportunities for off-farm employment, so agriculture is still a main source of livelihood for rural Indians and ... in the states where we are working like Madhya Pradesh and Bihar more than 70% of the people are dependent on agriculture, so improving the agricultural status may directly affect the livelihoods of small and poor people ...'*

Talking about women *'... their role in agriculture is very significant, but the recognition is still an issue ... they are playing a very critical role in all the agricultural management'*

As shown in figure 2 the majority of people depend on subsistence farming or activities related to agriculture such as wage labor, collecting and selling firewood or making Indian cigars.

#### **5.1.2. Local agricultural structure**

For statements about the participation of women in agriculture it is crucial to take the distribution of property, which in agriculture serves as a production base, into account. Figure 3 illustrates the distribution of facilities between WHH and MHH. MHH 63% (n=29) command over land and livestock for their agricultural activity. 19.6% (n= 9) have either land or livestock and 17.4% (n=8) have no land and no livestock. At WHH (n=26, 100%) only 38.5% (n=10) possess land and livestock. Therefore 26.9% (n=7) have either land or livestock and an amount of 34.6% (n=9) don't have land or livestock for their agricultural activities. As figure 3 shows MHH are more likely to have livestock and land and WHH are more often without any base for agricultural production.



**Figure 3: Production base for WHH (n=26) and MHH (n=46) households**

As mentioned in interviews and group discussions, WHH without land or livestock face a higher burden compared to MHH because they mostly get help with child care. Stated reasons therefore are that they mostly lack income and due to household or childcare duties they are attached to their homes or villages and lack possibilities for wage labor or work outside the village. One woman out of the sample is separated from her husband and does not get any support from him although he owns land. As she stated, going back to her parents or other family members is not an option for her.

Table 1 gives an inside on the agricultural structure in the study region. Out of 26 WHH twelve have livestock and out of 46 MHH 32 have livestock ( $p=0.077$ ). WHH possess on an average of 2.5 animals compared to 3.06 for MHH. The animals used most frequently are bullocks (WHH,  $n=1.71$ ; MHH,  $n=2.64$ ) and cows (WHH,  $n=2.25$ ; MHH,  $n=1.5$ ). As added by the interviewees bullocks are used for transporting and ploughing. Other animals are found in even lower numbers (goats,  $n=17$ ; poultry,  $n=5$ ; buffalo,  $n=4$ ; calf,  $n=3$ ; pigs,  $n=2$ ). Own observations from field trips indicate that the constitution of especially cows and bullocks are estimated as rather critical, most of them were thin. Out of 26 WHH fifteen dispose over land, while 35 MHH have land ( $p=0.118$ ). The average land size for WHH is 0.86 hectares, for MHH it is 0.87 hectares. Some interviewees mentioned that although they have land, not all of it is productive. Within the crop cultivating households ( $n=49$ ) WHH cultivate on average

2.64 different crops and in MHH 2.83 different crops ( $p=0.508$ ). None of the interviewed persons owns forest.

**Table 1: Agricultural structure for WHH (n=26) and MHH (n=46)**

Agricultural structure	WHH	MHH	P-values
<b>a. animal property</b>			
no. family owning animals	12	32	$p=0.077^a$
average number of animal/household	2.50	3.06	$p=0.86^a$
min number of animals	1	1	
max number of animals	6	10	
no. families owning bullocks	7	14	
average number of bullocks/household	1.71	2.64	$p=0.140^a$
no. of families owning cows	4	26	
average number of cows/household	2.25	1.50	$p=0.019^{*b}$
<b>b. land property</b>			
no. families owning land	15	35	$p=0.118^a$
hectares (arithmetic mean)	0.86	0.87	$p=0.782^a$
min	0.20	0.04	
max	2.83	2.83	
<b>b. diversity of crops</b>			
no of families having crops	14 <sup>c</sup>	35	
different crops	2.64	2.83	$p=0.508$
min	1	1	
max	5	5	

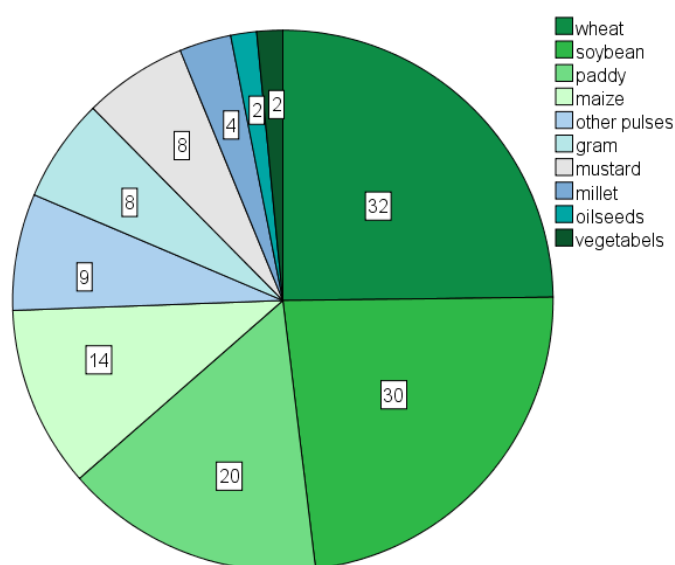
a. Differences between WHH and MHH statistically not significant.

b. \*Differences between WHH and MHH are significant at 0.05 level.

c. One family leased out their land.

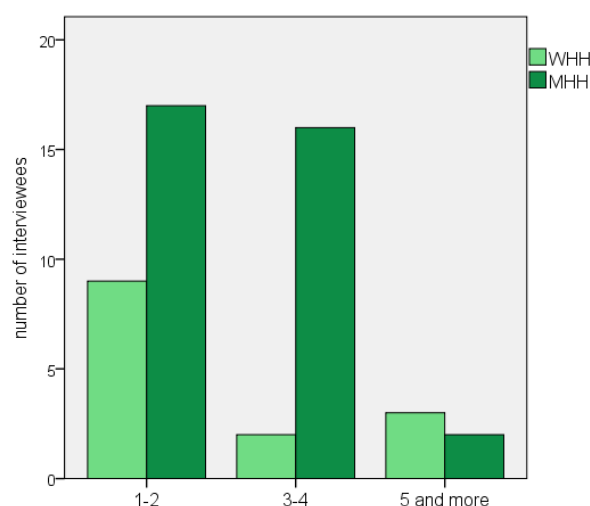
The agricultural practice concerning livestock (n=44, 100%) as well as crop (n=49, 100%) is very traditional. None of the farmers mentioned a change in livestock keeping, feeding patterns or breeding management. Only the use of vaccination was mentioned by 65.9% (n=29) of farmers as a rather newly introduced practice. Concerning the agricultural practice of crop production no changes or innovations were mentioned. Within the families owning land 83.6% (n=41) use pesticides and 77.5% (n=38) use fertilizer to improve their yields.

From the previous results one can draw the conclusion that the small scale farmers practice a rather traditional form of agriculture. Figure 4 reveals the variety of crops grown in the regions seems to confirm this assumption. The crops grown mostly by the farmers are wheat (n=32 times) and soybean (n=30 times), only grown in the districts of Sagar and Satna. Paddy as the third most grown crop (n=20 times) is found only in Satna and Mandla. Mandla is the only district where maize is grown (n=14 times). Four main crops make three-fourths of the grown crops. Other crops are pulses (n=9 times; Sagar and Satna), mustard (n=8 times; Mandla) or gram (n=8 times; Satna). Hardly anyone grows millet (n=4 times; Mandla), sesame (n=2 times; Sagar) or vegetables (n=2 times; Sagar and Satna). As mentioned by farmers while most of the crops are used for own consumption, soybean functions as cash crop to add to the income of the family. Additionally around 30% of WHH (n=8) and 30% of MHH (n=14) have a vegetable garden. The lack of adequate land, knowledge, seeds, scarcity of water, inadequate outcome or simple the lack of tradition were being identified as main reasons for the low numbers of vegetable gardens.



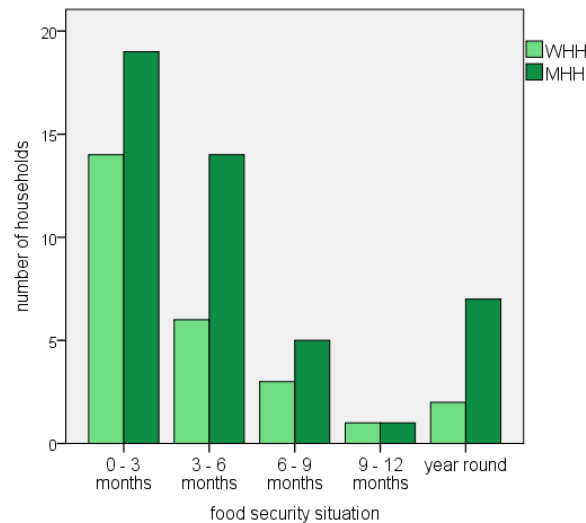
**Figure 4: Distribution of crops frequency within HH (n=49) with land**

Many farmer in WHH as well as in MHH depend to a high degree (WHH, n=9; MHH, n=17) on only one or two different crops per season (figure 4). Though dispose nearly as many MHH (n=16) on three to four crops a season but in WHH only two reach three to four different crops per season. If we take a look at an even higher diversification both households show very low numbers (MHH, n=2; WHH, n=3). Farmers in Mandla mentioned that due to lack of rain during dry season they cannot cultivate their entire land. Others said that due to the small field size they are forced to just grow a small variety of crops and in some cases farmer mentioned that they have fallow land and therefore cannot use their entire land. During a field trip to Satna I could observe that in some fields intercropping is done.

**Figure 5: Level of crop diversity in WHH (n=14) and MHH (35)**

As previous results show, not all of the people command over land or livestock and those who do mainly farm on a samll basis. Figure 6 will help to give some insides on the food security situation of these families. Thirty-three households (WHH, n=14; MHH, n=19) are only food secure up to three months. These are around 45% of the whole sample. For another 20 households (WHH, n=6, MHH, n=14; 27.7%) the food lasts between four to six months. Four WHH and six MHH indicated, that their food lasts between six to twelve months (13.8%) and only two WHH but seven MHH said they are a year round food secure (12.5%).

Many interviewees noted that they would get support for food by the Public Distribution System (PDS) and that their kids would get a warm meal once a day at the Midday-Meal in school. Some women mentioned that they also send their younger kids to school only to provide them with a warm meal.



**Figure 6: Food security situation in WHH (n=26) and MHH (n=46)**

Out of the nine households which reach year round food security eight own land. Statistical tests show significant differences between food security and the ownership of land ( $p=0.007^{**}$ ). Due to unfulfilled test conditions relations between crop diversity and land size could not be indicated.

The results about food security show a rather alarming situation. Further findings about the situation of women let implicate an even worse situation for them. Letting them rank their eating order for men, women, children and elder people results shows that children (average rank of 1.31), elder people (average rank of 1.5) as well as men (average rank of 1.80) mainly get their food before women (average rank of 2.6) do. Additionally 26 (36.1%) interviewees declared that they do not get the same quality and quantity of food.



## 5.2. Work distribution and decision taking patterns

### **Q 2: How are work distributed and decisions made within the family?**

#### **Q2.1 How are daily routines for men and women organized?**

#### **Q2.2 How is the work distributed between men and women?**

#### **Q2.3 How is decisions making dealt with within the family?**

### **5.2.1. Daily routines**

The timeframes developed separately for men and women during group discussions give some insights in the intra-household work distribution. Work and work distribution is strongly depended on the seasonal, regional, social and economic situation of the family. The following findings can only be seen as a general description of the work situation and distribution within the households.

Participants were asked to reproduce the activities of one day during their busiest time in the year at a 24 hour timeframe. The period was determined for every region by the information of the participants from the first FGD, either men or women. In one region, the busiest period was named to be during harvest. The other two regions dated their busiest time during rainy season, between June and September.

Days start very early at around four o'clock usually for men and women and end by ten or eleven at night. In one women and one men group discussion it was mentioned that men get up about one to two hours later then women. Remarkable was that it takes men about one to two hours a day for personal care, such as toilet and bath. Women also need around one two one and a half hours a day. As noted by the participants, this is due the fact that people mainly have to go to nearer lakes or rivers to take their bath or need to fetch water which both is very time-consuming. The time for a rest was quantified by men for around one and a half to three hours a day. While women did not mentioned that they take any rest during the day, men quantified the time that women take rest for up to one hour a day. The daily time spending on walking for men, dependent on the kind of work they do, lies for agricultural work between one and two hours. If they have to go for firewood it can become up to six hours a day. Women indicated their daily walking time, as well dependent on the

kind of work, for agricultural work to about one and a half hour a day. For firewood, dependent on whether they sell it and where, it can keep them walking for four and a half up to eight hours a day. Reasons for the long walking distances are the ability to find appropriate wood. As women mentioned due to depletion of forest it is getting more and more time-intensive and difficult to find wood. Wood is mainly taken from common forests. For agricultural work men indicate about seven and a half up to ten hours a day while women only indicated five and a half to eight hours. Both, men and women, indicated that in some cases women come later to the field or leave earlier due to household duties or care for children such as dropping them at school. A clear difference between men and women was visible in the distribution of household duties. While men spent about one to two hours a day for managing and maintaining livestock, women spent between five to nine hours a day with household duties. This includes the cleaning of the house, cooking, washing dishes, cutting firewood, fetching water, care for children and elders and often also maintaining the livestock including cattle feeding or collecting manure. Being asked about their definition of work in one women and one men group discussion work was defined as “work outside” or “work were you earn money or get a harvest”. Household work was not defined as work but rather as duty. In the other four FGDs work such as cooking or taking care of children was defined as work just as work in agriculture or as wage labor. The main outcomes of the timeframe are outlined in table 2.

**Table 2: Time required for different tasks by men and women from FGDs**

Task	Time - men	Time - women
bath	1-2 h	1-1,5 h
rest	1,5-3 h	0-1 h
walking - agricultural work	1-2 h	1,5 h
walking - firewood	up to 6 h	4,5-8 h
agricultural work	7,5-10h	5,5-8h
household	1-2 h*	5-9 h

\*means maintaining the house and livestock, optionally helping the children with homework

As Ms. Mungreiphy says tools such as timeframes are often used by Caritas India for gender analysis. In the following some of her experiences with timeframes are reproduced:

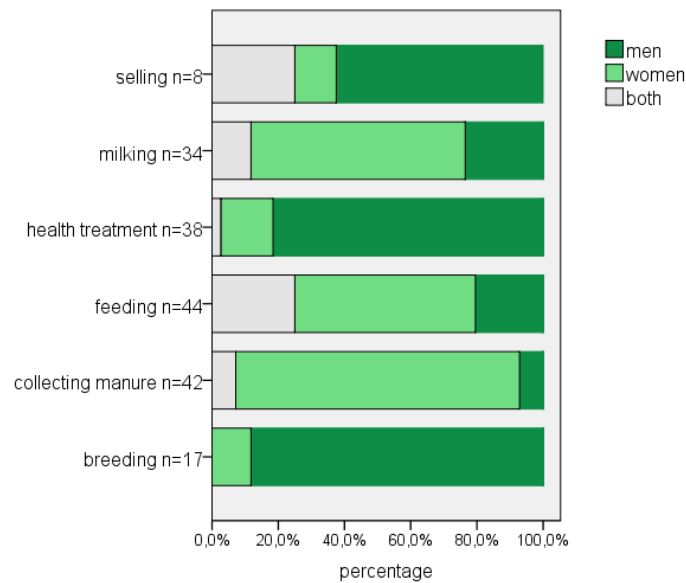
“...they will start at four o'clock, I will get up, then my husband gets up at six o'clock. In some places of course, in the rural areas there are many occasions I have seen, both get up together more or less at the same time doing different work, but in the trainings I have done, men have a lot of time for leisure, to be with their friends, sometimes to drink maybe or just relaxing like that. Women I have hardly seen having that, in terms of relaxing, in terms of going for entertainment in terms of going to their friends for something. Usually they don't put it out, because they don't see it as normal phenomena of a day but in the male's routine, men will have so much...”

“So if we average it and ask them to analyze what they have said ... How many hours you've worked and for whom and for what? And then men, how many hours they have worked and for whom and for what, what kind of work ... Analyze everything you will find in terms of multi kind types of roles women will do, time consuming work, women will be more at dirty job, women will be more at all the housework, there will be no leisure...”

Ms. Mungreiphy additionally notes that it is crucial to sit and reflect these results with women, otherwise they won't realize what they are doing and will not be sensitized.

### **5.2.2. Work distribution between men and women**

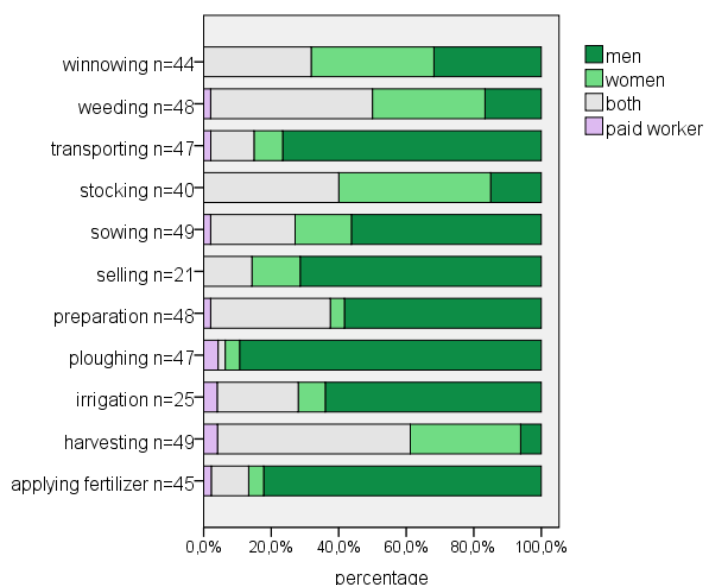
Twelve WHH and 32 MHH have livestock. As figure 7 illustrates the selling of animals (n=5), health treatment (n=31) and breeding management (n=15) is more often done by the male of the family. In 20 cases women mentioned that they do not have any breeding management at all and it is done “natural”. Work such as milking (n=22), feeding (n=24) or collecting manure (n=36) is mainly done by women, although feeding is to a high amount also done by both of them. Tests comparing the work distribution between men and women showed significant differences in health treatment ( $p=0.000^{***}$ ) and breeding management ( $p=0.000^{***}$ ) for men and significant differences in milking ( $p=0.000^{***}$ ), feeding ( $p=0.000^{***}$ ) and collecting manure ( $p=0.000^{***}$ ) for women.



**Figure 7: Livestock related work distribution**

Decisions concerning livestock within WHH (100%, n=12) are mainly taken by women (n=6) although in four cases the male of the family takes the decision. In two cases decisions are taken together. In MHH (100%, n=32) decisions are almost equally taken by men (n=13) as well as by women (n=12) and seven times they are taken together.

Twelve WHH and 37 MHH cultivate crop. Figure 7 indicates transporting (n=36) sowing (n=27), selling (n=15), preparation (n=28), ploughing (n=42), irrigation (n=16) and applying fertilizer (n=37) as strongly male dominated work. The work of harvesting (n=16) and stocking (n=18) is more often done by women. Winnowing and weeding is indicated as work which is in larger parts equally done by men and women. Paid worker play a minor role in the handling of the work load. Tests comparing men and women show significant differences for men at transporting, sowing, selling, preparation, ploughing, irrigation and applying fertilizer (all  $p=0.000^{***}$ ) while stocking ( $p=0.001^{***}$ ) and harvesting ( $p=0.000^{***}$ ) show significant differences for females.



**Figure 8: Crop related work distribution**

The selling of crop is mainly done at bigger or district markets (n=19, 90.4%). Prices are negotiated with middle men where most of them (n=20, 95.2%) sell their products to. Some farmers mentioned that information about the current price could be found by the APMC (Agricultural Produce Market Committee), but none of them uses this possibility. Eight farmers said that they would sell their products as per need, thirteen sell it all at once. The necessity of paying back loans was mentioned as main reasons for the immediate selling of the harvest or parts of it.

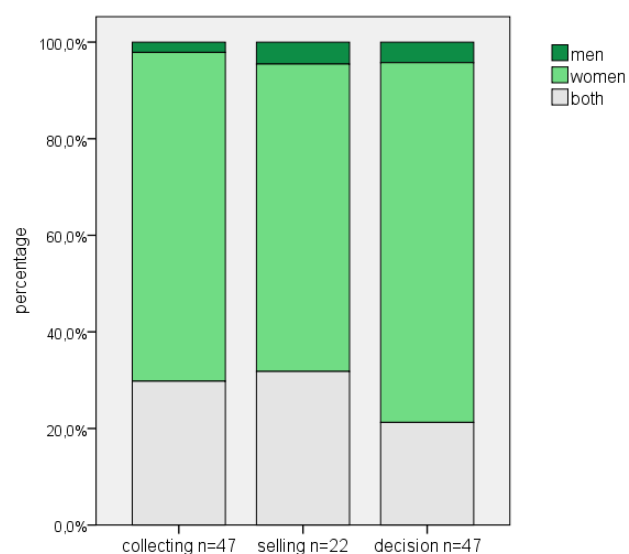
Concerning the work distribution in agriculture Mr. Jogesh explained that every work which is related with heavy things and where power is needed like ploughing, transporting or lifting is done by men, whereas women do the more labor intensive work such as weeding, winnowing, harvesting, cleaning, storing. At his estimation 70% of the agricultural work is done by women while 30% is handled by men. He confirmed the important role of women in agriculture and mentioned the lack of perception:

*“...they are playing a very critical role in all the agricultural management, but the recognition is still an issue...”*

Decisions concerning crop related work within WHH are mainly taken by women (n=6) followed by both of them (n=4) and in two cases decisions are taken by a male of the family.

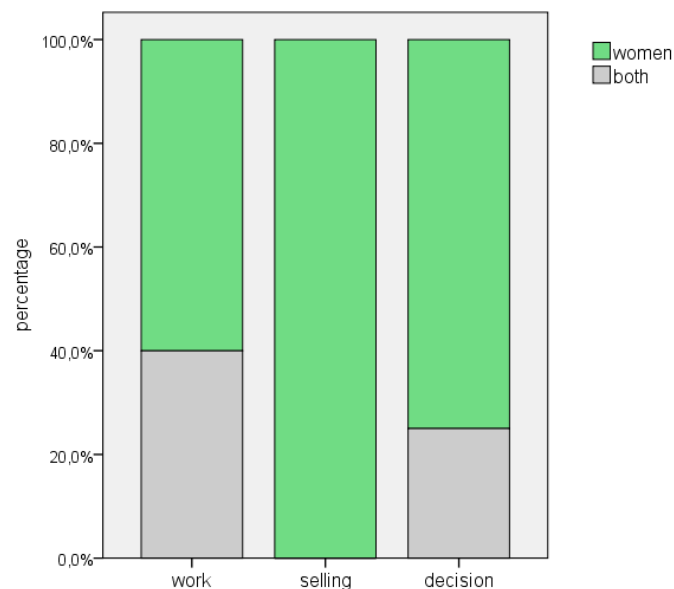
Within MHH decisions are taken mostly by male (n=21) in eight cases by women and another eight from both of them.

Another fundamental agriculture related income source is collecting and selling firewood. Out of the households collecting firewood (n=47, 100%), more than 50% (53.1%, n=25) use it for own consumption while around 45% (46.8%, n=22) also sell it. Households who do not collect firewood or don't do this on a regular basis indicated that in few cases they buy it or rather use cow dung or agricultural residue. The following figure (9) shows that the main work in collecting firewood (n=32) and selling firewood (n=14) is carried out by women. Only four women mentioned that they can sell their firewood at nearby villages or markets. Twelve women need to go to a bigger market and six women directly walk to houses or factories (for instance brick factory) to sell the firewood. Women indicated that on average they collect between 30 and 35 kg of wood at once and then carry it back home or to the market place. The wood is carried on their head, only one woman mentioned that her husband takes a bicycle and therefore they can also carry and sell more. The price for firewood has to be negotiated individually with every buyer. In very few cases men help with collecting (n=1) or selling (n=1) of the firewood. Due to women do most of the work the decision power lies within women's hand (n=35). Tests between men and women for collecting, selling and decision taking show significant differences for women (all  $p=0.000^{***}$ ).



**Figure 9: Firewood related work distribution**

As important as collecting firewood for additional income is as important is making Indian cigars. Figure 10 shows that making Indian cigars is mainly done by women (n=12). In some households it is done by men and women (n=8) together. Bidi making is a home based contract work where the middlemen comes to the house and brings the raw material, tendu leaves, replaces the paper and tobacco. Some women mentioned that they additionally go and collect the leaves during the dry season. There is no household where only the man makes Indian cigars. Due to the fact that a middlemen comes to the house, collects the Indian cigars and pays for the work, the selling of the cigars is always done by women (n=20). If there has to be made any decision about Indian cigars it too is mainly done by women (n=15). Comparing only men and women there are significant differences for women in work, selling and decision taking (all  $p=0.000^{***}$ ).



**Figure 10: Indian cigar related work distribution**

While getting an impression of the work distribution within different types of occupations it is interesting to inquire their own opinion on who they think works more in their family. Out of 66 women (100%) 46.9% (n=31) think that the male of the family, either their husband or son or father in law, works most. 39.3% of women (n=26) think that they, or another female in their family works most. 13.6% (n=9) share the opinion, that both of them work equally hard. Results from FGD on that question differ within and between genders. A common

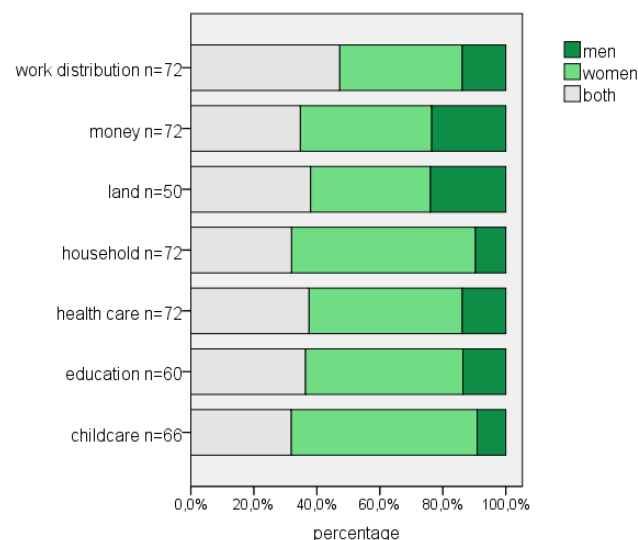
feedback was that women work more in terms of time and men in terms of physical hard work.

Dr. Jyotsna noted that gender trainings are important to sensitize not only men, but also women to recognize their work on the field as farmer as well as “home women”.

Being asked about the most exhausting work out of 60 women (100%), for 31.6% (n=19) of them work related to collecting firewood is the most exhausting work reason mentioned therefore were the long distances they have to manage and the heavy weight of the wood plus the often difficult negotiations with potential buyer. Collecting firewood is followed by wage labor (25%, n=15) or work related to agriculture (23.3%, n=14). Eight women (13.3%) mentioned making Indian cigars, three (5%) fetching water and one women housework (1.6%) as most exhausting work.

### 5.2.3. Decision taking pattern

If and how the woman is involved in the intra household decision-taking process can be seen as an important indicator for empowerment and equality. The following figure (11) gives an insight in the decision competence of the interviewees.



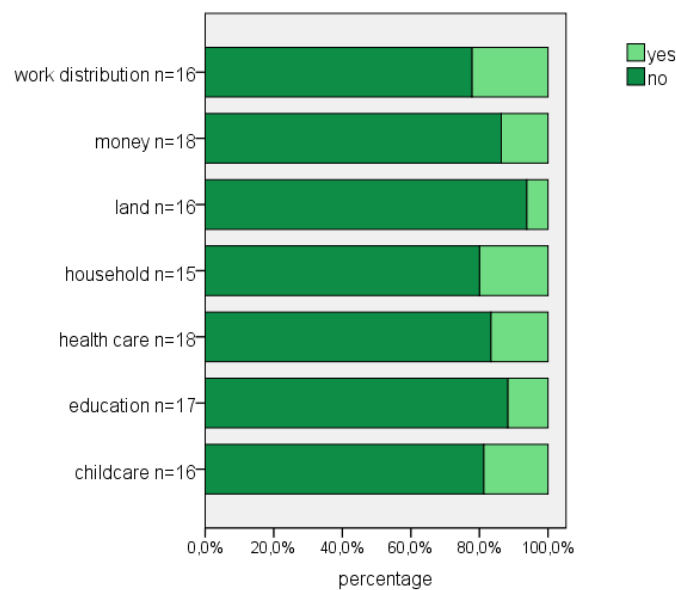
**Figure 11: Decision power within the household**

Childcare (n=66) and households (n=42) are typically fields of women's responsibility although in many cases decisions are taken together (childcare, n=21; household, n=23). Concerning the health care of the family (n=35) and the education of children (n=33)



decisions are mostly taken by women or both of them (health care,  $n=27$ ; education,  $n=24$ ). Money ( $n=17$ ), land ( $n=12$ ) and work distribution ( $n=10$ ) are fields where men are more involved in the decision taking. Interestingly women often take those decisions (money,  $n=30$ ; land,  $n=19$ ; work distribution,  $n=28$ ) and in many cases decisions are taken together (money,  $n=25$ ; land,  $n=19$ ; work distribution,  $n=34$ ). However some women mentioned that even they normally take decisions together, if they have different opinions mainly the men has the last say. Tests taking into account only men and women show significant differences for women in work distribution, household, health care, education and childcare (all  $p=0.000^{***}$ ) as well as for money ( $p=0.013^*$ ).

As figure 11 illustrated women, to a major portion, seem to take part in the decision taking at important fields of the family. The following figure 12 reveals the concrete fields where women wish for a higher impact in the decision making process.



**Figure 12: More decision power wanted by women in different activities**

As visualized in the figure above (12) only few women wish to have more influence on the decision taking. Respectively three women wished for more impact at child and health care, household and monetary issues. Work distribution is the field where most women wish to have more power to influence decisions ( $n=4$ ) and only two women wish to have more impact in education and one in decisions about the land.

### 5.3. Access to material and immaterial resources

#### Q 3: What is the access to material and immaterial resources like for women?

##### Q3.1 What is the distribution of landownership between men and women?

##### Q3.2 How are women involved in financial matters?

##### Q3.3 How do women have access to knowledge, the labor market and society?

#### 5.3.1. Land distribution and ownership

The availability of resources directly influences the productivity and further supports or hinders the empowerment of women. For an agricultural based livelihood, as we find it among the interviewees for this research, equal access to land is crucial.

Around 70% (n=50) out of the whole sample (n=72, 100%) have land, while around 30% (n=22) do not possess any land. Figure 13 illustrates the landownership in the families. Within the households possessing land (n=50, 100%) to 42% (n=20) the husband holds the land title. To 28% (n=14) another male of the family (father-in-law, n=7; son, n=3; brother-in-law, n=2; son-in-law, n=1 or father, n=1) is holding the land title. Only 20% (n=10) of the interviewed women hold the land title. In 6% another women holds the land title (mother-in-law, n=3). In 4% (n=2) of the cases the land is still owned by the government. This makes the majority of landowners either the husbands or other males of the family. Differences in the landownership between women and men are statistically significant ( $p=0.000^{***}$ ).

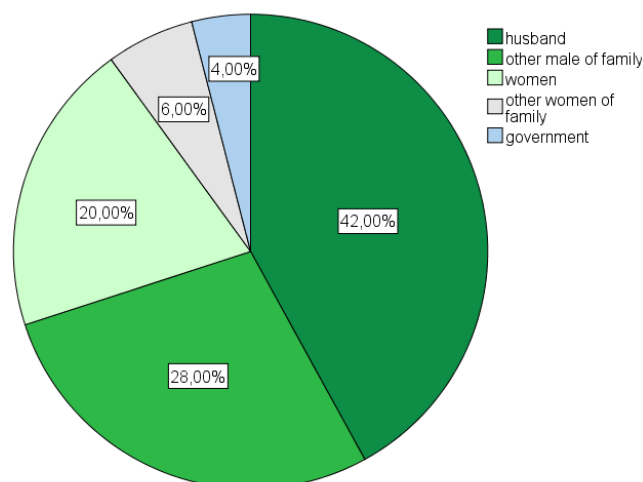
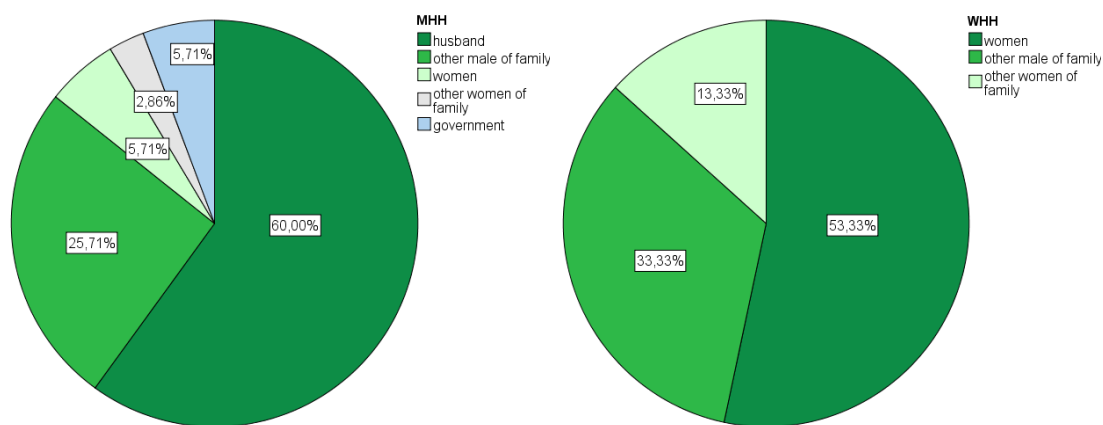


Figure 13: Landownership within the family (n=50)

While figure 12 clearly shows that men significantly more often own land it is interesting to see whether there is a difference in the holding of a land title in WHH and MHH. As apparent from figure 13, in MHH (n=35, 100%) the land mainly is owned by the husband (n=21, 60%) or another male of the family (n=9, 25.7%) and in only 5.7% (n=2) the woman owns the land. To a percent of 2.8% (n=1) other women of the family or for 5.7% (n=2) the government owns the land. Additionally for WHHs who own land (n=15, 100%), the land is to 33.3% (n=5) owned by other males of the family (n=2, son; father-in-law, n=1; n=1, brother-in-law, n=1, father) but with 53.3% the majority of the land is owned by the women themselves (n=8) and to a percentage of 13.3 (n=2) the land belongs to another women of the family.



**Figure 14: Comparison of landownership in WHH (n=15) and MHH (n=37)**

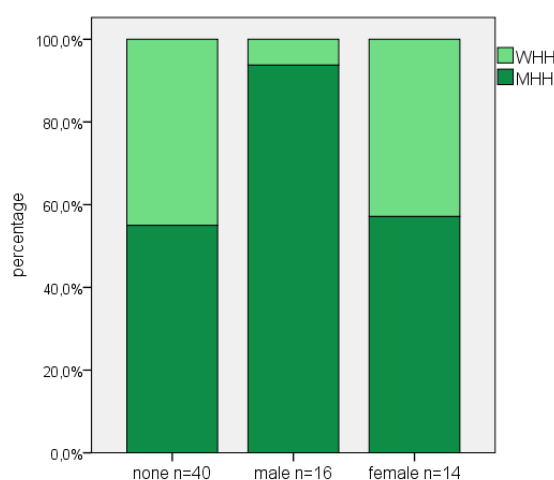
Within group discussions various reasons for the existing landownership arrangements were mentioned. First of all, while most men went to school at least for some years, women mostly didn't attend school at all thus they are not able to read or sign a contract. Secondly, the land is normally handed down in a patriarchal line from the father to the son. The daughter's portion will be given as dowry to the husband's family. Thirdly, to change landownership contracts in order to have them in both names simply costs money that people don't have. After the death of a husband in many cases the land will be written in the wife's name or directly handed down to the son. Being asked during the interviews about what women would like to change most or what they wish for, five women said that they would like to have some land to secure their livelihood. This too confirms the

importance of the factor land to create a secure livelihood. Additionally Mr. Jogesh noted that sometimes, for taking part in training it is necessary to hold a land title.

### 5.3.2. Women and finances

Another important resource in terms of empowerment is the access to money, a bank account and the possibility to command over money for daily purchases.

Within WHHs the majority (72%, n=18) do not dispose over a bank account at all. In case of a bank account ownership, mainly the woman (24%, n=6) holds the bank account herself, in only one case (4%) it is another male within the household. In MHH around half of them (48.8%, n=22) do not have a bank account. In 15 cases (33.3%) a male of the family has a bank account and after all, in 17.7% (n=8) a woman is holding the bank account. There are statistically significant differences in the holding of a bank account between WHH and MHH ( $p=0.02^*$ ). Two respondents, one within WHH and one within MHH, did not know whether someone in their family is holding a bank account.

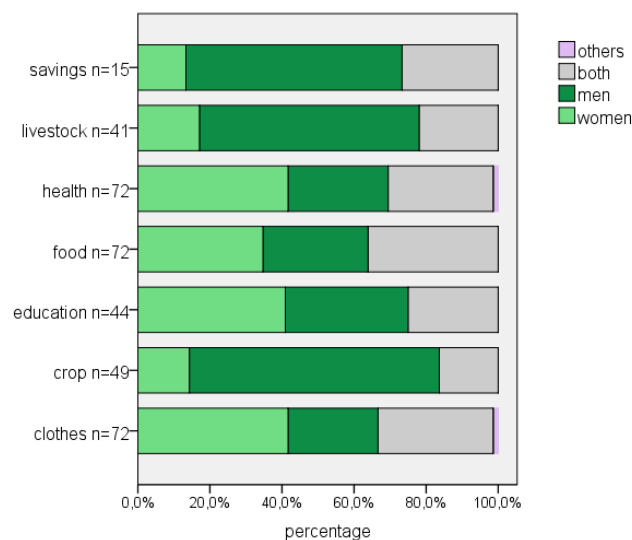


**Figure 15: Arrangements in holding a bank account in WHH (n=25) and MHH (n=45)**

Due to unfulfilled test conditions differences between literacy and the holding of a bank account could not be asserted. Out of the twelve literate women only three hold a bank account.

As we know from figure 15, it is not common that every family has a bank account. Still they have to sell their products and purchase things they need for their daily lives. The following

figure (16) will give an overview of the purchasing patterns of the families. Purchases for livestock (n=25, 60.9%) and crop (n=34, 69.3%) appear as men dominated areas. Only 15 declared that they would have savings where in most of the cases the men (n=9, 60%) is in charge of. Women often stated that they would keep their savings at home. Therefore shopping for health (n=30, 41.6%) and clothes (n=30, 41.6%) is mainly done by females. Education (women, n=18; men, n=15) and food (women, n=25; men, n=21) show a gender balanced purchasing behavior. Only differing between men and women the shopping patterns show significant differences for men in crop and livestock (all  $p=0.000^{***}$ ) shopping.



**Figure 16: Main purchasing responsibilities for defined items**

As illustrated in the above figure the responsibilities for purchasing certain things show gender tendencies. Some commodities involve more money than others and some things need to be purchased more often than others. Table 3 reveals an estimate ranking for different commodities.

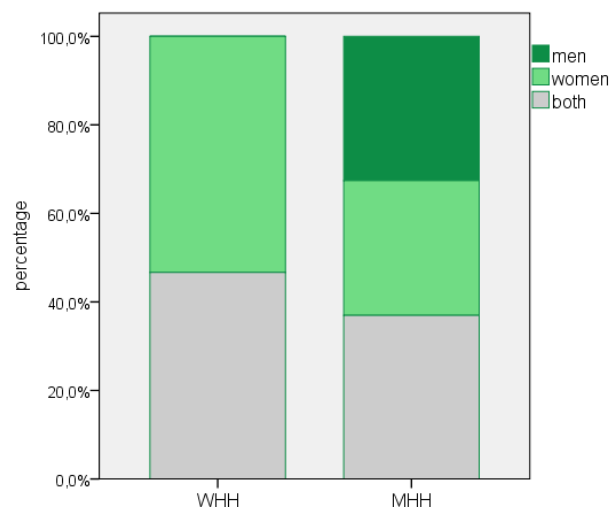
**Table 3: Expenditure ranking (1-7; one = most money spent, 7 = least money spent)**

	Food	Health	Crop	Cloth	Education	Livestock	Savings
<b>No of observations</b>	72	72	48	72	45	40	15
<b>Arithmetic mean</b>	1.25	2.69	2.94	3.15	3.49	4.63	5.80

Table 3 clearly shows that most of the families need the main part of their income for food. During the interviews women often underlined that they need a high percentage of their

income for expenditures on health which ranks on second place, followed by the spending on crops. Also for clothes people need to spend quite some money and let it ranks on fourth place. Through state support and free public schools as explained during interviews, the spending for education are not too high. Livestock as a low input branch also does not need a lot of investment. Many interviewees said that they do not have savings at all and those few who had could not save much.

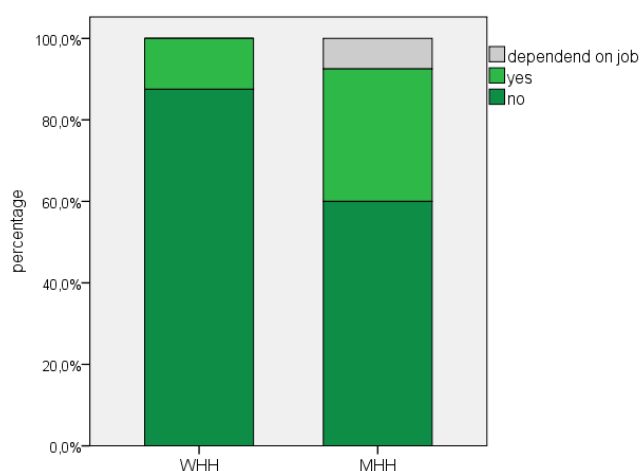
Having analyzed who does the shopping for which commodities and how much money is spend on figure 17 further reveals who takes the decision on how to spend the money. For the following analyzes data from MHH and WHH if a male is present, are used. As illustrated, among the WHH (n=15) the decisions about how to use the money are either taken by women (n=8) or together (n=7). Within the MHH in 15 cases the decisions are taken by men nearly equally often (n=14) is the decision taken by women. Seventeen times they decide together how to spend the money.



**Figure 17: Decision on money spending in WHH (n=15) and MHH (n=46)**

The following figure (18) illustrates the opinion on equal payment for men and women. Within WHH the majority (n=21) thinks, that women do not get equal payment for the same job. Only three women share the opinion that women and men get paid equally. We receive a slightly different opinion from women in MHH, there 24 women think that men get a better pay and 13 share the opinion of getting an equal payment. In three cases women

experienced different payment depending on the job. Some interviewees mentioned that they would get an equal payment for agricultural work, but not for construction, some women indicated it the other way round.



**Figure 18: Opinion from WHH (n=24) and MHH (n=40) on equal payment for men and women**

Reasons mentioned for the gap in payment by WHH are the higher physical power men command over (n=10). On the other side twelve women from MHH said that getting paid equal depends on the kind of job, either agriculture or construction, the location of the job, either on the country side or in the city and for whom you work, either in the public or the private sector.

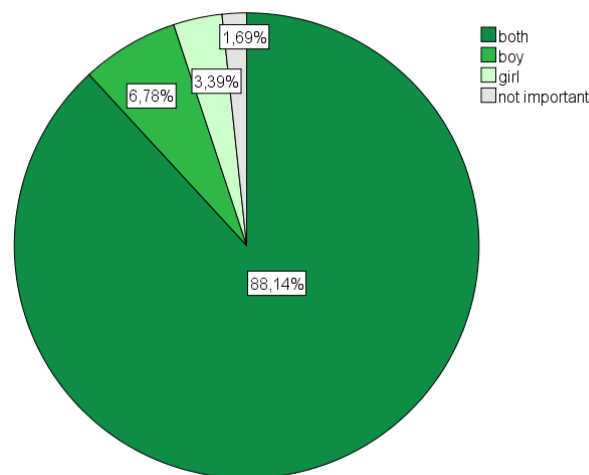
### 5.3.3. Access to knowledge, the labor market and society

It is beyond all questions that education and knowledge is crucial for development. Due to the pre-existing circumstances sixty (83.3%) out of the interviewed women (n=72, 100%) never went to school. From the twelve (16.7%) women which went to school, only six (n=8.3%) made it to class six or above and only one woman finished 10<sup>th</sup> class. Women mentioned that their lack of literacy hinders them in their everyday life at negotiations with buyers, employers or officials. Within the interviewed families there live 110 (n=100%) boys and girls in school going age. Hundred of them (n=90.9%) are going to school, wherefrom 55 are boys (50%) and 45 (40.9%) are girls. Free school and support with materials such as books or uniforms as well as for some the provision of bicycles for girls to reach school and

the midday-meal were important support for the families to be able to send their kids to school. Three girls (2.7%) and seven boys (6.3%) dropped out from school.

The ten drop-outs come from eight different families wherefrom three are WHH and five are MHH. Only in two families, one WHH and one MHH, two children dropped out. Reasons for the dropouts are that the workforce of the child was needed at home (five times), that the child failed (two times) or that the child wanted to stop going to school (two times). The decision about the dropout in WHH were taken by women, in MHH the decision once was taken by the men, once by the women, twice by the child and in one case both, men and women, took the decision. There is only one college going boy within the sample. A second boy got the acceptance for a scholarship and will be able to go to college.

Figure 19 the majority of the interviewees (88.1%, n=52) thinks education for boys and girls is equally important. Two interviewees (3.3%) thought that education for girls is more important than for boys because with education *'the girl really gets ahead in life'*. Four (6.7%) said that it is more important for the boy to be educated, because the girls *'only do household work'*, *'don't take decisions'* and *'the girl leaves the family after marriage'*. In only one case (1.6%) education was defined as not important at all.



**Figure 19: Importance of education for boys and girls (n=59)**

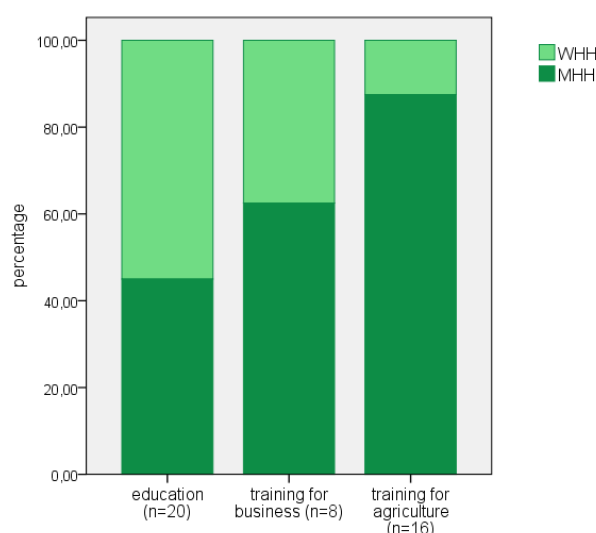
Due to the fact that only few women went to school another source of knowledge for women could have been trainings. As being exposed, only 13.9% (n=10) of women had the opportunity of any kind of training. The training mentioned most (8.3%, n=6) is offered by



the Government of India, Ministry of Agriculture and supports farmers with information on agricultural practices. Another training mentioned (4.2%, n=3) is offered by the Madhya Pradesh Rural Livelihoods Project (MPRLP). Both trainings are designed similar. The trainings are held irregularly, mainly short-dated and usually just once a year. Agricultural facilitators come to the villages and give information to farmers, generally men and women. In most cases only men attend the trainings. Reasons therefore as mentioned by the interviewed women are that they had no time because they were busy with housework or other duties, that through social norms they do not come in front of elder men, that they did not get the information about the training or that they would be interested in different kind of trainings. Four women (5.6%) said, that they would have been interested in the training or that they would want an extra training for women. Only one woman (1.4%) said that she would not go, because she has a different job and is not interested in agriculture. Only two women attended the governmental training. Additionally it was mentioned that the attendants cannot keep the information very long in their mind as all trainings are only oral ones and do not provide written material. The third training (1.4%, n=1) was a training on hygiene and cooking carried out by the government only for certain women who will be in charge of the preparation of the midday meal in schools. Within the 10 women (13.9%) who had information about trainings, eight (11.3%) were from MHH and only two of them (2.8%) from WHH.

Often NGOs provide trainings for women, as Dr. Jyotsna said, the Joint Women's Programme focuses on providing women not only with information but also with skills and trainings to increase their small income. Mr. Jogesh mentioned that they try to offer trainings exclusively for women because due to local customs women are often not able to speak out in front of their seniors. Additionally they are trying to engage more and more women for conducting the trainings but high educated women often choose to work in the office and not go out in the villages for training because the conditions in the rural areas are mostly a little bit harsh. So what they do is trying to get local women and girls to conduct trainings. According to Mr. Jogesh it is getting easier to make women to come to trainings, he thinks that a change of mindset has already started.

The high value and awareness for education and training as important factors towards an improvement in livelihood confirms figure 20. Asked within an open question about what they would like to change most or what they wish for, 34 women (100%) mentioned education (58.8%, n=20) and/or training either for business (23.5%, n=8) or agriculture (47.0%, n=16) as something were they want to see change.

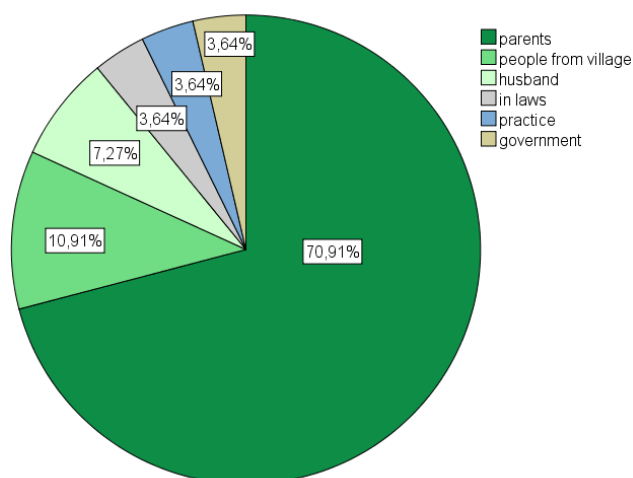


**Figure 20: Demand for training and education by WHH and MHH.**

Being asked about education WHH (55%, n=11) compared to MHH (45%, n=9) significantly more often wish for an improvement in education ( $p=0.016^*$ ), often associated with their children, grand-children, daughters or girls in general. Wish for trainings in business (100%, n=9) have been articulated in WHH (12.5%, n=1) and MHH (87.5%, n=8). Mostly mentioned were businesses such as small grocery stores, sewing or other things they can make from home. Women who wished for training in agriculture (100%, n=16) mainly wanted specific knowledge in livestock rearing or improved crop varieties.

Neither school nor trainings seem to be a major source of knowledge for women. The following figure (21) reveals the source of agricultural knowledge for women (n=55) in the study region. Their main source of knowledge are their parents (70.9%, mentioned 39 times) followed by people from the village (10.9%, mentioned 6 times), their husband (7.2%, mentioned four times), in-laws, practice or the government (each with 3.6%, mentioned two times). WHH replied that they would get their knowledge from their parents (mentioned 14

times), from their former husbands (mentioned two times) and from people in the village (mentioned one time).

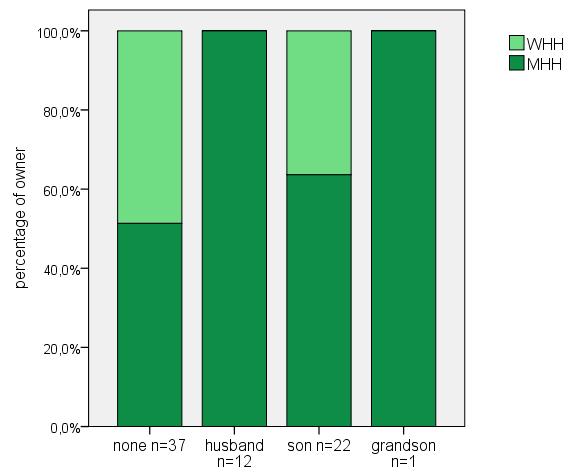


**Figure 21: Source of agricultural knowledge of women (n=50) (multiple naming possible)**

Another important source of knowledge can be media. Out of the 72 (100%) women interviewed only 13 (18.0%) have access to media such as radio, newspaper or television. Within the women having access to media (n=13, 100%) only three (23.1%) are from WHH, most of them live in MHH (n=10, 76.9%). Within WHH only one woman has access to radio, two to television and none to newspaper. The situation for women living in MHH concerning the access to media seems slightly better. Here five women have access to radio, four to television and one to newspaper. None of the interviewed woman has access to the internet or owns a mobile phone herself. Out of the sample (100%, n=72) about half of them (51.3%, n=37) do not have access to a mobile phone at all. Between WHH (36.1%, n=26) and MHH (63.8%, n=46) is a significant difference for MHH in the access to mobile phones ( $p=0.029^*$ ).

The mobile phone is being used for by men mainly for gaining information about market prices, the weather or to do bank business while women rarely use it to talk to relatives. The mobile phone will probably be an important media in the future. While WHH only have access in 11.1% (n=8), MHH have access to 37.5% (n=27). Figure 22 shows the ownership of mobile phones. Women in WHH only have access to mobile phones through their sons (n=8). Women in MHH have access mainly through their sons (n=14) or their husbands (n=12) and in one case through their grandson. Being asked about the necessity of a mobile

phone some interviewees mentioned that it is kind of a status symbol for many younger people.



**Figure 22: Ownership of mobile phones in WHH (n=26) and MHH (n=46)**

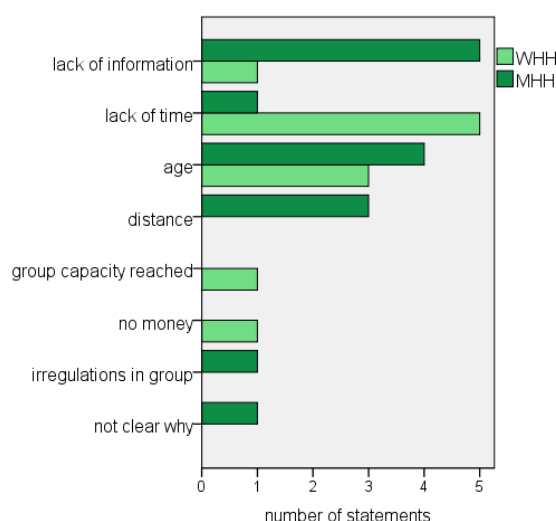
An important source of knowledge, empowerment, help and social competence are self-help groups (SHG). Forty-five women (14 WHH, 31 MHH) said that there would be a SHG supported and implemented by the government in their village. Out of the fourteen women from WHH only one fourth (n=3) is a member in a SHG. Within the MHH about half of the women (n=16) are members.

Ms. Mungreiphy about the participation of women in trainings or SHGs:

*'So sometimes women are refusing to come, it's not only men not allowing them to come, but women are refusing from reasons, they have never been promoted, they have never been encouraged...'*

Figure 23 gives an overview of the different reasons mentioned by either WHH (n=11) or MHH (n=15) for not being part of a SHG. It turns out, that the main reason for MHH is the lack of information about the group (n=5), the age (n=4), some SHG have age limits and do not accept older women and the distance to the group meetings (n=3). Other reasons are lack of time (n=1), problems within the group (n=1) and one women could not tell why she did not join the SHG. For WHH the two main reasons are first of all the lack of time (n=5) and secondly the age (n=3). Other reasons mentioned are the lack of information about the

group (n=1) or that the group capacity is already reached (n=1) or that they do not have money for the saving and credits which is done in the group (n=1).



**Figure 23: Reasons for not being part in a SHG for WHH (n=11) and MHH (n=15)**

Out of nine women who are literate and having a SHG in their village, eight join the SHG and some of them have functions within the group. Out of 38 women who are illiterate and have a SHG in their village eleven join the SHG.

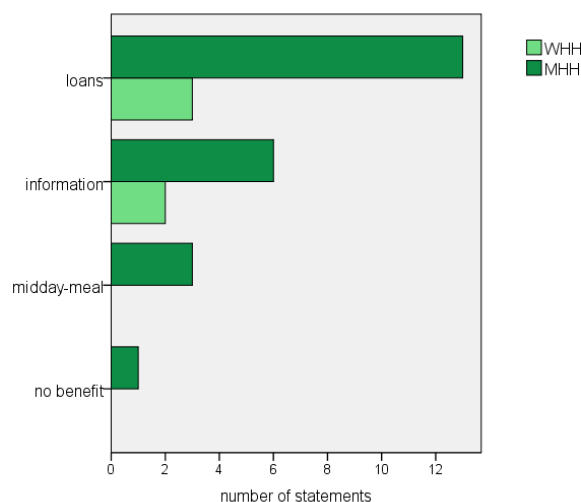
Ms. Mungreiphy giving some insides on the difficulties of women leadership:

*'Leadership, in some places of course women are ready, but men do not really have confidence to put women there. Thinking prejudice that they will not perform, they will not be able to lead, but they don't do anything to make them able to lead, so how do men change their mindset or how do women also change our mindset and say: 'Okay I am given an opportunity, let me take it and doing something'. So those kind of relations are way challenging.'*

*'...sometimes men might say: 'Okay, I will do this!' women will say: No, no, no, men will not clean the house!' It is a problem, so how do we make women realize first what is her understanding of gender, what is her gender self awareness and what is her confidence level, what is the kind of assertive nature or action she has to take, it has to be there, otherwise just when we will be blaming only men it will not work, there are men who are willing to do, who are willing to share...'*

*'Maybe sometimes women are excepting whatever they are been treated as and they are not voicing out, some maybe are voicing out but then other women are not supporting because they have seen, they have lived, they have heart what is being done as normal and not as human made. So that kind of acceptance is one big challenge...'*

In the following figure (24) the benefit of joining a SHG are laid out. Both, WHH (n=3) and MHH (n=13) mainly benefit from the possibility of taking a loan from the group. Some women mentioned that they already took some loans to buy medicine for their children or to open a business. The second most mentioned benefit (WHH, n=2, MHH, n=6) is the additional information women get from governmental facilitators which regularly come to SHGs. For three women from MHH the preparation of midday-meals is an additional benefit. Only in one case (MHH) one woman cannot see a benefit in the SHG, but she explained that the SHG had just started.



**Figure 24: Benefit from SHG for WHH (n=3) and MHH (n=16)**

Aside from participation in a SHG women can have function or be involved in their village life. Out of the 26 women (100%) from WHH 22 (84.6%) take part in the community life of their village. An equal high percentage we can find within MHH (n=46, 100%), where 41 (89.1%) women take part in the community life. Most of them are with no special functions (WHH, n=21, MHH, n=36) and just generally take part in community or religious celebrations. Six women are in charge of a special task or functions. These women mainly come from MHH (n=5). The functions women take over are on the one hand functions

within the SHG (n=3) or on the other hand are involved in the kindergarten (n=1) or as health worker (n=1). The six women in charge of special function are all literate.

As Dr. Jyotsna says village or community meetings form a good possibility of discussing traditions, health issues or for giving out information about legal rights because of the presents of men.

*‘So one has to choose an opportunity and strategy were men and women equally recognized to meet the changing of mindset. Changing of mindset is very difficult.’*

As Dr. Jyotsna and Ms. Mungreiphy confirm men should not be left out. Often, due their frequent interaction with society and their higher mobility, they are sometimes more open to changes and would support their women where it is sometimes the women who are not ready to change.

As former analyzes about the access for women to resources show, they often lack behind. What women think influences the ability to get a job or not is indicated in table four. The majority of the respondents (n=66, 100%) think that for men it is easier to get a job (69.7%, n=46), 21.2% (n=14) think that it is easier for a woman to get a job and 9.1% (n=6) think that it is equal for both. Within WHH around 73% (n=17) think that it is easier for men to get a job, within MHH 67% (n=29) think men have it easier to get a job.

**Table 4: Reasons indicated for the ability whether to get a job or not**

men		women		both	
connection, society	7*	if she is educated	2	it depends on work	1
physical power	20	own experience	1	it is hard for everyone	2
mobility	4			government has schemes for both	2
better educated	2				

\* The number notes how often the reason was stated

Some of the interviewees mentioned that they could get a job due the public Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). These jobs are offered during the lean season and comprise mainly work in construction, for instance improving

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the local infrastructure. During the field research I was able to observe different worksites of the MGNREGA.



## 6. Discussion

### 6.1. Women's participation in agriculture

**Q1: Which roles and duties do women currently take in agricultural sector?**

**Q1.1 How do women in women-headed households (WHH) and men-headed households (MHH) participate in agriculture?**

**Q1.2 What is the structure of local agriculture?**

#### 6.1.1. Participation in agriculture

The following information about the social and societal structure of women will help to better understand their situation and possible participation in the context of rural agriculture in the study region.

Women in MHH with an average of 42.2 years of age are significantly younger than women living in WHH with an average of 50.3 years of age. The age difference between MHH and WHH is given due to the higher likelihood of becoming a widow with an increase of age. Although widows in the sample seem to be fairly young, following Jensen (2005) and Chen (2000) this can be led back to the generally large husband-wife age gap or the higher remarriage rate among widowers. Studies additionally show that the likelihood of remarriage rises when women have not had children yet or if they do not have a son who could support them (Jensen, 2005). All of the widows within the sample have children and only four women live in households where no male is present, which may reduce the necessity of a remarriage. In addition, following Jensen's explanation, it is very uncommon to remarry after the age of forty. Within that sample no data about the particular time of becoming a widow was collected so no assertion about that factor can be made. None of the women live in an informal relation and only two women live separately from their husbands. This suggests a strong social restriction and a high dependence on family or the partner. As presented in the results, Dr. Jyotsna stated that due the lack of adequate information people in more remote areas adhere to often discriminating customs or social behaviours. As stated during FGDs (formal group discussions) women as well as men confirmed that WHH face higher workload, leading to greater insecurity. Not having any

rights to family assets, as one woman in the sample stated, might sway women stay with their husbands even when they are being abused or neglected. Jensen (2005) discusses the rare earning opportunities for women in rural areas as being mainly in the agricultural sector and requiring physical labor, which becomes more difficult with age. Due to this fact, widows have a higher economic vulnerability.

A difference in the size of household members in WHH and MHH is also observed. On average MHH consist of 6.95 members while WHH only of 4.69. The difference is quite remarkable. While fewer family members might reduce the expenditure of food and other items necessary for the daily life, WHH therefore lack at least one or more incomes. Discussing whether women- or men-headed households are poorer, Drèze and Srinivasan (1997) call attention to economies of scale affecting widows or women in WHH more. Due to fewer family members in WHH, investments within the household will probably encounter women in WHH more.

Concerning the affiliation to caste or tribe, the sample reflects Madhya Pradesh's general population constitutions with a high proportion of tribe's, 55% of the interviewees belonging to scheduled tribes. Furthermore, Madhya Pradesh is also home to a high amount of scheduled castes making them 10% of the sample and other backward castes accounting for more than 30% of the sample. Those affiliated with tribes are historically situated in more remote areas, in which a high proportion depend on agriculture and forestry (UNDP, 2011a).

After having gained and reflected upon the social and societal background we will further focus on the possible participation of the interviewees in agriculture. As the results show, income sources in rural areas are not very diverse. Most people depend on a variety of activities to manage and sustain their livelihood. None within the sample can make a living based solely on agriculture. This worrying situation is confirmed by NGOs working in rural areas. A high percentage of informal work and the multiple activities for one's livelihood characterize the workforce in India and other developing countries (Hirway and Sunny, 2011). With an average of 2.04 different occupations women in general handle more occupations than men do with an average of 1.8 different occupations. Women additionally often underestimate their production activities due to adding them to household work

(Hirway and Sunny 2011). The number of different occupations of course does not give any information about the time spent on each activity. For instance, and in sync within the sample, it is possible that men spend more time on wage labor than women do, but the average of different occupations demonstrates the multiple activities and roles women are engaged with.

To a high percent, people's livelihood in this region of India depend on agriculture or agriculture related activities. Many women indicate subsistence farming as one of their main occupations. While farming is predominantly conducted by men, a high number of women involved is also visible. The study conducted by Hirway and Sunny (2011) looks at worker population ratio<sup>11</sup> and the time spent by certain activities, using data based on Pandey (2000, in Hirway and Sunny 2011), and confirms that women are more often employed in the primary sector. This can reach back to the feminization of agriculture, a main development on the countryside and observed there for quite a while now. Here men more often leave the agriculture sector to find principally wage labor jobs (Srivastava and Srivastava, 2009). Case studies show that this can be especially applied for Madhya Pradesh (Singh and Sengupta, 2009). Hirway and Sunny (2011) additionally stress, that within the primary sector, women are predominantly collecting free goods such as wood, fruits, water or fodder. Results confirmed a significant difference for women in the collecting of fire wood than men. This may result from the higher involvement of men in wage labor and therefore less time for them for such activities. While both, men and women indicated wage labor nearly equally as often for additional income, men more often find jobs as wage worker outside agriculture. The amount of physical strength required of men for wage labor is stated as main reason for this work distribution. Fewer options for alternative income may also be a main reason of why women choose occupations such as collecting free goods. Another common source of income mainly for women is the making of bidi, Indian cigars. When concerning the secondary sector, Hirway and Sunny find that women are more engaged in manufacturing and less so in construction, while men are engaged in both and usually more often than women. These results can partly be applied for the study region, where women show a high involvement in bidi making and men a generally higher

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<sup>11</sup> The worker population ratio measures the proportion of country's working-age population that is employed.

involvement in wage labor, either found in agriculture or in construction. Only the minority of people find their jobs in service or business. Taking a closer look at the service and trade patterns of the sample clearly shows a higher involvement of men in trade such as selling and buying of crops or livestock. Due to the small sample size a comparison with literature is difficult. Hirway and Sunny (2011) point out that within the tertiary sector more men are employed and women may participate in petty services whereas men will participate in trade and business. These findings may be partially confirmed due to the study region. One main reason for such low occupation in service or business, especially for women, can be associated with the high literacy rate within the sample and the general low off-farm income possibilities which have been listed. Only few women indicated housework as their main occupation, the situation of those women widely varies in age and they come from WHH as well as from MHH. There might be different reasons for their main occupation as housewife such as age, illness, pregnancy, status of family or the size of households. While, depending on the household constitution, the average time spent on household duties for women, following data from the Government of India (2000, in Hirway and Sunny 2011) is 29 hours per week, the results from the study region the time spent on household duties ranged from five up to nine hours a day. According to those results is actually surprising, that not more women mentioned that household work as one of their main occupations. As for men, an outcome from FGDs shows that men link their household work only to activities such as maintaining the house or livestock but none of them would define this as one of their main occupations.

In the informal sector, almost all income sources come at an irregular, mostly daily basis. From the sample here, only six people, three men and three women, work in the service sector and therefore most likely work in a formal employment situation generating regular income. The overwhelming majority works entirely under irregular working conditions or as self-employed. That fact that informal employment conditions are such a common practice in India is demonstrated by the following numbers: According to Van Klaveren et al. (2010) the informal sector in India, during the 2000s, has been estimated to roughly 92-94% of all employment in India. In 2008, 36% of employed Indians (in percent of labor force<sup>12</sup>) were

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<sup>12</sup> Labor force comprises the percentage of the population either working or actively searching for a job.

engaged in casual wage work, 51% were self-employed leaving only 12% of regular paid employees (8% in the formal and 5% in the informal sector). The majority within the sample in this study works in the agricultural sector. Because of seasonal and weather dependent working peaks, agriculture might generally be characterized by short-term working agreements. During 2004-05 around 53% of the Indian labor force was employed in agriculture whereas 2.3% were found in the formal sectors and the rest in the informal sector (Van Klaveren et al. 2010). Due to weak infrastructure in rural areas, jobs in the formal sector are fairly rare. In this sample, two people working in the formal sector are literate and some women get jobs because of their being part of a SHG (self-help group). According to literature women engaged in agricultural work are mainly illiterate and low skilled (Singh and Sengupta, 2009), so SHGs and education may increase chances for formal and regular jobs.

In summary up there is strong evidence that people in the study region, due to lack of work opportunities in other sectors, highly depend on and participate in agriculture or agriculture related activities. While results in this study indicated no significant differences in the participation of WHH and MHH in agriculture literature, however reveals a higher employment among widows and an even higher rate among widows without land (Jensen 2005, Unisa and Datta s.a.). Reasons for the minor differences between WHH and MHH might on the one hand be that the majority of women from WHH live in households where a male, either their son or their son-in-law is present. On the other hand households in the study region that are independent from WHH or MHH are more or less at the same level of poverty, although it should not go without saying that widows or women living in separation from their husbands they may face higher social or cultural constraints.

#### **6.1.2. Local agricultural structure**

The local agricultural structure shows an unequal distribution of property such as livestock and land for WHH and MHH. MHH more often control both assets. Additionally, WHH more often live without any base of production. The FAO State of Food and Agriculture Report (2011a) confirms reduced access of women to land and other assets such as livestock. This reduced access of women to land and livestock can result from the possibility of losing access to their husbands land after his death (Jensen, 2005). Women separating from their

husbands can hardly hope for further support, and was also acknowledged in this research, as this has happened to one woman within the sample. Although many women work on the agricultural land of their families hardly any female holds a land title (PWESCR, 2011).

Agriculture in this study region is characterized by its very small size. With an average land size of only 0.86 hectares for WHH and a slightly higher of 0.87 for MHH families hardly dispose over any base for agricultural production and find themselves within the state's average of 0.88 hectares, lagging behind the national's average of 2.22 hectares (GoMP, s.a.). Additional to the already small field sizes, a few interviewees mentioned that some of their land is fallow and therefore not in production. Within the study region there are no notable differences in the field size of WHH and MHH. Wheat, soybean, paddy and maize, are the four main crops making up around 75% of cultivated crops and indicate poor crop diversity. As apparent from the results, some crops only appear in one or two districts within the region, this might result from the many different climatic and ecological zones Madhya Pradesh contains (GoMP, s.a.). The outcomes from the study region confirm the domination of wheat and paddy as main food crops and soybean as the main non-food crop (GoMP, s.a.). Soybean being the second frequent crop indicates that it is an important cash crop for many families within the study region. The high dependence on only one or two different crops for the majority of families might result from the small average land size. With only small plots of land, growing a diversity of crops may seem logistically illogical. Additionally, the low productivity of the land might reduce yields and the quality of crops. Lack of information and trainings or access to good quality seed or irrigation might add yet another layer of reduction to yields.

A higher difference in numbers can be found in the average herd size of WHH (2.50) and MHH (3.06). Bravo-Baumann (2000) finds that WHH are as successful as MHH in herding but tend to have smaller herds. Cattle is the most dispersed livestock within the sample followed by goats and poultry. As mentioned above, WHH in the study were more likely to manage either livestock or land. This might result from a high distribution of small ruminants among women. As reported by the International Livestock Research Institute (Kristjanson et al. 2010), it is possible and often the case that women although not owning land, own livestock. As this information corresponds with results from the study region it

should also be mentioned that in areas of India women also manage bulls, in which they rent to farmers (Kristjanson et al. 2010). Although this was not the case in the study region, it is a good example of diversifying women's sources of income and breaking open the animal-gender bias of women only owning small ruminants and men owning larger livestock. A higher occurrence of small ruminants among women might result from the different work, which is connected to keeping livestock and crop production.

Agricultural practice in Madhya Pradesh is very traditional and basic. No major changes in production or innovations within the last five years has been mentioned. That no new technologies or production systems have been adapted might result from low literacy rates among the farmers, the spare access to media (also see 5.3.3) and the insufficient access to and support of training (also see 5.3.3). The use of fertilizer and pesticides for crop production is common as well as the use of vaccination for livestock. In regards to the often critical financial situation of the farmer, the high use and distribution of expensive inputs such as fertilizer or pesticides needs to be critically discussed.

The land or herd sizes of farmers are small or unproductive enough that a living solely based on income from agriculture is not possible even when they manage land and livestock. Therefore, to sustain their livelihoods, additional income needs to be generated. Agarwal (1994) confirms that less than one third of rural households depend on agricultural wage labor but account for about half of those living below poverty line. Although many of them own land it is not enough or unproductive. Based on the given agricultural structure and the insufficient working opportunities, the food security situation in the study region is not given. Only nine household reach year round food security, and that mainly coming from MHH. About 45% of the households produce food for up to only three months. Here, MHH show a slightly higher food security compared to WHH. For less than 30% of the sample size, their food lasts up to six months, and only a minority of around 12% has year round food supply, again coming mainly from MHH. Out of the nine households that reach year round food security, eight own land. Here it is noteworthy that households with land are significantly more secure with their food supply then compared to households with no land. The precious food security situation is not narrowed to the districts Sagar, Satna and Mandla alone. The Indian State Hunger Index for 2008 assigns Madhya Pradesh as the only

state in the category that is extremely alarming. In 2009-10 about 42% of the rural people in Madhya Pradesh lived below the poverty line (Gol, s.a.). These numbers underline the critical situation in Madhya Pradesh.

Of course, the situation of women and kids is often the worse. Many of them suffer from chronic malnutrition because, based on customs, they often eat last and only the remaining food (FAO, 2009). While in the study region children are mainly the first to eat, women eat last after men and the elderly. More than a third of the interviewees stated that they would not get the same quality and quantity of food compared to their family members.

Various governmental schemes such as the Midday-Meal, the Public Distribution System (PDS) or the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) are attempting to improve the food security situation in Madhya Pradesh (Saxena, s.a.). These programs obviously play an important role in supporting the families in the study region and many interviewees mentioned that they would profit from those programs.

Another way of improving the food security situation might be a higher crop diversification and the focus on food security instead of cash crop production within the study region. The maintaining or the introduction of a vegetable garden could further help to improve the food security situation. So far, only 30% of the interviewees have a vegetable garden providing the family with important vitamins, minerals and micronutrients or presenting a source of additional income for the family. However, taking in account the critical land situation in the area, this might not be possible for many families.

## **6.2. Work distribution and decision making**

### **Q 2: How is work distributed and decisions made within the family?**

#### **Q2.1 How are daily routines for men and women organized?**

#### **Q2.2 How is the work distributed between men and women?**

#### **Q2.3 How is decision-making dealt with within the family?**

### **6.2.1. Daily routines**

For a better understanding of the work distribution in daily routines, the timeframes developed in separate FGDs for men and women, give interesting inside. Main observations



were the high amount of time spent on household duties, walking and personal hygiene, all comprising time spent on unpaid and partly unproductive work. Also, there is, especially for women, only a small amount of time left for relaxation or spending time with family and friends. The timeframes also clearly show that within the intra-household work distribution, there are clear gender divisions in certain fields.

A typical day for a farmer starts early, at or before sunrise and traditionally ends at ten or eleven at night. The main reason for such an early start, meaning around four to six o'clock in the morning, might be the dependence on daylight for work. As stated during informal talks and own observations, due to bad infrastructure people have irregular or no access to electricity. Often even if they have access, it is expensive and people are probably not able or willing to pay. While men and women go to sleep more or less at the same time, women often get up around one or two hours earlier than men to start cooking breakfast and other duties such as house cleaning or care for children. The general low involvement of men and therefore clear allocation of household duties as women's tasks don't require most men to get up as early.

While women spend long hours (five to nine) per day for household duties, taking care of children and cooking, men with only one to two hours a day, are hardly involved. Their main household task concerns the maintenance of the house or livestock, which comprises less time. Similar disparities are confirmed from a report of the Government of India (2000, in Hirway and Sunny 2011), in which women spend 29 hours per week on household work while men spent only around two hours. Similar results are shown from Pandey (2000 in Gross et al. 2002) where women spent around 34 hours compared to men with almost four hours. What makes household duties so time intensive is low mechanization and innovation for many processing and manufacturing steps. Cooking or washing dishes is, due to bad infrastructure, also connected with physically hard work. While the access to water due to public hand pumps or wells seemed acceptable, women have to walk many hours for collecting firewood. If women generate their income by collecting and selling firewood their unproductive time spent on walking becomes absurdly high.

Another remarkable outcome is the high amount of time spent on personal hygiene. This again can be led back to the lack of adequate infrastructure such as near public water

stations or own sanitary facilities in their houses. Such time consuming activities keep women from keeping a regular paid job and keep them in the unproductive and unpaid informal sector.

The high involvement in childcare and household duties therefore results in less time spent on productive work. Compared to men, with seven and a half up to ten hours, women only spend five and a half up to eight hours on productive work. The difference in time spent on productive work for men and women is also confirmed by the studies and reports of the Government of India (2000, in Hirway and Sunny, 2011) and Pandey (2000 in Gross et al. 2002). Balakrishnan and Fairbairn-Dunlop (2005) urge the need for an improvement in basic services and technologies for women to reduce the amount of time women spend on basic tasks. Leisure time was calculated as low with a maximum of three hours a day for men and one hour a day for women. It should be noted that women themselves stated that they have no free time while men quantified their leisure time of up to one hour. What is interesting is that men recognize the discrepancies and also quantify their difference in leisure time.

The data for daily routines illustrate work from June to September as being the busiest time of the year. It would be interesting how the time use changes during the off season. Would women and men gain more leisure time? Would women still be left alone with household duties? Or would men migrate to cities for work and women face additional work burdens?

Results from FGDs also show that some household duties are defined and recognized as work but in many cases they underestimated, which is done especially by women. Following Mrs. Mungreiphy, time-use surveys are an especially important tool to demonstrate women and which workloads they manage and allows them to reflect upon that. According to Pandey (s.a.), time-use surveys are additionally a good method for documenting the time women spent in unpaid and unproductive work because it is generally underestimated in national data.

#### **6.2.2. Work distribution between men and women**

The results on work distribution for livestock show clear gender divisions. Work such as selling, health treatment and breeding are mainly tasks that involve money, require

knowledge and access to markets. As results show those tasks are predominantly done by males, it is seen that lack of knowledge, access to training, markets, and mobility issues for women might be reasons for this predominantly male work distribution. Milking, feeding and collecting manure are tasks overwhelming completed by women. Such tasks are characterized as time consuming, and they need to be done regularly and do not require any special knowledge or involve money. Results from the timeframe confirm that women, compared to men, spend significant more time at home on household duties. Hence, it is more likely that they also complete regular work and maintenance of livestock. There are various studies confirming the important role of women in caring and managing livestock (Hirway and Sunny 2011, Kristjanson et al. 2010). Not only are they highly engaged, for them, livestock also represents financial security (Thornton et al. 2002). Additionally, women's access to livestock is easier than compared to other assets such as land ownership (Rubin et al. 2010).

Only eight out of the 44 households sell their livestock or products such as milk or eggs. This indicates that households live on a very subsistent basis and do not command over surpluses to sell. The rising demand on animal-sourced food, high in nutrients, might present a chance for women to build up livestock enterprises and in order to help them to sustain their livelihood and further empowerment (Kristjanson et al. 2010).

While it is not surprising that in WHH most of the decisions are made by women, it is astonishing, that also in MHH about one third of the decisions concerning animals are made by women. As women are often in charge of the livestock they also make the decisions here.

The work distribution concerning crop production points to a generally male dominated field. Women participate in almost every other agricultural activity, however, with crop production, only harvesting and stocking as well as weeding were to a larger part also done by women. It was also not common among the interviewees to pay a worker to carry out certain tasks. This might only be done within WHH where no son or son-in-law is present. The male domination in crop is confirmed by the decision making patterns for crop where men make the majority of the decisions. Reasons for the general male dominance in crop production might be the required physical strength especially in plowing, transporting or in field preparations and necessary expertise in plant cultivation, in which women often don't

take part in. Because of the common assumption that women are mainly involved in time-consuming work such as winnowing, weeding or sowing it was unexpected that women in the study region were just moderately involved in those tasks. A case study from Madhya Pradesh (Singh and Sengupta, 2009) confirms the involvement of women in every task except from plowing. Other results from several time-use surveys presented by the FAO (2011), including a study from India (GoI, 2006 in FAO 2011), confirms that women were involved in all the activities except plowing and their main work was done weeding, followed by harvesting and then the application of fertilizer. Differences in the intensity of involvement on certain tasks vary from crop to crop and depend on the particular work force situation of the family.

An interesting observation is that only 21 households out of the 49 that have crops sell them. This reveals that most households rely on their crops for subsistence and not profit generating. The selling of the crop is mainly done at larger or district markets, which requires mobility. Because of customary practices, women generally don't sell, travel to markets or negotiate with middle men. The likelihood of being in charge of trade might increase for WHH. Additionally, a large amount of interviewees have to sell their crops immediately in order to pay back loans. This point is critical when thinking about future risks. In the case of droughts or other risks concerning crop shortfalls, families will be in an even more insecure situation. In the future, both aid and insurance needs to be addressed. Other necessary interventions are more trainings and the implementation of adequate technologies for women. Also necessary is rethink to reduce time spent on very time consuming tasks. As also stated and recognized by NGOs, very often the problems are identified but trainings and implementation are lacking.

Collecting firewood is not only a time intensive but also physical hard work. Results show that mostly women are involved in collecting and selling firewood. The high involvement of women might also result from the cultural assigning of firewood collecting to household work and is therefore seen as a female task. These assumptions are also confirmed by FAO (2009), in which around 1.2 billion people, mainly women, depend on forest or forest products such as fuel wood, or foraging for food or medicine. In India especially, indigenous tribes are largely concentrated in and around forest areas and depend on forest products

for their livelihood (UNDP, 2011a). More than half of the study sample collect firewood, out of them around 30% also sell and rely on it to sustaining their livelihood. Literature reveals that there is often a gender disparate use of the forest and it is mainly women who do time- and labor-intensive work such as collecting products while men are involved in high-value work such as cutting timber for sale (FAO, 2009). Due to social constraints women are often in weaker negotiation positions when selling their wood to men. There is no village market for firewood, so in order to sell the wood women have to walk longer distances to get to larger markets or directly sell it at factories. This additionally weakens the negotiation position of women because the buyer might know that they will not go further distances to sell it somewhere else. According to Cecelski (2004, in Carr and Hartl 2010) collecting fuel wood is one of the most time consuming jobs and due to high rates of deforestation it is becoming even more so. In some areas of India there are projects introducing fuel-efficient wood-burning stoves for the purpose of saving women's time (Atukorala and Amerasekera 2006 in Carr and Hartl 2010) and freeing them for income-generating activities. While on the one hand this is a huge assistance for women on the other hand it is an income source for many women and a decrease in fuel-wood consumption would minimize their already low income. What women need here is support to change or diversify their livelihood.

As interviewees confirmed, they have to manage long distances to get appropriate firewood. In a research, conducted by Van't Veld et al. (2006) in Madhya Pradesh, it was discovered that the depletion of forest did not lead to more time-intensive firewood collection, but instead led to a switch from collecting firewood to the use of private waste and private trees for burning. With this, in the long run it turned into the alteration from private fruit trees to private firewood. This is an interesting outcome because some women in the interviewees stated that they also would use either cow dung or agricultural residue. But no one in the study region mentioned that they would have changed their fruit trees into firewood. I think this is good in more ways, because the change from fruit trees to private firewood seems to be critical in several ways. First, with the removal of agricultural waste the already poor soil is lacking in important nutrients, then, the change from fruit trees to firewood trees will only increase the already critical food security situation. Additionally, the problem of women not having any land or livestock will be increasingly difficult when facing the problem of deforestation and long distances to get firewood. To

close the gender gap other solutions, such as sustainable joint forest management, which was conducted in some areas in the 1990s and seemed to work (Van't Velt et al. 2006), should be taken into account.

For a high number of interviewees, making Indian cigars is a common and important income source. The work is principally carried out by women but also by men. The high involvement of women within the study region can be traced back to primarily two reasons. First, the agro-forestry based bidi making is due to the ideal geographical conditions of Madhya Pradesh a wide spread industry in the region. Secondly, bidi making is a home-based work, which can easily be done by women (ILO, s.a.). Rustagi et al. (s.a.) confirm the major involvement of women and children in bidi making. The study further reveals that women and children due to their skills are actually preferred as bidi rollers but ironically get paid lower than men. The authors of the study stress that due to their poverty, illiteracy and few alternatives, many women and children continue work under such conditions. While none of the women interviewed mentioned that their children are also involved in the making of Indian cigars this might be possible. As confirmed by the ILO (s.a.) the home-based nature and piece rating system of payment often leads to the involvement of children and especially girls in the making of bidi. Connecting the workers in communication, improving their access to markets and addressing health and education issues would improve the situation of many women within the study region. Around five million people depend on the bidi industry and can be affected for instance by anti-tobacco policies, therefore for the long-term promotion and skill training in non-bidi activities need to be asserted (ILO, s.a.). Such interventions would also benefit many women in the study region.

Having discussed and analyzed the work distribution for different income generating activities within the region it would be interesting to see how people estimate their work contribution. A little bit less than half of the women think that their husband or another male of the family works the most, followed by 40% of women thinking that they or another woman in the family works the most. Only around 10% think that they have an equal work distribution. Due the fact that the sample is very diverse in age, occupation, family and social constitution, the opinion on who works more differs within and between men and women. A general assumption from the FGDs is that women typically work more in terms of

time and men work more when physical strength is measured. Of course it always depends on the circumstances and the particular family working situation but it is obvious that men, recognize, that women work longer hours. That being said, it should not be forgotten that within the sample, all families are known to be struggling and men also do hard work. An important fact also mentioned by Dr. Jyotsna is the fact that with around 40% of women already realizing how much work they do and also that men within FGDs recognizing the high amount of work women have to deal with is an important achievement. Further time-use surveys are an important tool to make the situation more visible and to build awareness of the unpaid and unproductive work of women (Gross and Swirski, 2002).

Within the different tasks and activities women have to do, the majority of women associate collecting firewood as the most exhausting work. Obvious reasons therefore are stated in the section above. Collecting of firewood is followed by wage labor and agricultural work, which often requires physical labor. Making Indian cigars, fetching water and household duties were only infrequently mentioned.

### **6.2.3. Decision making patterns**

As results show, most of the decisions concerning issues such as childcare, household, healthcare and education are primarily made by women or by women together with their spouses. A possible explanation could be that women mainly stay at home or that it is simply their task to be in charge of those fields and hence they also make the decisions. A rather unexpected result was that even in typically male dominated fields such as money or land decisions are often made by women or both of partners together. Indeed concerning these fields more men than in other fields were involved but most of the time women were in charge of making the decisions. There is not one field where men constitute the majority of decision making. A possible explanation for these results can be found in Whitehead and Kabeer (2001), who noted that although there are different interests within household members, people affected by extreme poverty focus on decision making concerning the joint interests of the family. Therefore, the high participation in decision making can result from the critical economic situation of the family. Many families do not manage land or livestock as well as have a regular income, making the bargaining power within families often equal (Manser and Brown, 1981). Additionally it should be noted that results only

represent women's statements. Due to the high involvement of women in decision making it is not surprising that only a few women want to increase their impact. And thus work distribution is the main field where most women want to increase their influence in decision making.

### **6.3. Access to material and immaterial resources**

#### **Q 3: What is access to material and immaterial resources like for women?**

##### **Q3.1 What is the distribution of landownership between men and women?**

##### **Q3.2 How are women involved in financial matters?**

##### **Q3.3 How do women have access to knowledge, the labor market and society?**

#### **6.3.1. Land distribution and ownership**

For the rural poor, land is the most valuable asset due its dual role as a productive resource and as security or poverty prevention in times of crisis. Additionally the ownership of land enables the owner of retaining a credit or gaining access to services such as trainings (PWESCR, 2011). Results confirm that although they hold legal rights and are often the principle laborers on that land, women highly lack access to their or any land (Agarwal, 2002). Within the sample the majority of around 70% of the families has land. Out of the families owning land, 40% of the land is in the husband's name adding to the amount of land which is in other males' names to be around 70% . Only 20% of the women interviewed own a land title. The owning of land differs largely between WHH and MHH. In WHH about 50% of women have a land title under their name, while in MHH this is only 5%. As literature reveals, these inequalities arise from customary traditions where land was generally only handed down to the patrilineal line, from the father to the son. With this, specifically daughters largely lack the rights to reach their legally entitled portion of inheritance. Therefore widows more often had the chance to receive the land of their husband's, although in many cases it was directly given to the son (Chen 2000, Agarwal 2002).

The reason mentioned by FGDs for the imbalance of land distribution between men and women widely corresponds with the literature. For the legal registration of land, official documents and the land title are needed to be notarized by a legitimate authority (PWESCR, 2011). The low literacy rate among women can make assessments of contracts a hurdle and



increase the possibility of negotiating them instead in the husband or sons' name. Contracts or the changing of official documents for instance into the name of the wife or widow always involves money, which many people will simply not spend. According to Mearns (1999), transaction costs can make up to a third of the total value of a land transacted including official costs such as registration fees but additional informal costs for bribes to accelerate the transaction. Even if the land is simply inherited costs are involved. As Mearns stresses, there is a lack of clear title holding that can end up in losing the land. He sees a lot of potential in reducing transaction costs due computerization. Following the serious economic situation in the study region, the high costs might be a reason for not changing land titles or writing them in the widows name when in a couple of years the son presumed to receive the land. Probably the most deeply rooted reason for the strong preference of the son is the patrilineal tradition of handing down land. Mearns sees an intensive promotion and clarification of the legal rights of women as a crucial act for gaining equality. With this, especially information about the positive aspects of women holding a land title and their increase of bargaining power which will convert into positive spillover effects for their children and the entire family, will be crucial (Dwyer and Bruce 1988, Duraisamy 1992 in Agarwal 2002). Mearns is also aware of the fact that legislative measures alone will not be sufficient. And finally, for higher transparency, information and simplification of the transaction process is needed.

### **6.3.2. Women and finances**

An adequate access to credit, insurance and savings is essential for rural farmers to improve and increase the productivity of their livelihoods (World Bank, 2011). Nonetheless, only a minority of WHH (around 30%) has a bank account while 70% of WHH do not have a bank account. Accounts in WHH, are obviously, held by the women themselves. The situation for MHH is slightly better in this circumstance, at least roughly half of the families have a bank account. While the majority of bank accounts within MHH are held by men, there are also some in the name of women. The Government of India (2010) confirms the lack of access to bank institutions for around 40% of rural people and underlines the important function of financial access to economic improvement and security in case of surprises and risk.

To improve the access to financial services new products and ways that better suit and reach the poor have been implemented. New technologies, especially the use of mobile phones, bring simplifications. The main problem for poor people to gain access to bank institutions is the lack of clear identification documents (Gol, 2010). Often only microfinance institutions (MFIS), private moneylenders or self-help groups reach out to the poor and provide them with opportunities to gain credit. Due to various reasons, they have been the matter of much debate in recent times. Their mainly smaller number of clients holds their interest rates high and forces loan beneficiaries to sell their assets so that they can pay back their loans. Within self-help groups the members of the group are responsible for the repayment of loans, if this is not possible, credit receivers might face humiliation from other group members.

Within the study region, a couple of self-help groups offered credits for its members. Some women mentioned that they have already taken a credit from the group to buy medicine for their children or to open up a business. While none of the interviewed women mentioned that they have experienced problems with credits, some gave spoke of irregularities (Nayar et al. 2010). The huge female - male gap in favor of men concerning the owning of bank accounts can be explained from several instances. Social norms and behavior expectations can influence women`s work and economic activity to be less than that of men`s (Fletschner and Kenney, 2011). Also, the low level of literacy often makes it difficult to benefit from written information or to fully understand complex structures of financial products as well as within contracts (Ngimawa et al. 1997, Brown 2001).

Although women are disadvantaged in the access of bank accounts, they still save, earn and purchase items. Results on the shopping responsibilities give insight in the purchasing patterns within the families. While many interviewees noted that they would not earn enough to save money, most of them however, will probably do so whenever they can. As revealed in the previous results males more often have access to bank accounts and therefore are most likely to be more engaged in saving compared to women. If families do not have access to formal financial tools as Collins et al. (2009) lists, other possibilities such as storing savings at home or with others are common but unreliable. Many women in the interviews stated that they save their money at home. Purchases for livestock and crops are

mainly done by males, and result in selling patterns of work distribution within crops and livestock (Fletschner and Kenney, 2011). The purchases for health and education are done more often by the females of the family, which might be traced back to the general importance for women concerning health and education, resulting in higher visibility with an increase of bargaining power (Duraismy, 1992 in Agarwal, 2002). Food is about as equally often purchased by men as it is by women. The high rates of women purchasing food might be a consequence of their main involvement in cooking processes.

The families clearly need to spend most of their income on food. According to the National Sample Survey Organisation (NSSO) using data from 2004-05 in rural areas, people spent around 55% of their total expenditures on food, around seven percent of the expenditure goes to health and five percent to clothes (Times of India, 2006). Also within the study region most of the money is spent on food, followed by expenses for health. Crop production with necessary inputs such as seeds, fertilizer, pesticides or irrigation for crop production is in place three as it requires more intensive production compared to livestock which is slated in sixth place. Spending on clothes is place four and due to support from government, expenditures for education are low and rank at place five. Given the critical economic situation of the families the saving of money is not very relevant. Important cost factors which have not been sampled in this study are energy costs for items such as fuel and electricity, which following NSSO data adds up to 10% and transportation, calculated at 7% (Times of India, 2006).

Results do not give any information about whose money, either the incomes from men or women, is used for what. While women generally tend to spend much money on children, nutrition and education men often spend their money more likely on tobacco or alcohol (Duflo et al. 2004). Expenses for those items were not asked.

Results concerning the decision making within the household were surprising. Decision making within WHH is either done by women or equally by both genders. The high share of women in decision taking might be led back to various reasons. As in the case of young widows their children might be too young to have any say on how to spend the money. Elderly widows or single women might be accepted as head of the households or generally have a higher status and therefore decide on how to spend the money (Jensen, 2005).

Concerning MHH, both men and women equally make decisions. On one side, different bargaining power within the household might influence the decision making and therefore can also be in favor of women (Manser and Brown, 1981). On the other side one should take into account that there is a possibility of men spending money from wage labor or the selling of goods without women even knowing it in which they do not decide together or the woman would decide differently. But especially in very poor household where survival is an everyday struggle there are not so many options about how to spend money and the spending of money is needed to be done very conscientiously and therefore is done together (Whitehead and Kabeer, 2001).

Especially in WHH the general opinion is that men receive better pay for the same job compared to women. This assumption is a little bit different within MHH, here the majority of 24 women still think that men get a better pay but also 13 women think that their pay is equal to men. According to data from a case study done in Madhya Pradesh, men on average earn 80-100 rupees per day compared to women earning 40-50 rupees. This implies a wage disparity higher than that of the Indian average of around 70% (Singh and Sengupta, 2009). While some years back the wages for women laborer was only at 20 rupees a day, the increase in wages for women in the rural areas is mainly traced back to the effect of the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) (Singh and Sengupta, 2009). The higher employment among widows compared to women in MHH might let them experience the wage difference more often (Jensen 2005, Unisa and Datta s.a.). Women in MHH might stay and work more often from home and if they go out for work their negotiation power might become higher because they know how much their husband's get paid. Interviewees also mentioned that the pay would depend on the kind of job. Research showed that in addition to the common wage disparities between men and women there are differences in the kind of job, receiving more pay for physically hard work and therefore more applied on male dominated activities such as plowing while the lowest wages are found in weeding, a typical female task (Singh and Sengupta, 2009). Interviewees noted that they would also experience wage differences when comparing rural and urban areas. According to data from the 61<sup>st</sup> round of national sample survey (NSS), average payments in urban areas are higher compared to rural areas. This disparity continues to disregard existing wage inequalities between men and women, and may be a reason for the

lower payment for women, connected to the types of jobs they rely on. Their low mobility, low level of skills and literacy often makes them dependent on low paying jobs (Singh and Sengupta, 2009).

### **6.3.3. Access to knowledge, the labor market and society**

Alarming is the high percentage, over eighty, of women from the sample who never went to school. This number can be drawn from Madhya Pradesh's low literacy rates of only 27% for women in 1991 (Bajpai, 2003). These women suffer from their illiteracy every day and rely on low skilled and low paid jobs (Singh and Sengupta, 2009). Their lack of literacy also influences their status in society. Women mentioned that they would face difficulties arguing in discussions with employers, officials or buyers. They are unable to sign or understand complex documents or contracts and so often lack official documents or access to institutionalized benefits such as bank accounts. Without any skills or basic education especially in rural areas, it is difficult to get a well-paid job. Their lack of knowledge is a result of former and partially still existent social customs. School dropouts in the study region are also partially associated with these customs. Girls today are still the first to dropout to help with household duties or care for siblings if the family faces economic difficulties or labor shortage (Velkoff, 1998). Such duties were recognized five times as being a reason for dropouts within the sample. The education of male children was and still is seen as an investment in the families future because traditionally the son needs to care for his parents and since the daughter, when married, moves to her husband, investments in girls were seen as money lost (Velkoff, 1998). This opinion seems to have changed generally over time. Looking at the results for the importance of education, the majority of around 90% thinks that education is equally important for boys and girls. But still some women encourage those customs and biases thinking that girls are bound to household work and leave after marriage. It is disappointing that these biases are acknowledged by women themselves, but due to their own social and economic situation they might not have had the chance to think outside of their common patterns of behavior. Other reasons were insufficient numbers of schools or a lack of sanitary facilities, principally affecting girls (Velkoff, 1998).

In the region studied today, as presented in the results, 90% of children go to school and there are two main reasons for this. Madhya Pradesh has made a great effort to secure access to schools—opening around 26,000 schools between 1997 and 1998. Many of them are located in more remote areas and are inhabited by scheduled tribes and scheduled castes (Bajpai, 2003) and have probably benefited many families within the sample greatly. As experienced during the field work, today in many cases, schools are the only place where sanitary facilities are provided. Additionally, the schools worked together with the local councils to adapt better to the needs of the villages (Bajpai, 2003). Women questioned additionally mentioned governmental support for school material such as books or bicycles (Nirmala and Singh, 2012) and the midday-meal as highly influential support for them. The high awareness and importance of education for both boys and girls, is traced back to as stated by parents, a higher faith in the power of education (Indian Institute of Education, 2006).

Within the study region only ten women comprising less than 15% of the sample had the opportunity to attend any kind of training. Women from MHH more often knew about trainings. Out of the ten women being informed about the trainings only two attended them. The weak participation of women resulted from various reasons. First of all women often lack information about trainings, most likely because of their low mobility. As stated by women, trainings are often organized with short notice, therefore not suiting the women's daily routines. Another barrier for women to attend trainings and improve their skills is because they are busy with unpaid work (APEC North-South Institute, 1999 in Balakrishnan and Fairbairn-Dunlop, 2005) such as household or other duties. And finally, also mentioned and especially experienced in this study region are cultural constraints that hinder women because it is seen for them as being inappropriate to come and speak in front of older men. Many of those constraints and problems concerning weak access for women to extension services and trainings are known (Karl et al. 1997) but so far, especially in the study region, the organization of trainings has unfortunately not been adapted to women's needs.

Two of the offered trainings in the study region concerned agriculture. Given that most of the people in the area depend on agriculture to maintain their livelihood the offer of only

two infrequent, short-notice, one-day trainings to provide farmers with knowledge seems to be insufficient. Supporting this notion are the results showing that the women mainly get their agriculture knowledge from parents, husbands, other family members or people in the villages. Concerning the agricultural structure and the food security situation in the region, trainings for instance on crop diversity, seed improvement, soil fertility, (collective) marketing, income diversification or innovation on a long-term basis would be necessary for an improvement in agriculture. Following the outcome of the research for agricultural development and women's improvement it is crucial to take into account women's constraints and limits when designing trainings. It seems that NGOs already commit to different approaches and ways to improve inclusion and benefit women. The high awareness and faith in education is visible due to the expressed wish for further trainings and education, in which women seem to believe in the importance of education.

Another important source of information and knowledge represents media. In the study region, only a minority of 20% has access to media such as radio, television or newspapers. While the low access to media in general is critical, compared to WHH, women from MHH have much better access to media. Of those studied, only one woman stated that she has access to a newspaper. The low accessibility to media in general in rural areas can be traced to poor infrastructure. While India controls a high amount of newspapers and many of them are in local languages (Newspaper Society Indian s.a., in India Knowledge@Wharton, 2010) the large amount of illiterates among the interviewees and the tough economic situation of many families are significant reasons for the low distribution of newspapers. Although it is argued that better distribution of newspaper can improve literacy and the position of women if newspapers are more engaged in issues concerning the lower-caste communities (India Knowledge@Wharton, 2010), for many women or families buying newspapers would simply make no sense. Due to the reasons mentioned above an immediate potential increase of newspapers in the study region is not likely.

The most wide spread media source within the sample was radio and television. While a case study from India (Pigato, 2001) reported that the majority of the households own a radio this is not the case for this study region. This can be attributed to the economic situation of the families. Some households also had access to television. According to Jensen

and Oster (2009) television has a positive impact on women. They have found that women are experiencing a decrease of violence and son's preference due the information on television. They gain more autonomy and show lower fertility. Additionally evidence is found for a higher school enrolment of children, possibly leading back to higher decision making power of women. While it is not possible to make any statement about those impacts in the study region, television seems to carry a high potential in improving the status of women.

None of the interviewees had access to the Internet. In rural areas mainly male high school students or men with higher socioeconomic status access the Internet via public Internet kiosks mainly provided by the government or NGOs (Schwittay 2011). Due to the socio-economic situation of the interviewees it is possible that even if there would be the possibility to use the Internet they would lack the necessary skills or the money to use and pay for it. Also interesting is that women with boys attending university did not mentioned that their sons use the Internet. Improving the access of media for rural population could be offered through info centers with access to television, Internet and other media, and could be implemented by the government. Such a method would be similar to an example from West Bengal (Pigato, 2001). Of course equal access for men and women needs to be assured and there is a need in providing them with the necessary skills. Here is an opportunity for women empowerment to the break open traditional structures in the distribution or enlarged access of radio and television.

More than 50% of the families in the study region own a mobile phone. While only eight WHH have access to a mobile phone due to their sons being the owners, twenty-seven women in MHH have access through their sons', husbands' or grandsons' phones. None of the women own a mobile phone themselves so there is a strong domination of men owning mobile phones and therefore having better access to information and maintain connections. The use of mobile phones illustrates the gender divide in this region: The phones are used by men to investigate market prices or to organize work, and women mainly use the phone for staying in contact with relatives. People in this study region have a higher benefit from mobile phones compared to other media sources mentioned before. Because of mobile



phones they can interact with informants and catch up with current information for their business for instance about market prices or the weather.

Various forms of SHGs by NGOs or the government are aiming to empower women to become active in the local communities or in politics. They address social issues and more importantly, help them with savings and credit (Eda Rural Systems and APMAS, 2006). Among the 45 sampled women, many explained that there are governmental supported SHG in their villages. Only one forth, or three of the women coming from WHH are also part of the SHG, while the participation of women from MHH in SHG is far higher with around 50% or 16 women.

The main reason for not being part of a SHG, mainly mentioned by MHH, was lack of information about the group. According to Deininger and Yanyan (2009) there are problems in reaching and mobilizing the target group. Often campaigns on social issues are launched or the below poverty line census assisted in identifying the target population. Since not many women from WHH mentioned a lack of information, this might indicate that they are a target group and that there is more effort made for them to receive the information. The second most common reason is lack of time, which was mainly mentioned by WHH. As women in WHH often depend on uncertain income and irregular employment and their additional household duties they cannot take part on regular meetings. A final reason for women in WHH might also be a result of seasonal employment, in which they wouldn't receive the information or be there to participate (Eda Rural Systems and APMAS, 2006). The previous explanations could all be applied for the women in the study region. Additional to the time problem, specifically a problem of WHH, they also more often lack the money needed for saving and credit done in the SHGs as stated by one woman from a WHH. While trying to raise awareness for women in social and political issues, credit is the main target of most SHGs (Eda Rural Systems and APMAS, 2006). Within the study region seven women commented on their old age being a hindrance, and along the same lines single women and widows face restrictions and therefore should be included in those programs. Compared with other SHG institutions women in this region were allowed to participate (Eda Rural Systems and APMAS, 2006). The distance to group meetings, irregularities within the group, that groups have already reached their maximum quota of members, have been other

reasons of not being part of SHGs, less frequently mentioned by women. According to the experiences from Andhra Pradesh regular and correct bookkeeping is crucial to maintain trust within the members.

The main aim and most crucial benefit for women of SHG are to provide cheap and available access to credits and help them to manage and sustain themselves and their livelihoods. Suggestions out of experiences from Andhra Pradesh stress the need for a more flexible credit repayment to better adapt to the individual demands and possibilities in taking and repaying a credit (Eda Rural Systems and APMAS, 2006). An adaptation in the saving and credit schemes may help women in the study region too. Some SHG also have group-based enterprises such as collectively organized marketing of products, other collective activities or management contracts from the government such as running a ration shop,<sup>13</sup> or the cooking of midday-meals. Within the study region there are some SHGs in charge of preparing of midday-meals. While none of the women mentioned problems and saw this as an income generating possibility, experiences from Andhra Pradesh note that many of these contracts are not cost-effective and they only show low earnings for SHG members. Due to lack of experience, many women were unable to manage the non-transparent system, cash flow and supply (Eda Rural Systems and APMAS, 2006).

Besides the economic support a further aim of SHGs is to empower women and better connect them to local politics and make them more visible to the entire community. Women in the study region saw the receiving of information as an important benefit. Further results from Andhra Pradesh suggest that more effort should be made to widen and concentrate on social issues to promote, for instance, campaigns and rallies for an improvement in literacy, anti-dowry petitions or discussions about closing down local liquor stores. Eda Rural Systems and APMAS (2006) underline the importance of strengthening women and further accompany them if they make it to village or political functions. As experts from NGOs such as Ms. Mungreiphy and Dr. Jyotsna confirm, the visibility and further support as well as the participation of men in the whole process is very important. As presented in the results, compared to the number of women participating in SHG many more are engaged in the local community at religious celebrations or festivals. Those

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<sup>13</sup> The running of a ration shop would be part of the Public Distribution System.

occasions can and should be used to target relevant issues and enlighten and mobilize more women. As experiences show SHG have a positive effect not only on the members, but also on the community as a whole (Eda Rural Systems and APMAS 2006, Deininger and Yanyan 2009).

With 70%, the majority of the interviewees think that it is easier for men to get a job and some 10% believed that men and women are equally struggling. According to Van Klaveren et al. (2012) based on data from the ILO, EAPEP (Economically Active Population, Estimates and Projections) calculates the labor participation rate<sup>14</sup> in India for men at 84.6% but with women at only 35.7%. The huge gap in labor participation may underline the experience of women that men attain jobs more frequently and/or efficiently. While those numbers show an extreme gap in the labor participation of men and women one should not forget that women more often work in unrecognized categories and are not statistically captured.

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<sup>14</sup> The labor participation rate (LPR) measures the % of population between 15-64 years of age that are economically active.

## 7. Conclusion

Results concerning the different roles, duties and participation of women in the local agricultural structure of the study region show that women hold various roles and duties within the household as well as outside. Women are highly involved in agricultural production, which in the study area is characterized by its very small size and traditional working practices. An unequal distribution of property such as land and livestock between women-headed and men-headed households was detected. Within the study region men-headed households more often control both assets. A higher occurrence of small ruminants among women-headed households compared to men-headed households was found. Crop production was marked by poor diversity and identified soybeans the important cash crop. Unfortunately, the food security situation within the study region was not given for the majority of the families, in which insufficient access to and the support of trainings might have contributed to this situation. Households with land had a significantly higher rate of food security compared to households without land. The situation of women is often worse because, based on cultural customs, they often eat last and only the remaining food. In this respect, many families within the study region benefit from state intervention such as the public distribution system (PDS) for receiving food, or the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).

Women additionally often work in agricultural related fields outside the home, such as making Indian cigars, collecting and selling of firewood or work as wage labor. The majority of those jobs falls under irregular working conditions and are short-term based. Therefore, many women are self-employed. Due to the small sample size in this study, no significant difference between women-headed household and men-headed household concerning the participation in agriculture could be asserted. But as results from FGDs show, women-headed household, due to social customs and lack of information, can face discrimination, which can lead to a higher economic vulnerability.

Those results show that there is an urgent need for increased and better trainings and education to improve agricultural output and create different income possibilities, especially for women. Trainings need to become better adapted to women's needs and suit their daily routines. Special effort needs to be put towards the integration and accessibility of women-

headed households. Another important point is to openly discuss discriminating practices and customs against women.

Results concerning the work distribution and daily routines show that a large amount of time, especially from women, is spent on unpaid and partly unproductive work such as household duties, walking and personal hygiene. Within intra-household work distribution, clear gender divisions have been discovered for certain fields.

Results reveal that work that involves money, requires knowledge or access to markets and mobility, is predominantly completed by males, whereas time-consuming, regular work where no money or special knowledge is required, as well as household duties, are mainly carried out by females. Additionally, watching over livestock, collecting firewood and making Indian cigars seemed to be more female dominated sectors in comparison to crop production and work as wage labor, being more male dominated fields.

However, within the sample there is an awareness of the burden of work that women have to manage, along with the low rates of mechanization and innovation, lack of adequate infrastructure and ties to traditional roles that often keep women in the unproductive and unpaid sector. An improvement in basic services and technologies would free women for productive and income generating activities which would provide them with higher bargaining power within the household, hence empowering them. This shows that time-use surveys are an important and effective tool to visualize women's workload and help men and women to reflect on their work distributions. Therefore the further application and use of time-use surveys needs to be promoted.

Results clearly show an unequal access to resources. Only few women hold a land title or a bank account. For women, the situations of women-headed households are slightly better compared to men-headed households. This critical situation can be predominantly traced back to traditional customs and women's low level of education. Therefore there is an urgent need to ensure equal access to resources for women. The importance of education and training has already been realized within the sample but the offer has not yet been adapted to women's need. Linked, is the important role that self-help groups or the media holds for women's empowerment as well as toward further debates of women's issues in the public arena. These possibilities offer at least in part, a platform for exchange or credit.

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Until now, media, due to low access, plays no role for women. Therefore efforts need to be put in place to further support and develop self-help groups as well as the public discussion of women's issues. Additionally, it is important to underline the positive effects that women's empowerment illustrates towards the whole family, because in order to improve women's roles and status in society, men play an important role and cannot be left out.

## 8. Summary

Women all over the world play an important role in overcoming poverty and other grievances. The misallocation of resources and opportunities as well as the hindered access of women to resources decreases productivity and comes at a high economic and social cost for all (UN 2010, FAO 2011, World Bank 2011).

The aim of this study is to illustrate the current situation of women living off small scale-farming or agricultural related activities and to identify gender-based disparities in work distribution and the access to material and immaterial resources that hinder women's development and empowerment. Therefore an overview of the local agricultural structure in the study region and women's occupations is presented. Additionally, a comparison between women-headed households and men-headed households is made.

The data for this research was collected in both a qualitative and quantitative fashion. The qualitative data was gained through formal group discussions (FGD's) and semi-structured expert interviews. Quantitative data was collected through structured individual interviews. Informal conversations and observations complete the triangulation of data. Data from formal group discussions and expert interviews were analyzed qualitatively, and data from individual interviews were analyzed quantitatively with PASW Statistics 18 (Predictive Analytic Software). The research was carried out in three districts of Madhya Pradesh state as well as in New Delhi, India. The targeted groups were women and families from disadvantaged castes and tribes living under poor conditions.

Results show that due to the small structure of the agriculture a living based solely on their own agricultural production is not possible for the families within the sample. Many families don't even own land or livestock. They often depend on various incomes from agriculture related, time-intensive, low skilled and low paid occupations such as wage labor work, the collecting and selling of firewood or making Indian cigars. Within the work distribution, clear gender divisions in certain fields have been detected. Often women handle time-consuming, unproductive and unpaid work. The distribution of material and immaterial resources are unequal for men and women. Women also often lack adequate access to important resources, which reduces their productivity. Therefore, women-headed households, due to

the absence of a husband, are slightly better off compared to men-headed households when it comes to access of land or bank accounts. Self-help groups have been detected as important tools for women's empowerment. Further effort needs to be put in the implementation and adaptation of new and already existing self-help groups and trainings to better adapt them to women's needs. Additionally an intensive and more open discussion on cultural customs, often discriminating women's needs, must be achieved in order to positively change the situation of the women in the study region.



## 9. Zusammenfassung

Frauen spielen überall in der Welt eine wichtige Rolle um Hunger und andere Misstände zu bewältigen. Die Fehlallokation von Ressourcen und Möglichkeiten wie auch der erschwerte Zugang der Frauen zu Ressourcen verringert deren Produktivität und verursacht hohe ökonomischen und sozialen Kosten für alle (UN 2010, FAO 2011, World Bank 2011).

Ziel dieser Studie ist es, die aktuelle Situation der Frauen die von Subsistenzwirtschaften oder landwirtschaftsnahen Aktivitäten leben zu beschreiben und geschlechterbasierte Unterschiede in der Arbeitsteilung sowie dem Zugang zu materiellen und nicht materiellen Ressourcen, welche die Entwicklung und Ermächtigung von Frauen behindern, zu identifizieren. Folglich werden ein Überblick über die lokale landwirtschaftliche Struktur in der Studienregion sowie ein Überblick über deren berufliche Aktivitäten gegeben. Weiteres wird ein Vergleich zwischen Frauen geführten Haushalten und Männer geführten Haushalten angestellt.

Für die Untersuchung wurden qualitative und quantitative Daten erhoben. Die qualitativen Daten wurden durch Fokusgruppendifkussionen und leitfadengestützten Experteninterviews gewonnen. Quantitative Daten durch aus strukturierte Einzelinterviews gesammelt. Informelle Konversationen und Beobachtungen komplementieren die Triangulation der Daten. Die Daten aus den Fokusgruppendifkussionen und Experteninterviews wurden qualitativ analysiert und die Daten der Einzelinterviews wurden quantitativ mit PASW Statistics 18 (Predictive Analytic Software) analysiert. Die Forschungsarbeit wurde in drei Bezirken im Bundesstaat Madhya Pradesh sowie in Neu Delhi, in Indien durchgeführt. Zielgruppe waren Frauen und Familien von benachteiligten Kasten und Volksstämmen die unter ärmlichen Verhältnissen leben.

Ergebnisse zeigen, dass durch die klein strukturierte Landwirtschaft ein Leben, nur basierend auf der eigenen landwirtschaftlichen Produktion für die befragten Familien in der Forschungsregion nicht möglich ist. Viele Familien verfügen nicht einmal über Land oder Viehbestand. Sie sind oft abhängig vom Einkommen aus unterschiedlichen landwirtschaftsnahen, zeitintensiven, einfachen und schlecht bezahlten Tätigkeiten wie Lohnarbeit, das Sammeln und Verkaufen von Feuerholz oder das Anfertigen von indischen

Zigarren. Innerhalb der Arbeitsteilung konnten klare geschlechterspezifische Aufteilungen zu bestimmten Aufgabengebieten festgestellt werden. Oft führen Frauen zeitintensive, unproduktive und unbezahlte Arbeiten aus. Die Aufteilung von materiellen und nicht materiellen Ressourcen ist ungleich für Männer und Frauen. Frauen fehlt es oftmals an ausreichendem Zugang zu wichtigen Ressourcen, dies verringert ihre Produktivität. Aufgrund der Abwesenheit des Ehemannes sind Frauen geführte Haushalte im Vergleich zu von Männern geführten Haushalten beim Zugang zu Land oder Bankkonten geringfügig besser gestellt. Selbsthilfegruppen wurden als wichtiges Instrument für die Ermächtigung von Frauen identifiziert. Weitere Anstrengungen zur Implementierung und Anpassung neuer sowie bereits existierender Selbsthilfegruppen und Trainings müssen unternommen werden um diese besser an die Bedürfnisse von Frauen anzupassen. Zusätzlich muss eine intensive und offenere Diskussion über oftmals Frauen diskriminierende kulturelle Gepflogenheiten erreicht werden um die Situation der Frauen in der Forschungsregion positiv zu beeinflussen.

## 10. Indexes

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## 10.5. List of abbreviations and acronyms

AFPRO	Action for Food Production
ARD	Global Program on Agricultural Research for Development
BOKU	University of Natural Resources and Applied Life Science
EU	European Union
EC	European Commission
FAO	Food and Agricultural Organization
GNI	Gross National Income
GoI	Government of India
GoMP	Government of Madhya Pradesh
HDI	Human Development Index
IFAD	International Fund for Agricultural Development
ILO	International Labor Organization
ISHI	India State Hunger Index
MDGs	Millennium Development Goals
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
NIC	National Informatics Centre
NSS	National Sample Survey
PDS	Public Distribution System
SAF-BIN	Strengthening Adaptive small scale Farming in Bangladesh, India and Nepal
SHF	Small Holder Farmer
SHG	Self-Help Group
UN	United Nation
UNDP	United Nation Development Program

**Appendix 1: Questionnaire**

Interview no: \_\_\_\_\_ Date: \_\_\_\_\_ Translator: \_\_\_\_\_  
 Language: Hindi/English

**General Information**

District: \_\_\_\_\_ Village: \_\_\_\_\_ Hamlet: \_\_\_\_\_

Name: \_\_\_\_\_ Age: \_\_\_\_\_ Marital Status \_\_\_\_\_ (Code)

Caste: \_\_\_\_\_ (Code) Literacy: \_\_\_\_\_ (highest education) Head of the household: \_\_\_\_\_

With who's family are you staying? \_\_\_\_\_

Number of family members: \_\_\_\_\_

	Male (> 18)	Female (> 18)	Boy (up to 18)	Girl (up to 18)
no.				
age of the children				

**Education**

1. Primary occupation of women \_\_\_\_\_ (Code)

2. Primary occupation of men (son) \_\_\_\_\_ (Code)

3. no of school going children		4. no of college going youth		5. no. of children dropped out from school	
Boy (<18)	Girl (< 18)	Boy	Girl	Boy	Girl

a. Why did the children drop out from school? \_\_\_\_\_

b. Who takes the decision about the drop out from school? ☐ men ☐ women

6. Who is it more important to educate ? ☐ Boy ☐ Girl ☐ equal

7. Have you got access to media? ☐ Yes ☐ No

a. If yes, to which? ☐ newspaper ☐ radio ☐ television ☐ internet ☐ others

8. Have you got a mobile phone? ☐ Yes ☐ No

a. If no, does someone in your family have one? \_\_\_\_\_

**Agriculture**

9. Do you own land? ☐ Yes ☐ No

a. If no, who owns the land you are living on/cultivating?

---

10. How big is the land, \_\_\_\_\_ what kind of land is it and is it irrigated? (in acres)

	home stead land	land owned & self ploughed	rent/leased in (as on date)	rent/leased out (as on date)	fallow
size of land	sqm				
irrigation					

11. Which kinds of agriculture do you have?

☐ Livestock ☐ crop ☐ forest ☐ fisheries ☐ others

12. If there is livestock, which kind of livestock, how many and who takes the decisions?

livestock	no	takes decision (m = men, w = women)	livestock	no	takes decision (m = men, w = women)

13. If there are crops, which kind of crops, how much and which would you define as cash crops and who decides what to grow? (in acres)

crop	unit	cash crop	takes the decision (m = men, w = women)

14. If there is forest, how much, how do you use the forest and who mainly takes the decision. (in acres)

forest	unit	takes decision (m = men, w = women)

15. If there is fisheries, which kind of fish how many and who mainly takes the decisions?

fish	unit	takes decision (m = men, w = women)	fish	unit	takes decision (m = men, w = women)

--	--	--	--	--	--

**16. How would you define your agricultural practices?**

	<b>traditional</b>	<b>improved</b> (e.g. use compost, intercropping, organic farming, ...)	<b>use of</b> (fertilizer, pesticides, mechanic devise, vaccination, specify )	<b>comments</b>
<b>livestock</b>				
<b>crops</b>				
<b>forest</b>				
<b>fisheries</b>				

**17. Have you invented new crops or livestock methods within the last 5 years? ☐ Yes ☐ No**

a. If yes, which ones and why?

\_\_\_\_\_

b. Do they cause more work or bring more money?

\_\_\_\_\_

c. Who decided to invent them? ☐ Men ☐ Women

**18. Where from do you receive your agricultural knowledge?**

\_\_\_\_\_

**19. Does someone offer any training for men or women? ☐ Yes ☐ No**

a. If yes, which trainings, have you received any of them?

\_\_\_\_\_

**20. Which main agricultural problems do you face? \_\_\_\_\_**

\_\_\_\_\_

**21. Where do you sell your products, who sells them, how do you reach the markets, who buys them, which kind of agreements do you have, which prices do you get, how often do you sell there and are there any problems?**

market	product	seller	reach market (Code)	buyer (Code)	nature of agreement (Code)	price (Code)	frequency	problems


22. Would there be some other market options? ☐ Yes ☐ No

a. If yes, which ones and why don't you use them

\_\_\_\_\_

23. Where from do you get market information (e.g. price)?

\_\_\_\_\_

24. How would you define your food security situation? \_\_\_\_\_ (Code)

25. Which kind of food do you have to buy additional and how often do you go to the market?

food	frequency

26. Do you have a vegetable garden? ☐ Yes ☐ No

27. Do you store food? ☐ Yes ☐ No

a. If yes, which kind of food and how do you store them?

\_\_\_\_\_

b. If no, why not? \_\_\_\_\_

28. Who gets to eat first? (rank)

children		adults		elder people	
boy	girl	men	women	men	women



29. Do all family members get the same quality and quantity of food? ☐ Yes ☐ No

## Decision making

30. Who takes the decisions in the following areas and on which decisions would you like have more impact?

	who takes the decision		
	men	women	more impact wanted
<b>child care</b>			
<b>household</b>			
<b>education of children</b>			
<b>health care</b> (when to see a doctor)			
<b>money</b> (investing/saving/spending)			
<b>work distribution</b>			
<b>land</b> (buying, selling, renting)			

## Work distribution

### 31. Which type of work is done and by whom?

<b>livestock</b>	<b>who mainly does the work</b> (m=men, w = women, b = boy, g = girl, p = paid worker)							
<b>work</b>	breedin g	feedin g	milking	slaughtering	collecting manure	making dairy products	selling	health treatment (vaccination,...)

<b>crop</b>	<b>who mainly does the work</b> (m=men, w = women, b = boy, g = girl, p = paid worker)										
	preparatio n	ploughin g	sowing	weeding	applying fertilize r	harvesting	winnowing/millin g	transporting	stocking	irrigatio n	selling at market

<b>fisheries</b>	<b>who mainly does the work</b> (m=men, w = women, b = boy, g = girl, p = paid worker)			
<b>fish</b>	preparation	fishing	selling	

forest	unit	who mainly does the work (m=men, w = women, b = boy, g = girl, p = paid worker)		
		preparation	collecting wood	selling

**32. Did you face challenges/changes in the workload** (concerning housework, care for elder people/ill, ...) **or in the work distribution within the last 5 years?** ☐ Yes ☐ No

**d. If yes, which one and why?**

\_\_\_\_\_

**e. Did your workload and the earned money increase or decline?**

\_\_\_\_\_

**33. Who do you think works more in your family?** ☐ husband ☐ wife ☐ others

**34. What is the hardest, most exhausting work for you and why?**

\_\_\_\_\_

## Economic Situation

**35. Household facilities {Observe & Record}**

Type of house					Electricity	Fuel used	drinking water	sanitation
wall	roof	floor	No of storeys	No of rooms	Code	Code	Code	Code

**36. Who generates income in your household and to which percentage?**

	Male	Female
No. of Person generating income		
percentage/amount		

**37. Do men and women get paid equally?** ☐ Yes ☐ No

**a. If no, what are the reasons?**

\_\_\_\_\_

**38. What are the sources of your income and how regular is that?**

source of income	forest products	animal production	crops	wage labor	service (specify)	business (specify)	other income (specify)
percentage							
men/women							
frequency							

39. Which other income possibilities do you have?

---

40. For whom is it easier to get a job and why? ☐ men ☐ women

---

41. Where on do you spend your money and who mainly does the shopping?

	Food	Crop (e.g. seeds, fertilizer)	Livestock (e.g. feed, fodder, medicine)	Cloth	Health & Sanitation	Education	Savings	Others
rank								
women								
men								

42. Who decides on what to spend the money?

---

a. If the man decides, do you always agree on his spending habits?

---



---



---

43. Do you have a bank account? ☐ Yes ☐ No

a. If no, does someone in your family have one? \_\_\_\_\_

44. Have you got a bicycle or a motorbike? ☐ Yes ☐ No

a. If no, does someone in your family have one? \_\_\_\_\_

45. How do you manage your long distance ways?

---

## Social relations

46. Besides from work, how often do you leave the house and to go where?

---

47. Are you engaged in the community? ☐ Yes ☐ No

a. If yes, what is your function? \_\_\_\_\_

b. If no, why not and would you like to get more involved? \_\_\_\_\_

48. Is your husband engaged in the community? ☐ Yes ☐ No

49. Is there a women group in the village? ☐ Yes ☐ No

a. If yes, do you go there? ☐ Yes ☐ No

b. If yes, what is the benefit? \_\_\_\_\_

c. If no, why not? \_\_\_\_\_

50. Do you experience any disadvantages compared to your husband/man (in case of land, money, education, access to resources) because you are a woman? --☐ Yes ☐ No

a. If yes, where?

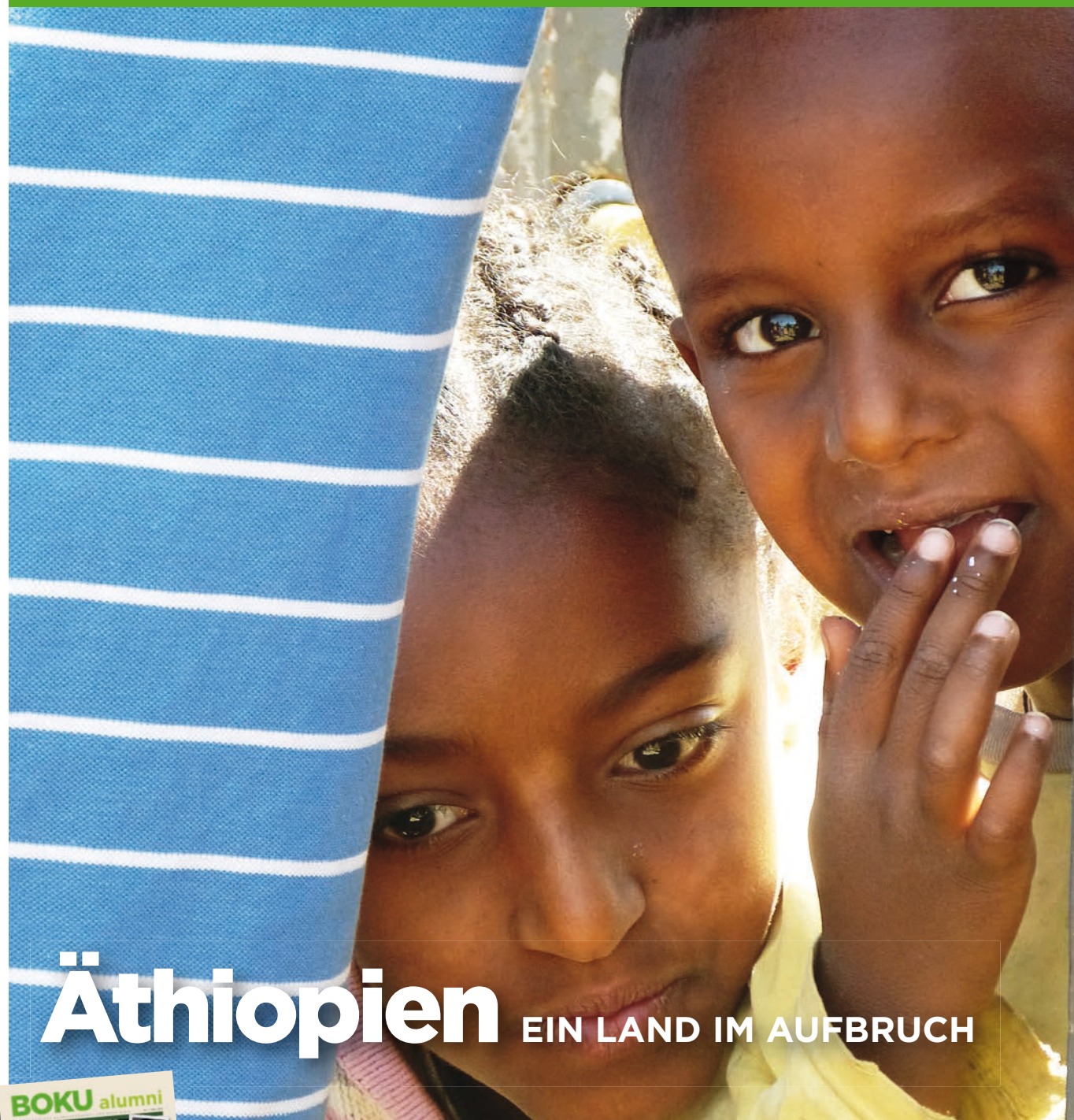
\_\_\_\_\_

51. From all the things we mentioned (education, agriculture, work, economic situation and social relations) where would you like to change things most and why?

---

THANK YOU VERY MUCH!

DANYAVAAD!



## Äthiopien

EIN LAND IM AUFBRUCH



MIT  
**BOKU**  
alumni

**BETRETEN DER  
BAUSTELLE VERBOTEN:**  
Die BOKU baut um

**MARION HUBER-  
HUMER**  
über die Vermeidung von  
Lebensmittelabfällen



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Univ.Prof. DI Dr. Dr.h.c.mult.  
Martin H. Gerzabek  
Rektor



*Liebe Kolleginnen und Kollegen,  
Freunde und Freundinnen der BOKU!*

Im von der Universitas Indonesia zum dritten Mal initiierten GreenMetric World Universities Ranking konnte sich die BOKU im Vergleich zum Vorjahr von Platz 45 auf Platz 21 verbessern. Das ist umso erfreulicher, als die Konkurrenz jährlich härter wird. Waren es im ersten und zweiten Jahr 95 bzw. 178 akademische Bildungseinrichtungen, so waren es 2012 bereits 215 Universitäten in 49 Ländern, die an diesem Ranking teilnahmen. Die BOKU ist nach dem Ranking nicht nur die am nachhaltigsten agierende Universität in Österreich, sondern im gesamten deutschsprachigen Raum.

Für das GreenMetric World Universities Ranking wird beurteilt, ob die Universität eine Vorreiterrolle innehat und ob sie Multiplikatorin für eine nachhaltige Entwicklung ist. Da tut sich die BOKU leicht, denn ihre Forschungsprojekte zur Sicherung der natürlichen Lebensgrundlagen – zum Beispiel im Bereich nachwachsender Rohstoffe und in der Entwicklungszusammenarbeit – sind beispielgebend. Mit dem Zentrum für Globalen Wandel und Nachhaltigkeit oder dem BOKU-CO<sub>2</sub>-Kompensationssystem, um nur einige wenige unserer „Leuchttürme“ zu nennen, kann die BOKU ein praktikables Vorbild sein. In der Ausbildung der Studierenden steht die Nachhaltigkeit ebenfalls im Zentrum.

74 Prozent der Bakkalaureats- und Masterstudiengänge an der BOKU weisen eine hohe oder mittlere Nachhaltigkeitsrelevanz auf, ebenso 80 Prozent der insgesamt 25 Masterstudiengänge.

Die BOKU nimmt auch die soziale Verantwortung gegenüber ihren mehr als 2000 MitarbeiterInnen ernst: Im Rahmen des auf vorerst drei Jahre angelegten Projekts „Gesunde BOKU“ stehen Erhaltung und Förderung von Gesundheit und Arbeitsfähigkeit im Mittelpunkt. Mittels einer breit angelegten Befragung und Evaluierungen verschiedener Bereiche werden Ressourcen und Belastungen erhoben, um daraus resultierende Verbesserungsmöglichkeiten für eine gesundheitsgerechte Arbeitsgestaltung in den täglichen Arbeitsablauf zu integrieren.

Ein „Export“ unseres Forschungs- und Bildungs-Know-hows im Bereich der Nachhaltigkeit, speziell in weniger entwickelte Länder, ist ebenfalls ein wichtiger Mosaikstein der Aktivitäten einer nachhaltigen Universität. Gerade in der Zusammenarbeit mit Ländern wie z. B. Äthiopien kann die BOKU viel bewegen. Dies zeigte sehr klar eine Delegationsreise im Februar dieses Jahres. Ernährungssicherung und -sicherheit für eine rasant ansteigende Bevölkerung, Schutz der natürlichen Ressourcen, insbesondere von Boden, Wasser und Bioressourcen, und die sozio-ökonomische Einbettung der Entwicklungsprojekte sind ein Gebot der Stunde. Die BOKU hat aufgrund ihrer diesbezüglichen Kernkompetenzen eine ganz besondere Verpflichtung.

*Martin Gerzabek*

### IMPRESSUM

**Medieninhaberin und Herausgeberin:** Universität für Bodenkultur Wien (BOKU), Gregor-Mendel-Straße 33, 1180 Wien. **Chefredaktion:** Michaela Klement, michaela.klement@boku.ac.at **Redaktion:** Hermine Roth, Hannelore Schopfhauser, Ingeborg Sperl **AutorInnen dieser Ausgabe:** Clement Atzberger, Eva Maria Bachinger, Eva Baldrian, Julia Buchebner, Martin Gerzabek, Georg Gübitz, Eva Ploss, Ruth Scheiber, Veronika Wirth **Grafik:** Patricio Handl **Cover:** Martin Gerzabek **Druck:** AV+Astoria **Auflage:** 8.000 **Erscheinungsweise:** 4-mal jährlich

**Blattlinie:** Das BOKU Magazin versteht sich als Informationsmedium für Angehörige, AbsolventInnen, Freundinnen und Freunde der Universität für Bodenkultur Wien und soll die interne und externe Kommunikation fördern. Namentlich gekennzeichnete Artikel geben die Meinung der Autorin oder des Autors wieder und müssen mit der Auffassung der Redaktion nicht übereinstimmen. Redaktionelle Bearbeitung und Kürzung von Beiträgen aus Platzgründen vorbehalten. Beiträge senden Sie bitte an michaela.klement@boku.ac.at



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Quellen



Wie ist die Situation der Frau in der indischen Landwirtschaft?

Dieser Frage ging Bernadette Mayr in ihrer Masterarbeit „The Role of Women in a Mixed Crop-Livestock Production System in Northern India: How can the gender gap be closed?“ nach.

**D**as Forschungsgebiet für die Arbeit beschränkte sich auf drei ländliche Regionen, Sagar, Satna und Mandla in Madhya Pradesh, Indien. Diese Regionen zählen zu den ärmsten in Indien. Ziel der Arbeit war es, den Beitrag der Frauen an landwirtschaftlichen Tätigkeiten in der lokalen Agrarstruktur sowie Arbeitsteilung und Entscheidungsfindungsprozesse innerhalb der Familien zu erforschen. Zudem sollte ein Einblick über den Zugang zu materiellen sowie immateriellen Ressourcen wie Land, Geld und Wissen der Frauen gewonnen werden.

**Traditionelle Zuständigkeiten.** Die Ergebnisse zeigen, dass es den Familien in allen drei Regionen nicht möglich ist, ihre Grundversorgung durch Subsistenzwirtschaften alleine zu decken. In den Familien geht kaum jemand einer geregelten Tätigkeit nach. Dies kann auf die schlechte Infrastruktur auf dem Land sowie den geringen Bildungsgrad (sechzig von zweiundsiebzig befragten Frauen erhielten gar keine Schulbildung) zurückgeführt werden. Die Familien sind daher auf Zusatzeinkommen aus agrarnahen Tätigkeiten, wie dem Verkauf von Feuerholz oder aus getrockneten Blättern gerollten indischen Zigaretten, angewiesen. Rund 30 Prozent der befragten Frauen und ihre Familien besitzen gar kein Land, ihre Situation ist daher noch prekärer.

Im Bereich der Arbeitsteilung sind klare Unterschiede in den Zuständigkeiten erkennbar. Oftmals werden zeitintensive, regelmäßige sowie mühsame Arbeiten und jene Arbeiten, die kein Einkommen bringen, wie beispielsweise Feuerholz sammeln oder den Haushalt führen, von Frauen getätigt. Auch innerhalb der Tierproduktion oder Feldarbeit sind klare Zuständigkei-

FORSCHUNGSERGEBNISSE INGE DIRMHIRN STIPENDIUM:

# FRAUEN IN DER INDISCHEN LANDWIRTSCHAFT NOCH IMMER STARK BENACHTEILIGT!

Text: Eva Ploss



REUTERS/Ahmad Masood

ten erkennbar. Diese Arbeitsteilungen werden auf traditionelle Rollenbilder und historische Entwicklungen zurückgeführt. Ergebnisse über Entscheidungsfindungsprozesse innerhalb der Familien spiegeln traditionelle Zuständigkeiten wider. Beispielsweise treffen Frauen in den Bereichen Haushalt oder Kindererziehung vermehrt die Entscheidungen, Männer tun dies vor allem im Bereich der Landwirtschaft oder bei Geldangelegenheiten.

**Starke Benachteiligung.** Die Ergebnisse zeigen einen schlechten Zugang zu materiellen sowie immateriellen Ressourcen für Frauen auf. In allen Bereichen, Landbesitz, Zugang zu Bankkonten oder zu Information in Form von Trainings, Medien oder Schulbildung, liegen Frauen weit hinter Männern zurück. Als Ursachen dafür wurden unter anderem der geringe Bildungsgrad und die geringe Mobilität von Frauen identifiziert.

Ergebnisse der Arbeit weisen in vielen Bereichen starke Benachteiligungen für Frauen auf. Zudem sind Haushalte alleinstehender Frauen meist noch stär-

ker betroffen. Der ungleiche Zugang zu Ressourcen und traditionelle Rollenbilder wirken sich negativ auf Frauen aus und verringern ihre Produktivität und Effizienz. Eine Unterstützung der Frauen durch den Ausbau von Trainingsangeboten sowie die Förderung von Selbsthilfegruppen sind von enormer Bedeutung, um die Rolle und Stellung der Frauen in der indischen Landwirtschaft zu verbessern. ■

[www.boku.ac.at/dirmhirn-foerderpreis.html](http://www.boku.ac.at/dirmhirn-foerderpreis.html)

## Info

Dank einer großzügigen finanziellen Unterstützung von Dr. Frank Dirmhirn, dem Neffen der ersten BOKU-Professorin Inge Dirmhirn, konnte der Arbeitskreis für Gleichbehandlungsfragen 2011 erstmalig ein eigenes Inge Dirmhirn Stipendium in Höhe von EUR 2.000,- zur Förderung einer BOKU-Masterarbeit aus dem Bereich der Frauen- und Geschlechterforschung vergeben.