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The decency of women's working conditions

in peri-urban dairy buffalo production systems in the District Faisalabad, Punjab, Pakistan

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This working paper is based on an ICDD-funded MSc thesis completed in September 2012 at Georg-August-University Göttingen and University of Kassel, Faculty of Organic Agricultural Sciences, Animal Husbandry in the Tropics and Subtropics.

Contents

Abstract

Equitable working conditions and fair payment for female workers are often lacking. To analyse the decency of women's working conditions in dairy production systems in Pakistan, female workers (n = 73) were asked about their on-farm activities in a semi-structured face to face interview. In addition, participatory research tools were applied to determine problems the women are facing. The research was carried out in 2011.

The workload of female family members is enormous: it is the task of women to take care of the household, the children, and the livestock. Farm related activities are to clean the sheds, to prepare dungcakes and to water and feed the buffalo. Not only the high number of working hours – 16 hours per day – , but also heavy physical workload, are certainly undecent. From 73 interviewed women, 86.1 % prepared dungcakes, 86.1 % were feeding the buffaloes, 91.7 % were in charge of cleaning the sheds and 65.3 % were involved in milking the animals. More than two thirds (69.8 %) of the interviewees related the harsh working conditions to negative impacts on their body condition.

The results from two group discussions showed that the major problems of working women, caused by the working conditions, were lack of time and money, and health problems resulting from work.

In most cases (n = 47) the work was rendered in form of "unpaid family labour" while milk was mainly produced for subsistence, non-commercial sale to neighbours or commercial sale to a milkman (*dhodi*). Female farm labourers also participated in the research (n = 26). These women are also facing health problems and additionally they were complaining about inadequate payment. Most of these women (61.5 %) were not getting paid money. Commonly, the labourers (88.5 %, n = 26) were compensated with non-monetary goods like dungcakes, milk, feed or food.

Less than half of the female labourers (46.2 %, n = 26) received a monetary payment. The income of the labouring families was often below the extreme poverty line defined by the World Bank (*WB, 2011a*). The products, milk and dungcakes, are the main outputs of the women's work and have a high value in use and in exchange. Milk is especially important for the subsistence oriented or subsistence and market oriented farms, as it provides protein and fat for the family. Dungcakes are the main source of fuel – nearly 90 % (n = 73) of the interviewed women used dungcakes for cooking purposes.

The second part of this study aimed to determine if working conditions are decent or inadequate. As women mostly worked as unpaid family labour and rarely received an income, even as a labourer, payment was mostly inexistent or inadequate. The daily working hours of women on peri-urban dairy farms were, with an average of 12.1 h (n=72), very high compared to the payment or income. In 97.2 % of the cases, working hours exceeded the number of decent working hours defined by the ILO (*2002*). Due to heavy workload, harsh weather conditions and absence of safety measures at work, women felt several negative impacts on their bodies. Overall, there was no social protection for women working on Pakistani farms. In some cases even bounded work occurred.

From the study result it was concluded that women do not receive an equal payment compared to men, have fewer opportunities for education and have often no opportunity to invest and start their own business. In consequence, the work of family as well as hired female workers on dairy farms is undervalued in terms of payment, work time and the outcome of their on-farm activities. Overall, the working conditions of women working on dairy farms in the peri-urban area of Faisalabad are not decent.

1 Introduction

1.1 Concept of decent work

Equitable working conditions and fair payment for labourers and workers should be an aspiration all over the world, and is in fact one of the Millennium Development Goals (MDG, 2011). In reality however, poverty and exploitation of workers are the norm, especially in the agricultural sector in the so-called developing countries. It is also commonly known that, in particular, female labour is not valued equal to male labour (*FAO, 2011a*), therefore MDG Target 1.B explicitly mentions women as a major target group for improvements of the employment situation and decency of work (*UN, 2000*). Apart from that the 1948 Universal Declaration of Human Rights is claiming that:

> "(1) Everyone has the right to work, to [...] favourable conditions [...];
> (2) Everyone, without any discrimination, has the right to equal pay for equal work;
> (3) Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection;
> (4) Everyone has the right to form and to join trade unions for the protection of his interests." (UDHR, 1948).

The International Labour Organization declares it as a fundamental right "to obtain decent and productive work in conditions of freedom, equity, security and human dignity" (*ILO, 2012*). Therefore four pillars of decent work were defined, which are focusing on "employment, social protection, social dialogue and tripartism, and fundamental principles and rights at work" (*Anker et al., 2002*). In this paper the term "work" is defined as goal-oriented activity, including productive work with an outcome as well as work for subsistence or housework.

1.2 Agriculture in the study area

Agricultural work plays a big role in the economy of Pakistan and 45 % of the Pakistani labour force is employed in this sector (*Farooq, 2011a*). In the District of Faisalabad, 82 % of the 5.843 km^2 area are used for agriculture (*Ministry of Textile Pakistan, 2012*). Most of the milk demand of the 2.9 million inhabitants of the city Faisalabad is produced in the peri-urban areas, because in the city centre animal husbandry is banned. Milk production is a labour-intensive production system, as the technical status of the typical peri-urban dairy production systems is low. Resulting from this it is even important to explore if the labour standards are decent and allow obtaining a sustainable milk production. As socio-economic aspects are relevant for the analysis of the situation of women working in peri-urban dairy production, it is also important to know that 75 % of the district's population have a low income and are defined as poor (*City District Government of Faisalabad, 2006*).

In Pakistan, 74.9 % of working women are found in the agricultural sector, whereas only 36.6 % of the male workers are working in agriculture (*Farooq, 2011a*). This shows that women constitute the major workforce in the country's agricultural sector. Working conditions especially of women are often hard, no matter if they are working as an underpaid labourer or as an unpaid family worker (*Acharcya et al., 1999*). According to Mumtaz (2006), 52.8 % of Pakistan's female workers are not getting paid, and in general one can observe that women receive lower wages than men.

This paper focuses on women working in dairy animal husbandry, since livestock rearing is often a task of women (*Jamal, 2005*): In the case of Faisalabad's peri-urban dairy farms, women are mainly in charge of feeding and watering the buffaloes as well as of preparing the fodder. As Alumas (*2005*) mentioned, women are often also engaged in milking and in processing the milk.

1.3 Aim of the study

To improve the working conditions of women in peri-urban agriculture, it is firstly necessary to analyse the actual situation. Therefore, the aim of this paper is to:

Characterise the decency of work (or its deficits) and the remuneration of female workers in peri-urban dairy production units of Faisalabad, Pakistan.

After analysing the problems, one can identify ways to improve the conditions. For this purpose, it is desirable to adopt, from the beginning, a bottom-up strategy in which the target people are taking part in the evaluation of their situation at work.

This paper can only provide evidence for the inadequate working conditions of the studied group of women and indicate exploitation or unacceptable circumstances at work. Yet, the provided results were shared with the ILO, for its "Labour Issues in Urban and Peri-Urban Agriculture: Information and Resource Guide" (*ILO, 2013*) to achieve food security, reduce poverty, realise decent working conditions and strengthen capacities of peri-urban farmers, as claimed by Nussbaum (*2003*). Although the working conditions of women in the peri-urban agriculture of Faisalabad are only one example, they are important as the focus lies on female workers who are often neglected in the debate. However, it is complicated to measure the decency of female work because of the different kinds of work women accomplish. Depending on social arrangements, women's work can be productive and paid or it can just consist of necessary tasks that have to be done for the family household, without being defined as "productive work" (*Sen, 1987*). Independent of the (economic) classification of the work women are pursuing, the working conditions should be decent. Therefore the following two hypotheses have guided this study:

1. **The accomplishments of female workers in dairy production units are undervalued.**
2. **Working conditions for female workers in dairy production units are inadequate.**

2 Material and methods

2.1 Choice of farms

The selected farms were located in a periphery belt around the city centre of Faisalabad, at a distance to the centre of 4 to 9.4 km (*Hagmann, 2011*). The randomly chosen female workers who were interviewed worked on one of the 145 farms from the pre-study (*Hagmann, 2011*) or were working in the direct neighbourhood.

Mostly the wife of a farmer or a female labourer took part in the survey. In case there was no one present at the listed farm or if no women were working at the farm, other farms in that area were selected randomly, which fulfilled the requirement that buffaloes were kept and women workers were present. With the help of a Holux M241 GPS logger the exact location of each farm was registered (**Figure 1**).

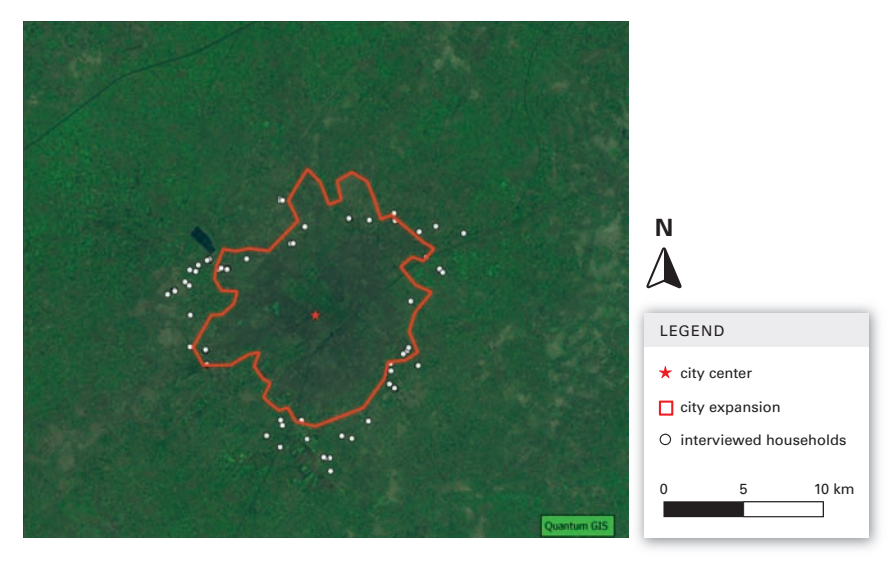

Figure 1: GIS-based map of Faisalabad with city boundary (red line) and location of 69 among the 73 interviewed households developed from a Landsat image by using Quantum GIS 1.6.0.

2.2 Quantitative data collection

In the first part of the research project women who were working on buffalo farms were interviewed. A semi-structured questionnaire was used for a "face to face" interview. As Punjabi is the local language spoken by the working woman, the English version of the questionnaire was translated into Punjabi. The answers were documented in English.

Furthermore the interviews were recorded with a voice recorder. The duration of an interview was about 30 minutes. The quantitative part covered data about the woman, her level of education, information about the farm and work she was doing. The survey also included sensitive questions about topics like self-determination. For this reason the translator had to be a female person, and during the conversation it was soughed to have a closed forum with only female attendees to ensure a comfortable situation for the woman and to obtain reliable answers.

To determine the duration of work one has to clearly define and separate between work and leisure time. In this study work time includes all on farm activities as well as housework which is contributing profit to the family as a social group. Furthermore, midwife activities or production of marketed handicrafts or stitching are also defined as work, even if they are not related to the research focus of agricultural activity.

2.3 Qualitative data collection

To combine quantitative and qualitative methods, some open questions were included in the questionnaire and two separate group discussions were held in which participatory research methods (PRM) were used. The tools which were used were brainstorming and creating charts on big paper sheets to identify problems. The choice of participants for the group discussion was done based on the qualitative data. Based on the 60 interviews which were completed in the first two months of data collection, women were clustered into two status categories (family workers, hired workers). Another condition for forming homogeneous groups was that the participants should not be younger than 18 or older than 55 years, and that a group should consist of 5 to 10 participants to grant suitable discussion conditions (*Flick, 2009*). The chosen women were personally invited by the translator, whom they already knew from the interviews; for both sessions 8 women were finally present. Each discussion was moderated by a Punjabi speaking female; the women were split into two groups of four participants each; their task was to discuss the problems they were facing regarding their work. Together and with the help of the moderator they had to create a chart and name the problems that were related to their activities on the farms. After 30 to 40 minutes the results were presented to the other group of four participants and discussed in the plenary.

2.4 Statistical analyses and data interpretation

The results from the interviews were converted into a numeric system and captured in a data file with the open source program "Open Office Calculator 3.2". Most of the statistical calculations and tables were also created with this program. For graphics like boxplots the open source program "R Statistics 2.12.0" was used. The map showing the GPS coordinates of the farms was created with Google Earth and Quantum GIS 1.6.0 (also open source). The duration of female work was estimated to obtain a realistic idea on working hours per day.

3 Results

3.1 Quantitative aspects of female farm work

In total 73 interviews were conducted during September to December 2011. Whereas 47 women were working on the farm of their family, 26 women were working as a labourer on a third person's farm. The age of the participants ranged from 15 to 70 years.

Most of the farmers kept only a small number of buffaloes: more than half of the 73 farms on which interviews were done had up to 10 buffaloes, one quarter owned between 10 and 20 buffaloes and only 13 farms had more than 20 buffaloes. Figure 2 shows on the one hand the total number of buffaloes on the farms, split into different herd sizes. On the other hand it shows how many buffaloes were owned by the interviewed females themselves, because the interviewed women did not always own the buffaloes.

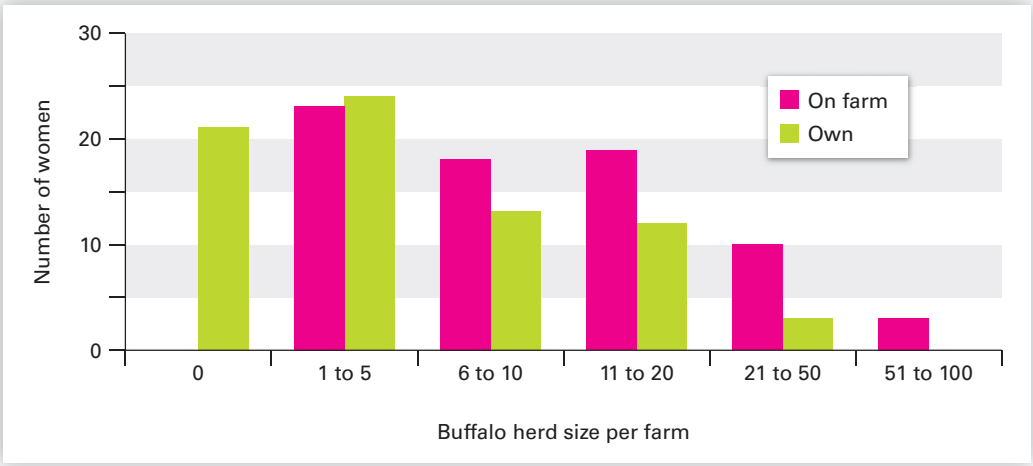

Figure 2: Number of women working on farms with no buffalo, 1 to 5 buffaloes, 6 to 10 buffaloes, 11 to 20 buffaloes, 21 to 50 buffaloes or up to 100 buffaloes, compared to the number of buffaloes owned by the interviewed women (n=73).

Of the 73 interviewed women, 21 (28.8 %) did not own a buffalo, but they were just coming to the farms to work there. Most of the female workers owned between 1 and 5 buffaloes. Often this was also the total number of buffaloes on the farm because this group comprises the small-scale farms where women are working as unpaid family labourers. On farms keeping more than 6 buffaloes often hired female labourers were working. The total number of buffaloes on these farms was higher than the number of animals owned by the working women. Only 4.1 % of the working women owned more than 20 buffaloes and none of the interviewed women owned more than 50 buffaloes.

On the farms taking part in the study, on average 3.5 people were involved in animal husbandry. In total 115 women were working on the 73 farms, averaging 1.58 working females per farm. On 26 farms female labourers worked who were not part of the family. However, nearly two thirds of the women (64.4 %) were unpaid agricultural labour on their family's farm. Among the 73 interviewed women, 90 % mentioned that they were engaged in animal husbandry; the remaining 10 % were only involved in dungcake preparation.

Traditionally the women are the whole day present on the farm and in the house, so they are the ones caring most for the animals and spending many working hours on the farm. Their tasks are to take care of the buffaloes and to clean the sheds by transporting the dung outside of the farmyard or by preparing dungcakes.

3.1.1 Task and working hours

The women's task is also to prepare the feed and to feed the animals. In total 86.1 % of the women were feeding the buffaloes, while 49.3 % were also preparing the feed and 31.0 % were additionally collecting the fodder. Cleaning of the sheds is a clear task of women and 91.7 % of the interviewees were doing this. On the other hand, cleaning of animals is a task of male workers, therefore only 9.9 % of the interviewees were washing the buffalo. Similar to the cleaning of sheds, dungcake preparation is defined as a women's task, and 86.1 % of the interviewees were doing this work (**Picture 1**). Helping to milk the buffalo was done by 65.3 % of the women and processing of milk for home consumption by 53.5 %. Breeding management and decisions on buying or selling an animal is mostly the task of the male household head.

Picture 1: Dungcakes drying on a wall.

The daily working time of the women, as shown in **Figure 3**, was calculated by combining all answers of women regarding their work time, and including all on farm activities as well as housework. From this approach it resulted that the majority of the women (69.4 %, n = 72) worked > 11 hours per day.

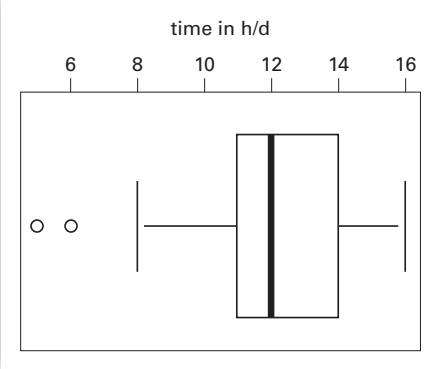

Figure 3a: Distribution of women's working hours per day (n = 72).

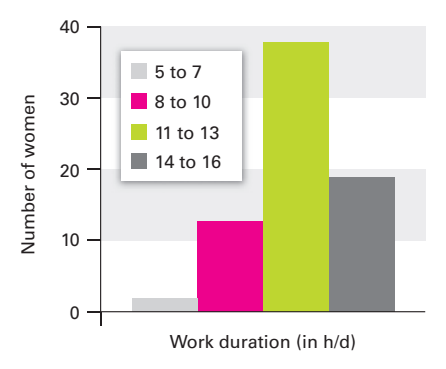

Figure 3b: Number of women with different numbers of working hours (n = 72).

The minimum duration of work was 5 h and the maximum was 16 h per day, with an average of 12.1 hours per day. Overall, one fifth of the interviewees was working up to 10 h per day and nearly 80 % were working longer (yellow and green bars in Figure 3b). **Figure 4** indicates how much time was needed for different tasks.

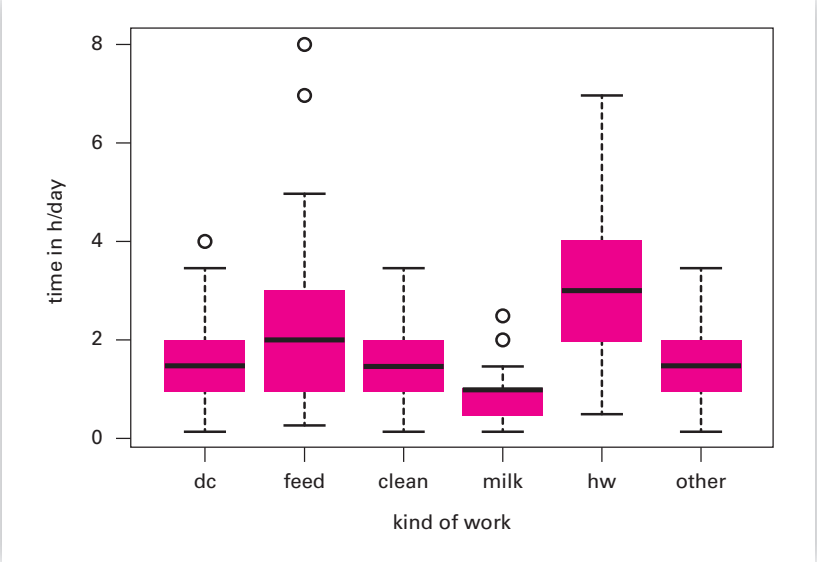

Figure 4: Daily working hours of women for dungcake production (dc, n = 62), feeding of buffaloes (feed, n = 66), cleaning of sheds and buffaloes (clean, n = 63), milking of buffaloes (milk, n = 52), housework (hw, n = 45) and other work (other, n = 63).

On average the women who prepared dungcakes spent 1.5 h on this work every day (n = 62). The same number of working hours was needed for cleaning the sheds and the animals (n = 63). The time for preparing the fodder depended on the type of feed. Cutting the long green millet plants is done with the help of a cutting machine, whereas concentrate feed has to be mixed with water. On average the female workers spent 2 hours / day on feeding the buffaloes (n = 66). If the farmer did not own land to grow feed or have money to buy feed, the person who is in charge of the animals has to collect fodder from somewhere. This can take up to 8 hours / day.

Among the interviewed women, 45.2 % milked the buffaloes. Yet, they often explained that they only helped milking. The time needed for milking one buffalo takes only 10 minutes. Milking usually takes place twice a day and generally the work is shared between the workers. As most of the participating farms owned a low number of buffaloes, milking consumed the smallest amount of working hours – on average, women spent 1 hour / day for milking or helping milking (n = 52). Housework is exclusively done by women. It includes taking care of children, cooking food, washing clothes and dishes and many other work in the household. Consequently it is complicated to determine the amount of time used for these tasks, and only 45 women attempted to respond to this question. In consequence the respective results vary widely, with a minimum of half an hour and a maximum of 7 hours / day – the mean duration of housework was 3 hours / day. Additionally to the named fields of work, one quarter of the participants mentioned also other types of work.

3.1.2 Payment of female workers

Among the 26 hired labourers, only 10 were working for money. One woman received a direct payment of money for her agricultural work, namely 1000 Rs.[1] per month for 5 h of work every day (plus an additional payment of milk and other remuneration). In 7 cases the husbands, who were also working on the farm, received one salary as payment for the work of the whole family. Three of the women who said that their husbands were getting money did mention the height of their family's income: The first family was working with four persons on the farm; however, the girls (16 and 17 years) were just working there in the morning and did handicrafts in the afternoon. Their father received 35000 Rs. per year. In the second case 4000 Rs. per month were paid to the father, while three sisters and their parents were working the whole day. In the third case a family with three workers received 2800 Rs. per month.

1 1000 Rs. (Pakistani Rupees) equalled 11.01 US$ on 3.11.2012

In addition to the low payment, the problem of irregular payment of the salary and of in-kind remunerations was mentioned. "Owners are paying sometimes on time, but sometimes they do not pay on time" (*GD1.labourer, Rec.GD1*), or they even do not pay at all. One girl complained that after receiving one time a payment "he [the farm owner] did not give anything again" (*GD1.labourer, Rec.GD1*). Hence they had to manage to earn some money and started to make handicrafts and stitching.

The majority of female workers were paid in non-monetary goods, even if they did farm work like feeding and cleaning. Most of these women received milk and dungcakes as payments (**Tables 1 and 2**). Sometimes they also received food or ingredients like flour or wheat grain; fodder for their own buffaloes was also given. These remuneration were also given to four women who worked on their own farm and in addition to that on another buffalo farm, where they received in-kind remuneration for their work.

Table 1: Number of women receiving different goods as remuneration.

Remuneration	Women (n)
Milk	16
Dungcake	14
Money	11
Feed	9
Food	5

Table 2: Number of women receiving different combinations of remunerative goods (n=30).

Combination of remunerative goods	Women (n)
Feed	7
Milk + Dungcake	6
Dungcake	3
Milk + Money	3
Milk + Money + Dungcake	3
Milk + Money + Dungcake + Food	2
Milk	1
Milk + Food	1
Food	1
Food + Feed + Money	1
Feed + Money	1
Money	1
Total	**30**

Out of the 30 women paid in kind, 16 received buffalo milk, on average 1.5 l per day (n = 13). The second most frequent good used for payment were dungcakes. Overall, 14 female workers were receiving them as remuneration for their work. Feed was given to 30 % and food to 16.7 % of the hired labourers (n = 26). Overall, it was not easy to compare the payments because of the different status of the women (labourers, family workers, part-time workers) and because of the different combinations of goods which were given.

To learn about the involvement of women in marketing and selling of farm products, the women were asked if they sold milk, dungcakes or other items. Nearly 80 % of the 73 women were involved in the selling of goods, and only 15 women were not selling anything. Forty-one women were in charge of selling milk, and 38 (52.1 %) sold dungcakes, mainly to neighbours. Other items sold by the women were handicrafts, stitched items or processed milk. Only 5.5 % were selling these other goods (**Figures 5 and 6**). From the figures it is evident that female family workers mostly sold the milk produced by their buffaloes, whereas hired labourers tended to sell dungcakes more often than the family workers.

Figure 5: Absolute number of women selling any goods (s), selling milk (s_m), selling dungcakes (s_dc) or selling other goods (s_o).

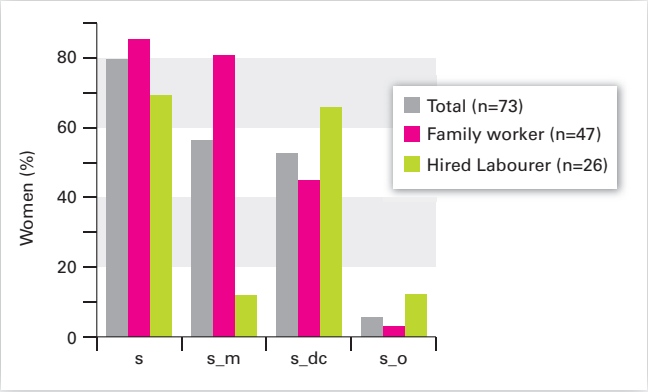

Figure 6: Relative number of women (total, family worker, labourer) selling any goods (s), selling milk (s_m), selling dungcakes (s_dc) or selling other goods (s_o).

The interviewed women were asked about the litre price which they were receiving for selling the milk, which depended on the way of marketing. There was a difference between the price paid by the end consumers, who were in these cases the neighbours, and the price paid by a milkman. The average milk price determined from the responding households was calculated at 52.4 Rs. (n = 75). The dungcakes were mostly sold in units of 100. Often the price was fixed to 100 Rs. per 100 dungcakes or 50 Rs. per 100 dungcakes. On average, the women's income from dungcake sale was 70.5 Rs. per 100 dungcakes (n = 38).

3.1.3 Working conditions of female workers

To evaluate their working conditions, the women were asked to rank their workload from "not hard at all" up to "very hard". The results (**Figure 7**) showed that 45.1 % of the women did not define their work as hard at all, followed by 35.2 % of the women perceiving that their burden was slightly hard, and 16.9 % were characterizing their work as "very hard". More than two thirds of the women (69.8 %, n = 73) replied that their work had negative impacts on their body condition.

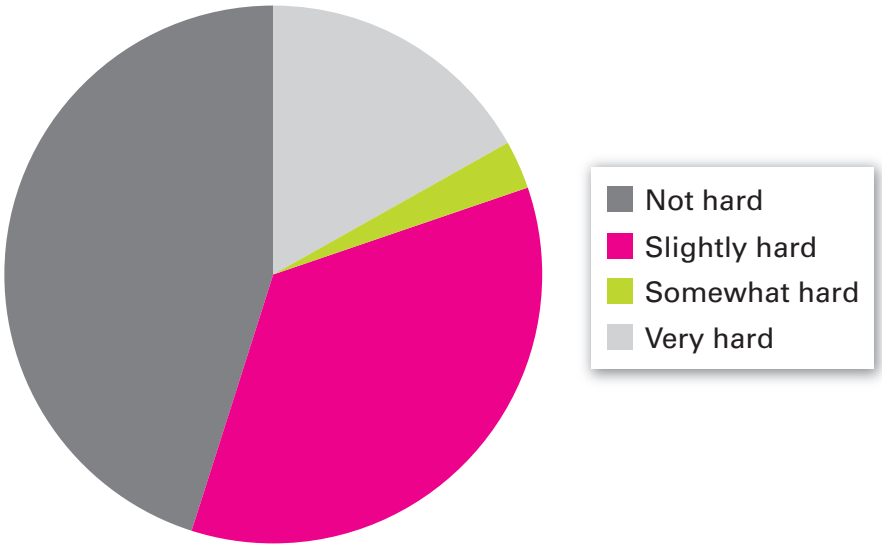

Figure 7: Women's answers (%) on how hard their working conditions are (n = 71).

The following disorders (**Figure 8**) were mentioned by the women, whereby multiple answers were possible:

- feeling too hot or too cold due to the harsh weather conditions (57.5 %);
- feeling sometimes body pain from the work (26 %);
- having pain from the heavy loads (19.2 %) which they have to carry, especially on their heads.

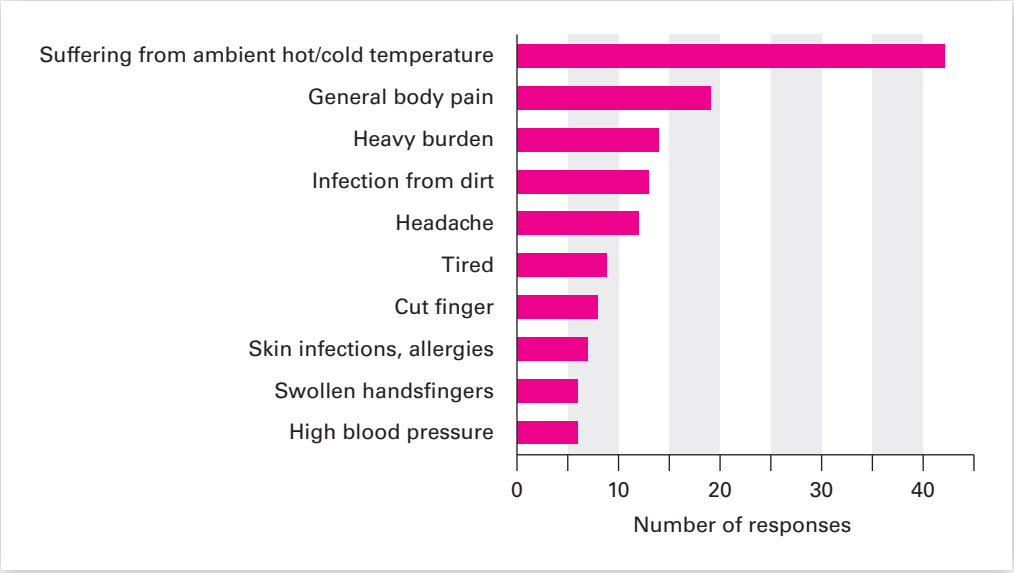

Figure 8: Number of women suffering from negative impacts of working conditions on their body.

Furthermore, some women mentioned that they got infections from the dirt and manure, mainly on the hands (17.8 %). Some were also suffering from headache (16.4 %) or got tired (12.3 %) from the work. In total, 8 women or their children had cut off at least one finger in the fodder cutting machine. This means that in more than 10 % of the 73 cases a person had lost a part of her body due to work. Furthermore, skin infections or allergic reactions were noticed by 7 women (9.6 %). Hands and fingers sometimes got swollen and some women got problems with their blood pressure (8.2 %). Additionally, a few women mentioned problems of breathing, coughing or asthmatic reactions, weakness and stress (each with 5.5 %).

In 87.7 % of the interviewed households, dungcakes were used as fuel, whereas only 8.2 % used gas to cook food. Women inhale much smoke while cooking if their stove is located in the house. From the women who cooked with dungcakes, 74.2 % were cooking in the open air area, while 10.6 % cooked inside the house in winter and outside in summer. Only 15.2 % were permanently cooking inside the house.

3.2 Outcomes of the group discussions

The first group discussion was held with the labourers. The initial task was to identify problems in daily work. The results are depicted in **Figure 9**:

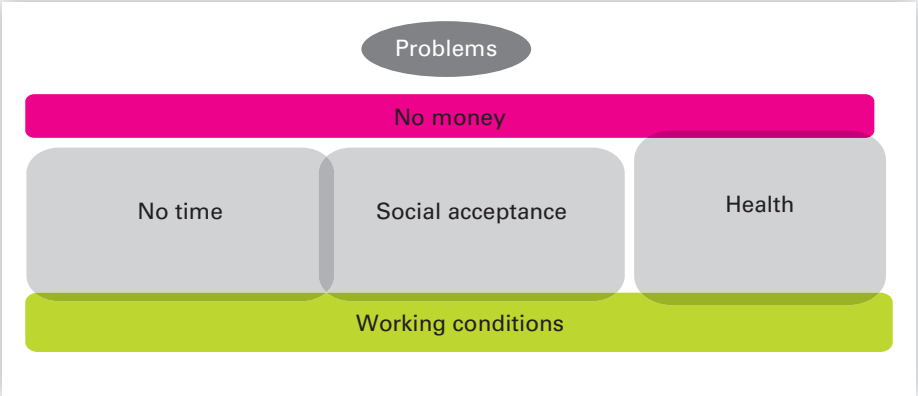

Figure 9: Main problems faced by female labourers.

Most problems were caused by the work and working conditions. Out of these a time problem, problems of social acceptance and health problems could be named as overall topics. The superior problem was poverty in general, especially the lack of cash income. The financial problem was directly linked to health conditions, because the workers were not able to pay for medical treatments. Furthermore, the lack of social acceptance was directly linked to the time problem, because the women were not able to join religious events or family gatherings as required by tradition.

In their daily life the female labourers get up very early - before sunrise at 3 or 4 a.m.. From then on they work all day on the farm until 6 or 7 p.m.. In between they have some breaks, for example, for breakfast from 8 to 9 a.m., in which they have to prepare food for their families. Some have one or two free hours at lunch time, which is the hottest period of the day, but several women have just to continue with their tasks.

Often the whole labouring family just lives in the stable of the farm owner. Therefore the women are often not free from work after the farm labour, but have to handle household chores. Food preparation in the traditional way, on a dungcake fire, takes at least 1.5 h. Housework also includes child-rearing activities and washing of clothes and dishes. The participants of the group discussion mentioned that working conditions are not easy. Most of them get very tired by the work and have no power for anything else after the working day is completed. One woman described her work as follows: "We are working like animals with animals!" (*GD1.labourer, Rec.GD1*). The biggest problem of the labourers referred to their health as affected by the weather conditions. Because of the conti-

nental climate the summers are very hot and only the early morning hours are suitable to work. On the contrary, the winters are cold and in the early morning hours it is uncomfortable to pump cold water or milk a buffalo. Subsequently, the labourers are getting ill or even get fever. Additionally, the women suffered under the heavy loads they have to carry. As they are carrying nearly everything in big bowls on their head (**Picture 2**), the weight especially of the fresh dung is very heavy and leads to body pain. Another health risk comes from dungcake preparation; the group explained that working with the manure makes them sick and very dirty.

Picture 2: Female labourer carrying manure

Picture 3: Woman sitting in smoke while cooking with dungcakes.

One health issue not directly related to the farm work but definitely a problem women are facing during housework is the smoke inhaled when using dungcakes as fuel, which makes them suffer from cough or breathing problems (**Picture 3**). The emission is especially high in winter when the water content of the dungcakes is higher than in summer and when more women cook inside the houses. In view of their packed daily schedule, the labourers concluded that time shortage is one of their main problems, and all agreed that they are suffering from this: due to the long working day they do not have enough time for housework, are too tired after work, have no time for social interactions with guest or relatives and they even do not get a day off for religious holidays or in case of illness. Social problems build up for the women due to their low social status of a farm labourer. The women also mentioned to suffer from the fact that they have to marry their daughters; this puts a high financial pressure on the families who often have to take a credit. It is not easy to find a husband of good social status for the daughters who are working all day with cow manure (**Picture 4**). The dirtiness of the work restricts the women furthermore in the exercise of their religion, since praying to Allah is only allowed clean, which is hardly possible on a normal day. Even on religious feasts which are governmental holidays, they are bound to the farm work.

Picture 4: Female labourer carrying manure

All women explained that they are short of money. The group members agreed to the statement of one woman: "we live from hand to mouth" and "if we do not have enough food we do not eat ourselves but only provide food to our children" (*GD1.labourer, Rec.GD1*). This quotation illustrates the extreme poverty of the labourers, whose income hardly covers their families' food demand. For clothes, shoes, education of children, electricity and even for the rent of a flat, the cash income is mostly too low. Some of the labourers were living on the farm where they were working, because they could not afford to live in an own / rented house, or their own house was too far from the place where they worked. Incommensurately the earnings from farm work were not enough to cover the living costs. In at least one case, the labouring family even had to pay for renting the house owned by the farmer. This woman claimed that "they pay us for our work and we pay them for rent" (*GD1.labourer, Rec.GD1*).

Cash income gets very important if a family member is ill. The bills for medicine, hospital or even the transport to medical facilities are very expensive, and the family mostly has to take a loan to cover treatment costs or the sick person has to suffer without medical treatment. As far as taking a credit was concerned, the women agreed that one should not take a credit from a bank, because of high interest rates. Rather, they borrowed money from a private person, like the farm owner, and committed themselves and the family members to work for the owner until the credit was paid back. The same situation can occur if the family needs money to marry the daughters.

As a summary statement on their problems the group agreed to one woman's statements: "It is not a good life for poor people because we do not have any facilities and we can not enjoy anything" (*GD1.labourer, Rec.GD1*).

The second group discussion took place with family workers who owned up to 6 buffaloes. The daily schedule of these women working on their own farms was comparable to the one of the labourers. Even though sometimes the families could afford to hire a labourer, so that the family workers did not have to clean the shed and prepare the dungcakes on their own, all women participating in the second group discussion had to manage the manure themselves and were not assisted by hired labourers. In addition to work on the farm and in the house there was the task of collecting fodder. Because of the small scale of the farms, the families normally did not own land and generally had a low cash income. They had to search for feed outside the living area, and for this, men and women went to cut grass and other plants for feeding purposes. One woman

explained how complicated it is for a small-scale farmer to pay the buffalo feed: "the fodder and other feed concentrates are very expensive, e.g. earlier a bag of khul [cotton seed cake] was about 500 Rs. but now it costs 1800–1900 Rs." (*GD2.owner, Rec.GD2*). In additional to the problem of high prices there is seasonal shortage of fodder, and sometimes, the women complained, they even do not eat but just feed the animals.

Similar to the female labourers, the female family workers complained about the following:

- work under harsh weather conditions;
- if a woman has a handicapped or ill relative, she has to work more to achieve the income for the family;
- heavy loads to carry, leading for example to back pain;
- toxic smoke and smell from cooking with dungcakes;
- dirt of manure which restricts the social and religious life and causes allergies.

In addition some women mentioned that they were suffering from depression.

In the peri-urban sector of Faisalabad one can find so called "cattle colonies" which were created by the government to keep the buffaloes out of the city centre. The women from these colonies complained that they are bound to live in these areas even if there are no facilities like schools and gas, but only poverty and pollution.

Since a buffalo costs around 150.000 Rs., the animals can be seen as an investment on the one hand, but are on the other hand very costly. If an animal dies this is a very big loss. The statement: "We strongly wish to have more animals, so that our income could be increased" (*GD2.owner, Rec.GD2*) was made repeatedly, but in all cases the families did not have enough money to increase their buffalo numbers. Furthermore, the treatment of a sick buffalo is costly and hardly affordable for most farmers. Sometimes there are no veterinary services available in the peri-urban areas and if doctors and medicine are available, the treatments are very expensive. One woman gave the following example: "Yesterday my buffalo was ill and I did not have money to buy the medicine. So I had to borrow money from neighbours, and I bought medicine for 2000 Rs." (*GD2.owner, Rec.GD2*).

If a buffalo gives birth, the women devote a lot of care of it because it is a valuable asset. Most of the milk is sold to earn some income and just a small quantity is kept for the family. The women discussed that milk from other farms is often mixed with water, but they do not add water to the milk. All of them agreed that it is better to produce own milk than buying adulterated milk, although "there is not much profit" (*GD2.owner, Rec.GD2*) from selling the milk. Furthermore, it is not profitable to process the milk and sell milk products, because the prices for goods like lassi and ghee are much lower than the input cost. Overall, the women complained that their expenses (for the buffaloes) are high, but the income is too low to make any profit: Animal feed for one buffalo costs about 500 Rs. per day and daily income from sold milk per buffalo is approximately 300 Rs..

4 Discussion and conclusions

4.1 Reflections on methodology

To conduct the research, a female translator was needed. The translator originated from one of the peri-urban communities, so that trust and respect between the interviewees and the researchers was established. Sometimes it was not possible to speak alone with a woman, because the interview took place in a common room and not behind closed doors. Still most of the time it was accepted that only female participants were wanted, but there were cases where a man answered the questions instead of letting the woman answer. This data was not used, because it was not sure that the respondent gave reliable information. Overall the women were very motivated and interested to join the interview, because they were glad that somebody was seriously listening to their problems.

During the interviews we noticed that some women could not count, tell us their age or estimate their work time. Even if they replied to questions related to the duration of work, one could not be sure that the number of working hours given was reflecting the real situation. The ILO (*Anker et al., 2002*) mentioned in "Measuring Decent Work with Statistical Indicators" that "in the case of self-response, there is a tendency to over-report hours of work by all categories of workers". Therefore an approach had to be found to realistically estimate the duration of working hours. This was time consuming but necessary to judge if the workload of the women was decent.

The determination of the payment of working women also proved to be a complicated issue. Most of the family workers did not receive in cash remunerations, so that it was not possible to directly evaluate value of their work. Female labourers received a huge variety of goods as payment, so that it was not also easy to assess the value of work in terms of payment. Moreover, the prices of goods used for remuneration are known to depend on the location. For example, prices for farm products decrease with increasing distance to the city centre.

Before it was possible to use PRM, it was necessary to train the translator to make her familiar with the research tools. The preparation of the two group discussions was time consuming because at least 5 women should join each round. For most of the women it was not easy to arrange a day off from work. One woman said "For today we worked very hard to finish our work on the farm quickly so that we can come here" (*GD1.labourer, Rec.GD1*). During the group discussions the women discussed openly and were not shy even if they did not know the other participants before.

4.2 Value of the work done by the women

To determine a measurement for value of work, one major approach is the labour theory of value (LTV). Historically, this theory has drawn on heterogeneous indicators to define the value. Classical economists Adam Smith (1776) and David Ricardo (1821) postulated that the value of work can be measured from the value of the created commodity, the average work time needed for its production, and by taking into account the use value as well as the exchange value with other commodities. The overall aim of the LTV is to determine a fair payment for the workers who are creating a value. Therefore, money or non-monetary goods should be used for an equitable reward of the value of the work. To judge if: **the accomplishments of female workers in dairy production units are adequately valued, indicators like payment, work time, use and exchange value of the product were analysed in the following.**

4.2.1 Value of work measured by payment

The value of work could not be correctly determined for the unpaid family workers, as they did not receive any cash or in kind payment for their work at the family farm. For that reason only the payment of female labourers can be discussed.

First of all it is obvious that the labouring women mostly were not getting paid in a monetary way, since "women seldom received any cash income from their participation as labour, as their husbands and male members of the family control the money earned from agriculture" (Rafia, 2005). The present results support this statement. From the labouring families working on buffalo farms, not even half received a monetary payment (38.5 %, n = 26) and only one female labourer received the money on her own. Referring to the three examples mentioned in the results part, the per capita income can be calculated as shown in Table 3: The monetary payment of labourers is between 0.33 US$ and 0.41 US$ per person per day. This is below the extreme poverty line of 1.25 US$ per capita per day as defined by the World Bank (*Nallari and Griffith, 2011*).

Since the women or other family members also received milk and dungcakes, these remunerations have to be included into the calculation, to determine the overall value of the remunerations. The amount of milk was calculated from the answers given in the interviews. The average of 1.5 litres per day for a labourer's family was given by two respondents (*I.Nr.3 with Rec.A5 and I.Nr.10 with Rec.A13*) and 2 litres per day by a third respondent (*I.Nr.37 with Rec.B6.*). These amounts were divided by the number of working people per family and multiplied by the average milk price to calculate the monetary value.

Table 3: Examples of three female labourer families income including monetary and non-monetary remunerations.

	Family 1	Family 2	Family 3
Working family members (n)	**4**	**5**	**3**
Payment per family, Rs. per year	**35,000**	**48,000**	**33,600**
Cash income per capita, Rs./d	25.0	26.6	31.1
Cash income per capita, €/d	0.26	0.27	0.32
Cash income per capita, US$/d	0.33	0.34	0.41
Milk received, l/d	**1.50**	**1.50**	**2.00**
Milk received per person, l/d	0.38	0.30	0.66
Milk value per person, Rs./d	21.32	17.06	37.53
Milk received per person, US$/d	0.28	0.23	0.50
Dung cakes received, n/d	**100**	**100**	**100**
Dc received per person, n/d	25.0	20.0	33.3
Dc value per person, Rs./d	25.0	20.0	33.3
Dc received per person, US$/d	0.33	0.27	0.44
Total income per person, US$/d	**0.94**	**0.84**	**1.35**

For the remuneration in dungcakes, no reliable numbers are available, so that the calculation was done by assuming an average dungcake payment of 100 dungcakes per day and a price of 1 Rs. per dungcake. Even if one includes the value of the non-monetary payments, like milk and dungcakes, it is difficult for a labourer to achieve a daily income of 1.25 US$ (per person 0.3–0.66 litres milk/day at an average neighbourhood-sales-price of 56.86 Rs. per litre, and 20–33.3 dungcakes per day). The total income would approximate 0.94 US$ in example 1, 0.84 US$ in example 2 and 1.35 US$ in example 3; only in the last case the income is above the extreme poverty line but still below the poverty line (daily income per capita less than 2.25 US$) defined by the World Bank (Nallari and Griffith, 2011). It has to be noted that the calculations only consider the income of the working family members and do not include members who are not working, for example children and old people.

The insufficient cash income is definitely the main problem for the labourers, so that they have to sell the milk and the dungcakes they are receiving, or they even have to take a loan. Most of the time credits are taken to cover hospital bills or to finance the wedding of children. As health insurance is not common or too expensive in Pakistan and especially not affordable for poor people or small scale farmers, medical treatments are very costly.

One of the interviewees recalled how they got into a big debt circle: First of all the family borrowed 500000 Rs. from a farm owner. They agreed on working as long on the farm as the money was returned. Her son was also working on the farm until the 14 year old child lost his hand in the fodder cutting machine. When the accident happened the family had to borrow money again to pay the hospital. Altogether the family had to pay back 700000 Rs. while they received 2800 Rs. payment every month as well as 2 litres of milk per day for their farm work (family 3 from the above example). Since their earnings hardly cover their daily living expenses, the family is not able at all to pay back the credit, and all family members, including the children, are bound to work on that farm. The woman said "When we have returned the 7 lakh[2] we will get freedom again" (*I.Nr.37 with Rec.B6*). Yet, they have no alternative to acquire any capital, since the workers are not allowed to keep their own animals in that place and the only son is not able to work as a labourer, because he lost one hand (*I.Nr 37., Rec.B6*). Although this example shows a singular fate, there are many more cases of poor families that have to borrow money from farm owners and get bound to work on the farm for their and even their children's whole lives. This relationship between employee and employer shows characteristics of forced labour. In such cases "the elimination of all forms of forced or compulsory labour" (*ILO and ASEAN, 2005*) is violated, which will further be discussed below.

The women reported that discussions with the owners about an increased salary mostly end like following example: "Our income is very less, we ask the [farm] owners to increase the income but they say it is sufficient for our work." Further the owner argues that, if they are not satisfied they "can leave this farm and work on any other farm" (*GD1.labourer, Rec.GD1*). This example shows that the labourers are not really forced to work on a particular farm, but often there is no alternative to achieve a better or even a fair payment.

4.2.2 Value of work measured by the outputs

The products milk and dungcakes are the main outputs of female work on the dairy farms. Hence, the milk price can be seen as the **value of the produced commodity** and the **value in exchange**. There are two ways to benefit from the produced buffalo milk. One is the opportunity to sell the milk and receive in return a cash income. The other strategy is to use the milk for subsistence, thus saving expenditures on food. If milk is used for home consumption the value of exchange of the milk is less important than the **value in use**.

2 1 lakh = 100000 Rs.

The family farms that took part in the study could either be classified as **subsistence orientated** or **subsistence market orientated** farms. The first category sells less than 10 % of the production value to the market, the second category sells between 10 and 90 % of the production value to the market (*Doppler, 1991*). The interviewed small scale farmers often combined the two approaches of home consumption and marketing of the milk, depending on their financial situation. If short in money "We sell more milk and keep a very small amount in our house for our own consumption, to get some money" (*GD2.owner, Rec.GD2*). On the other hand the income from milk is hardly covering the feed costs, so that it is often not profitable to sell the milk. From this point of view a subsistence milk production makes more sense.

As mentioned in the results, the processing of milk is not a suitable solution to increase the income, because the butter, ghee and curd prices are too low. In the second group discussion the women said: "We do not produce butter and other milk products like *lassi* because we sell more milk to get the money we need" (*GD2.owner, Rec.GD2*). The women furthermore stated that the return from processed products is not even covering the material inputs. If one includes the value of work time to produce, for example, butter, the equation gets even more imbalanced.

By tradition, Pakistani people consume a lot of milk; for many people milk is the most important diet ingredient in terms of covering the protein and fat requirements, and is therefore necessary for good nutrition. The women taking part in this study were mostly taking care of family health and nutrition of family members and knew very well about the value of milk.

They also knew about the importance of milk for their body condition as some of the women mentioned: "We take *chai* 4–5 times a day, because we can not work without *chai*" (*GD1.labourer, Rec.GD1*), which means that they feel not to have enough energy and power to work hard without the black tea cooked in buffalo milk.

If one takes into account how much time is needed to prepare the dungcakes, their value should be high because it is very time intensive to collect and transport the manure, to shape it and put it on the wall for drying. The value in exchange is also very high for two reasons: Firstly, nearly everybody needs dungcakes for cooking purposes, since the price for gas is, for many people and especially for the poor, not affordable. Secondly, the dirty working conditions of dungcake preparation make it more comfortable for people with better income to buy them than to prepare them on their own.

As discussed above, female family workers are sharing with their families the high costs of feeding the animals and caring for their health. Rising costs of inputs such as feeds and medicine are due to inflation, global crises and the additional tragic circumstances of the flood in south Pakistan in 2010. The Consumer Price Index (CPI) that includes especially food prices increased from 11.5 % in July-August 2009-10 to 14.1 % in period July-August 2010–11 (*Khan, 2011*). But not only monetary input cost are hardly affordable, the care of the animals is also very time intensive. Referring to Hagmann's (*2011*) economic analysis, gross margins were negative for 29 % of the farms that took part in the present study (n = 55). Among the women who were working on their own farm, 61.3 % (n = 31) had a farm income of less than 1.25 US$ per person per day, and thus were below the extreme poverty line. Table 4 compares the household income to the World Bank definition of poverty and to the household head's own assessment (*Hagmann, 2011*). Yet, the farm income might only be part of total household income, because additional income might be earned by other businesses and jobs.

Table 4: Wealth groups of studied family farms households from own assessment and according to the definition of the World Bank (Nallari and Griffith, 2011), using data from Hagmann (2011).

Wealth group	Own prediction (n = 33)*	World Bank standards (n = 31)
Extremly poor	0	19
Poor	9	4
Well off	23	8
Rich	1	0

* prediction by household head, data by Hagmann

4.2.3 Conclusions on the value of work

The value of women's work measured in monetary terms can definitely be called undervalued, for both the female labourer and the women owning some buffaloes. Reasons for the inadequate appreciation of women's work are for instance the fact that they do not obtain a payment for the work in the domestic environment or on the own farm.

The work of the buffalo owning women is undervalued in monetary terms because they are working as unpaid family labourers, whereby overall the financial output from the livestock unit is lower than the needed inputs. Women who owned buffaloes only received little income from selling milk and dungcakes, which was lower than input costs for feed and medicine. Increasing animal number seems to lead to even more problems, since there is not enough feed available. The alternative of processing the milk before selling is also not profitable and just practised for home consumption.

Economically, small scale peri-urban buffalo units seem to be inefficient. Still, they play an important role for subsistence milk production of the involved households.
In the case of labourers, their work is undervalued because they do not get paid themselves - only male family members receive one salary even if all women of the family are working as well. Moreover, the female labourers only receive an undervalued amount of dungcakes and milk.

Table 5: Different values of work depending on status of the worker and regarding the end product.

	Labourer		Owner	
	Milk	Dungcake	Milk	Dungcake
Use value	high value for nutrition	high value as fuel	high value for nutrition	high value as fuel
Exchange value	–	with neighbours		–
Economic value (price)	–	undervalued, because of low price		
Time value	–	undervalued, since very time intensive		

Table 5 visualises the different products and their values in terms of use, exchange, price and time. The values are not same for female labourers and female buffalo owners. Dungcakes and milk are of high value use for all working women. The exchange value of dungcakes is higher for the labourers because they often receive them as payment and can resell them. The owner mostly only prepares as much dungcakes as she needs for the household and dumps the rest of the manure or freely gives to other women to prepare dungcakes. Contrary to this, milk does not have an exchange value for the labourers, because they only get enough for their family. But milk has a high exchange value for the female buffalo owners, because they have enough to sell or exchange in the neighbourhood. Overall, the prices of dungcakes and milk are too low to cover labour costs, since the work invested to produce these two goods (as remuneration, or as own production) is very time consuming.

Given the low income of all working women on peri-urban buffalo farms, it can be concluded that most of them are living in poverty, and have a strong tendency towards subsistence economies where the use value of commodities is higher than their monetary value.

4.3 Working conditions

To answer the question if the **working conditions for female workers in dairy production units are adequate** or not, one has to define the indicators to measure decent work. The main charters have already been introduced in Chapter 1.1 from which indicators have to be derived.

The ILO has published a country program of how to improve the decency of work in Pakistan (Government of Pakistan and ILO, 2008) in which the following indicators are used to judge decency: (1) Employment opportunities, (2) Unacceptability of work, (3) Adequate earnings and productive work, (4) Decent hours, (5) Stability and security of work, (6) Combining work and family life, (7) Fair treatment in employment, (8) Safe work environment, (9) Social protection, (10) Social dialogue and workplace relations.

The present paper is not only evaluating the situation of labourers but includes also women who are self-employed on their own farm. Therefore focus of the evaluation of working conditions is on the following factors: payment, to measure if earnings are adequate; working hours; impact of work on the body and safety at work; social protection; force to work, self-determination and gender aspects.

4.3.1 Decency measured by income

The most important points regarding the earnings of working women on peri-urban buffalo farms have already been evaluated in Chapter 4.2.1. Still, payment is an important factor to measure decency and will briefly be discussed in order to conclude if the payment is decent.

An adequate income is given if persons who are working full-time can "ensure the economic well-being of themselves and their households" (Anker et al., 2002), which means that at least two persons should be able to cover their daily living costs from one job. The ILO names the minimum income of 2.25US$ a day as decent to insure a life above the poverty line (*Anker et al., 2002*). The calculation in Chapter 4.2.1, Table 3, illustrates that the income of female labourers and their families does not reach this threshold and cannot be classified as decent.

In terms of unpaid family labour and self-employment, the decency measurement cannot be based on earning, but the whole farm income has to be divided by the number of persons living from this. Table 4 shows that only 25.8 % (n = 31) of the studied farms are able to reap an income from their farm activities that is higher than 2.25 US$ per person per day. Hagmann (*2011*) explicitly stated that the income from agricultural products is not the only income of the families. Often the men are earning additional wages from other businesses. The average salary of employees in Pakistan was 4088 Rs. per month in the year 2003–04. On average, this earning has to feed six family members (*Arif, 2007*) and leads to an income of 22.71 Rs. or 0.24 US$ per day per person. This again is below the extreme poverty line, and in rural areas incomes are even lower (*Arif, 2007*).

4.3.2 Decency measured by work hours

Decency of work should include a measurement of the daily work time. To determine the duration of work one has to clearly distinguish work and leisure time. As already mentioned, work time includes all on farm activities as well as housework in the present case.

The women who were taking part in the group discussions agreed on the statement: "We work from morning to evening" (*GD1.labourer, Rec.GD1*) and "we work the whole day [...] because we do not have any other source of income" (*GD2.owner, Rec.GD2*). Some women did not even have 40 minutes of time to participate in the survey.

The ILO Convention No. 1 defines that an adequate number of working hours per week should not exceed 48 h, calculated as 8 h per day during 6 days week (*ILO, 2012*). Above this duration, work time is declared as "excessive hours of work" (more than 49 h per week) and "extreme hours of work" (more than 59 h per week). A high frequency of excessive hours indicates that the payment rate per hour is not adequate and that the working conditions are not decent (*Anker et al., 2002*).

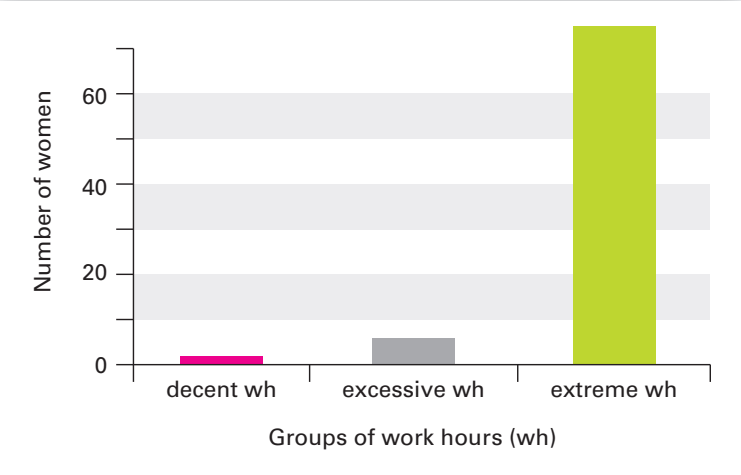

Figure 10: Number of women with decent hours of work (t≤49h), excessive hours of work (49<t≤59h) and extreme hours of work (59h<t) per week, n=72.

The majority of the interviewed women worked twice the time defined as decent. As shown in Figure 10, only 2.8% of the interviewed women (n=72) worked a decent number of hours. Compared to this 8.3% of the women were doing excessive hours of work and 88.9% had to cope with extreme hours of work.

The reason is that each working day is longer than 8 hours, and that the women work 7 days a week and do not have a day off. In consequence, there is no time to rest and recover from the hard work. Additionally, the women cannot practice their religion, even though it is common in the Islamic Republic of Pakistan to have some free time on Friday afternoon and on Sunday to worship. One woman claimed in the group discussion: "We do not have holiday on Sunday as well as on Eid [Muslim holiday] and on other special occasions" (*GD1.labourer, Rec.GD1*).

The overload of working hours leads to a decline of productivity, because of declining mental concentration and lack of time to recover; it also leads to health problems due to distress and unsafe situations at the work place, and additionally leads to an imbalance between care for the family and farm work.

If a balanced combination of work and family life is impossible, this is an indecent working situation especially for women. Many studies showed that the problem of a long working day for women lays in their additional status as caregivers. As Nussbaum (2003) mentions "most of the care-giving for (such) dependents [infants, old people, disabled persons ...] is done by women, often without any public recognition that it is work. The time spent on care-giving disables women from any other functions of life [...]".

In terms of care for children this is the normal status quo, also for Pakistani women. Additional difficulties that some of the women had to deal with were illness of family members, which increased the workload of the woman. Two statements from the group discussions are illustrating this: "My husband is ill and I am working all alone" and "My son is abnormal and my husband also ill. I have to do all the work" (*GD2.owner, Rec.GD2*).

In general, self-employed people tend to work longer than labourers (Anker et al., 2002). In the case of the women working on buffalo farms this cannot be confirmed as the results show that female labourers were working on average 12.4 h per day, while female family workers had daily working hours of about 12.0 h. Of course there are also cases where women are not working so long; for these cases different reasons can be found. Some of the women working on their own farm did not prepare dungcakes because they had enough money to pay a labourer to do it, or they had gas facilities and were not bound to dung as fuel. Others did not have to cook or take care of children by themselves because the housework was done by other women in the family. Still, the trend of an overload of work for all interviewed women was evident.

4.3.3 Decency measured by impact on body condition and safety at work

Except for the housework, work is mainly done outside. Only feeding, watering and cleaning the animals is sometimes done in a sheltered place. Hence women's workplace is often exposed to all weather conditions. Temperatures can range from –1°C in the winter mornings, when women have to start cooking at the outdoor cooking site. Also watering the animals by using hand pumps is quite hard in the cold season. In summer the temperatures reach up to 50 °C and still dungcakes have to be prepared in open space without shade during lunchtime. Consequently, women experience problems with blood pressure or temperature stress due to temperature extremes.

Carrying heavy loads causes pain in the back as well as in arms and legs, especially if there are no appropriated tools like wheelbarrows available. Throughout the day, women carry feed and water to the stable and in return carry manure to the outside dumping places. A woman mentioned in the group discussion "There are some problems in my backbone and I feel pain, but I still carry heavy loads of dung and make dungcakes, which is very difficult" (*GD2.owner, Rec.GD2*). The dungcake preparation with bare hands is furthermore causing infections on the hands of the women, especially if there are already injuries present.

It is complicated to increase decency in this working field. To use gloves for work with cow manure would increase input costs. Additionally, environmental problems could occur, because there is no solution of how to handle garbage in peri-urban areas. Most of the litter is just dumped anywhere and the question of how to handle used gloves would rise. Asked for ideas for improvement of the hygienic conditions, one woman explained that a concrete floor would make it easier to work especially during the rainy season when the floor is getting very muddy and it would be safer to carry heavy loads from one place to another.

In terms of harshness of work, some of the women's tasks were of simple nature. Still they might consume a lot of time, as for instance cooking of food. Yet, the stress factor is not high as long as there is no time pressure. Regarding the housework, the women often do more than one task at a time, for example child-rearing activities are a permanent duty.

The housework also has impacts on the women's body condition. The burning of dung-cakes for cooking purposes takes traditionally place in an open stove and involves incomplete combustion of organic matter (*Smith, 1993*). Emission of smoke is the consequence. Women are inhaling this while preparing food and suffer from coughing and asthmatic reactions or feel headache after cooking. reasons for this are damages at the bronchiolar epithelium or acute respiratory infections. Being exposed to the smoke may not only "result in various forms of respiratory infections", but may furthermore lead to an increase of "infant and prenatal mortality, pulmonary tuberculosis, nasopharyngeal and laryngeal cancer, cataract, etc." (*Lal et al., 2011*). This is noticed by the women as they feel "Problems of smoke in the eyes, feeling allergy in eyes, getting tears in the eyes and having also problems of breathing" (*GD2.owner, Rec.GD2*). Generally, depressions and distress do occur but this was not possible to measure or diagnose.

4.3.4 Decency measured by work safety

As stated in the Occupational Safety and Health Convention Nr.155 (*ILO, 1981*), work-related "accidents and injuries" should be prevented to insure a decent work place. The convention has not been signed by the Pakistani government yet. Additionally to this, occupational accidents are rarely recorded so that no data about occupational accidents in the Pakistani agricultural sector are available (*Hämäläinen et al., 2009*). The present study showed especially one possible source of risk that has to be discussed. In 11 % cases either the interviewee herself or a family member had cut a hand or a finger in the fodder cutting machine. This is definitely a risk that should be taken care of to reduce accidents, no matter if the labourers or the owners are working with the machine. Precaution, awareness, training and security machinery should be installed to minimise the risk of loosing fingers or whole hands while chopping feed for the animals.

4.3.5 Decency measured by social protection

The only social protection for the female labourers is the offer of food and accommodation on farm. In most cases the labourers are living in a kind of stable, which gives them shelter with a cooking place. Some of them also receive basic needs like food and clothing. Despite the hard working conditions and their negative impacts on the health status of the working women, there is no social security like health insurance or pension. Furthermore, none of the interviewed woman had a financial protection except her wedding contract. The wedding contract often fixes arrangements of financial compensation in case of elementary changes in the marital status (divorce, marriage of another wife). In terms of accidents on the farm, the workers, no matter if self-employed or hired, have to pay the medical treatments on their own. If they do not have enough money they have to borrow it, as illustrated in Chapter 4.2.1. If there is no money for treatments, the person has to suffer from the disease, which is illustrated by two cases:

In the first example, a labourer woman aged about 70 years worked with her husband on a farm to repay money they had borrowed for the wedding of the son. She had broken her hand at work and did not have any money to pay a doctor or at least to buy some medicine (*I.Nr.26, Rec.A33*).

The second example is about a girl aged 14 years, member of the family 2 in Table 3 (*I.Nr.10, Rec.A13*). She got fatally poisoned by some agrochemicals because the family did not have the money to pay for a proper medical treatment. The farm owner tried to help by paying the transport to a governmental hospital, where basic treatments are for free. In the end it could not been proven that the girl's intoxication was related to her working conditions, but she had been a labourer living with her family in a stable on the farm, and the incident was definitely related to her poor living conditions.

As a general observation, there is no law that obliges a farm owner to take social care for the labourers unless he employs more than 10 persons (*Arif, 2007*). Furthermore, the small scale farms are mostly run by self-employed family members and have therefore also no social and monetary securities.

As far as labourers are concerned, the ILO Conventions call for "Social dialogue" and especially for the "Right to form unions". Even if this was ratified by Pakistan it would be impossible for farm labourers to start an association or a group for collective bargaining. In the group discussion this idea came from the women as a possible solution to improve their situation: They concluded that they should raise their voices collectively and do something together to pressure the farm owners to pay more. But they saw serious difficulties because they do not know any labour union, farmer or women association. This does not mean that there are no associations existing but just that the women have not heard about them. By themselves they thought that they could force the farm

owner to pay more if they stopped working for too low payment. But they don't do like this because they know "if we leave the farm job, any other labourer will come to do this job". Just in case "all labourers are not working, the owners have no option and then they will increase the payment" (*GD1.labourer, Rec.GD1*). The discussion ended with the statement that it is very difficult to gather all the labourers. In addition, the farm owners argue "leave the job if you think that the payment is too low, we can do it ourselves" (*GD1.labourer, Rec.GD1*). Finally, the labouring women have no other alternative and concluded that it is better to work hard and get at least the necessities like dungcakes, milk and some cash.

Analysing not only the labourers' situation but also the farmers' situation, one has to emphasize that most of the owners do not have the chance to pay more to the labourers, because their income per person is also too low (Chapter 4.2.2). **Table 6** depicts the wealth groups of the farms which took part in the study of Hagmann (*2011*) as well as in this study, and on which now labouring women were interviewed. The number of farms in the column "Own assessment" differs from the number of farms in the World Bank column because total farm income was not available in all cases.

Table 6: Wealth groups of households employing female labourers: farmers' own assessment and assessment according to the definition of the World Bank (WB) (Nallari and Griffith, 2011.

Farms employing female labourer	own assessment (n=22)*	World Bank standards (n=20)
Extremly poor	0	12
Poor	4	4
Well off	14	4
Rich	4	0

* assessment by household head, data from Hagmann and Tariq (2009)

The number of farms in the column "self- assessment" differs from the number of farms in the World Bank column because total farm income was not available.

The result shows that most of the farmers (81.8 %, n=22) would not see themselves as poor. But based on the overall farm income, 80 % (n=20) of the farm owners can be declared as poor by World Bank standards. Due to this, most farm owners are not able to pay adequate salaries to their labourers.

4.3.6 Decency measured by forced work and alternatives

Forced work is defined by the ILO (1930) as slave labour or work to which labourers are bonded, so that the working "person has not offered himself/herself voluntarily". Referring to the ILO this can be clarified as "unacceptable work" and is therefore not decent.

As Pakistan has singed the Abolition of Forced Labour Convention (*C29 & C105*), it is illegal to force people to work. Of course people know that forcing people to work is illegal, so force might occur in a hidden way making it difficult to measure or prove it. The given examples of indebted families are close to the situation of forced work. On the one hand they have a kind of oral contract with the farm owner to repay the money, on the other hand the bondage to the farm and the force to work there is very high. It is not clear what would happen if the family would decide to just leave the farm. Yet, the social pressure is so high that this possibility has to be rejected. Further, these families have no opportunities to repay the credit and to get free from the farm ever again. They also do not see a chance to earn more money in a different job. Combined with the fact that there is no cash available to invest into a new business, alternatives are rare. In the end it is obvious, no matter if the work can be called forced work or not, that these kinds of working conditions are not decent at all.

Forces might occur due to the fact that family life is organised in a traditional way. Parents have to arrange the marriages of their children, where a dowry has to be given not only by the parents of the bride, but also by the groom's family (*Zia, 1998*). Money is also needed to pay the expensive weddings and this is not easily affordable as one girl said: "My sister and I are very young and at the age of marriage, but we do not have money to manage the marriage expenses" (*GD1.labourer, Rec.GD1*). All of the interviewed women were somehow under pressure to save, collect or borrow and repay this huge amount of money for wedding purposes. Apart from the financial burden for the parents, one woman explained her worries: "My daughters are young and they are also beautiful and educated, but we have animals in our home. So when any family visits us to see my daughters for marriage, they go back because of our dirty house with the animals and they refuse" (*GD2.owner, Rec.GD2*). The statement shows that not only the burden of the weddings is a pressure from society, but also that families involved in animal husbandry are getting discriminated against. The dirty living conditions are not tolerated by richer persons. To grant their children a better future, the women are facing a high pressure to earn money, and because of this, they try to work even harder.

4.3.7 Decency measured by the grade of self-determination and gender aspects

The results of the survey showed that most of the women are proud of their work and like it. It is questionable how reliable these answers are and to what extent the women just adapted to the situation in which they are, not able to change anything.

A theory of Nussbaum (*2003*) is that women tend to accept and adjust "… their expectations to a, from society antecedent, lower social status" so that they do not think that alternatives to the status quo are possible at all. The statement "we do not have any alternatives", which was made by many study participants, shows that most of them have adopted a passive dependants modus. Often the women focussed on the little status they had and explained in the interviews that they were proud to work and that their work was important to improve the financial situation of the family. Especially the buffalo owning women were proud of having their own business and income due to this. As the ILO claims that decency of work should include the freedom to express concerns and to take part in decision making processes that are affecting the life of the women, the self-employed women should be free at least to participate in farm management decisions as well as in financial decisions.

Referring to the emancipatory part of the questionnaire, women do play a big role in managing the household money. Still it can be assumed from the qualitative results that important investment decisions are always taken by men. This is also underlined by the fact that men are in charge of animal trade. It can thus be concluded that not only working tasks are divided by gender but also the family budget is theoretically split into the normal household cash desk that is taken care of by women, and into the savings and business money for which the men are responsible. Depending on the financial status of the family, one part or the other can contain the higher amount. In poor households, the saved capital and the capital for investment tends to be lower than the budget for the daily living expenses. The question if women then take on a higher responsibility in money decision processes than in richer families cannot be answered from the results of this study. However, Mumtaz (*2007*) noticed that poor women tend to be excluded from decision processes and bound to their domestic activities.

Generally, women in agriculture face a gender gap due to a limited access to input factors and resources like start-up capital, land ownership, technologies, extension services etc.. Due to this, women have fewer opportunities to adopt new technologies or to optimise farm management, which results in a lower economic productivity compared to men (*FAO, 2011b; Anker et al., 2002*).

4.3.8 Decency measured by equality of payment

In terms of monetary payment, NGOs claim that the wage of female employees in Pakistan is only 59 % of the salary of males, with a trend of increasing gap (Arif, 2007). The results of the present interviews showed that labouring women generally do not get paid money. Only one out of 26 labourers got directly paid for her work on a dairy farm. This makes 3.9 % whereas 97.7 % of the male labourers got paid between 2,000 and 8,000 Rs. per month and person (*Hagmann, 2011*). The only woman who got a salary received only half of the minimum amount given to a male labourer (1.000 Rs. per month). In the study of Hagmann (*2010*), just one worker received non-monetary commodities as payment. Furthermore, 60.5 % of the male labourers in Hagmann's study received meals in addition to their wages, while in the present study only 16.7 % of the female labourers got food (see Tables 1 and 2). Besides, 14 % of the men also received some milk (*Hagmann, 2010*), as compared to 53.3 % of the women. Regarding the claim for labour rights, such as equal payment for equal work (*UDHR, 1948; ILO, 2012*), one has to conclude that this is not realized. While a male labourer who has the job to clean the shed definitely gets paid for his on farm activity, a labouring woman mostly does not receive money, or not the same amount, for the same work. Still this is complicated to measure, because men rarely do the same work as women. To answer the question of equal payment, one must take into account that most work in Pakistan is gender-specific. It seems that female work is per se less paid compared to male work. This could mean that also men would receive an equally low payment for work which is normally done by women. In addition, and contrary to the labourers' work, work of female family workers is not possible to value in monetary terms because all labour is resulting in the creation of value which is the product of the own farm. In the economic survey of Pakistan 2011 it was stated that 66.3 % of working women are working as "unpaid family helpers" (Bibi, 2011). On the other side just 18.7 % of the men are unpaid family labourers. Overall, the remuneration of female workers cannot be judged as a "fair payment". Even if one would assume that the women work 6 h on the farm and the other 6 h in the house, the payment for the farm work would still be too low.

4.3.9 Conclusion: Is female farm work decent?

The women's working conditions and the decency of work have been assessed by indicators defined by international institutions like UN and ILO. According to these criteria, adequate payment of working women in peri-urban dairy units in Faisalabad does not exist if one considers their remunerations. The income of female farm workers is low, even through the determination of the value of non-monetary remunerations is difficult.

The comparison of working hours with ILO standards (*Anker et al., 2002*) showed that nearly all women taking part in this study had to cope with "extreme hours of work". With an average of 12.1 h per day the workload is so high that the women are very restricted in their lives and not able to have leisure time or to practice their religion. The number of working hours is also very high compared to other studies, because in the present study housework was included in work, whereas in other calculations housework was often not accounted for (*Nussbaum, 2003*).

The impact of work on the body condition of women has been discussed. Especially the use of the fodder cutting machine can be dangerous and this has to be improved. Not only from farm work, but also from housework women tend to suffer under their working conditions, for example by inhaling the smoke of burning dungcakes.

Social protection is missing completely. Women (as well as men) do not have any security even if they are working as a farm labourer. This even goes to the extent that a medical treatment of an injury that happened during work has to be paid by the labourers themselves.

The next critical point is the occurrence of forced work. Overall, no direct use of force has been detected, but bound labour definitely exists. Bounded families have to work on farm until they have returned a credit, whereby at the same time the payment is hardly enough to cover the daily expenses. Even next-generation family members can then be bound to work for the farm owner.

In terms of self-determination, women do not have any choice to work on a farm or not, because there are no alternative jobs available. In their working areas, such as taking care of children and household, and preparation of dungcakes, women are free to do everything as they like. But important decisions regarding the buffaloes are often not part of their responsibility. Furthermore, women are only partly involved in the financial decisions of their families, mainly those concerning the household, whereas farm management decisions are often the task of the male household head. Overall, the working conditions of women, both hired and family workers, in peri-urban buffalo units cannot be defined as decent.

The "Pakistan Decent Work Country Programme" argues that even if it is planed to increase decency, the needed institutions such as legal mechanisms to support the strategy are missing. There is a gap between conventions which were ratified and the national legislation to implement these rules (*Anker et al., 2002*).

5 Outlook on women's working conditions in Faisalabad's dairy sector

5.1 Pollution and poverty

The future most likely will see an increase of people living around the city of Faisalabad due to the increasing urbanisation and rapidly growing population (City District Government of Faisalabad, 2012). Consequently more dairy animals will be kept around the city to supply milk and meat, and especially to provide income to the families (*Habib et al., 2007*). This will probably result in an even higher pollution due to human and animal wastes beyond what is presently the case.

Picture 5: Pollution due to buffalo manure deposited next to a water body.

While conducting the study it was often observed that cattle and buffalo dung has been taken out of the stables to clean the sheds of the animals, but the manure was just dumped outside the farm yard or thrown across the wall of the farm, often next to a water body (**Picture 5**). Referring to the survey, 53.4 % of the women knew that pollution due to animals exists.

Due to the fact that most families do not own land, most of the small scale buffalo farms are keeping their animals just in their stable or on the street in front of their houses. That a majority of the peri-urban dairy households do not own land was also proven by Hagmann (2011), who found that 62.1 % of the farmers were landless. This leads to an imbalanced ratio between animals and agricultural area, and a very high number of livestock per unit of area. Out of this not only the problem of pollution occurs but also a shortfall of supply of animal feed, because there is limited cropland to meet the nutritional demands for the large animal population in the peri-urban areas. Still, an increase of the number of buffaloes is much wanted by the women, they would even take loans to buy more animals.

Poverty in peri-urban areas comes along with a lack of infrastructure like schools, hospitals, availability of clean drinking water and a missing sewage system (**Picture 6**) "which undermines their [peri-urban dwellers] capabilities, limit their opportunities to secure employment, resulting in imprisonment of vicious cycle of poverty" (*Siddiqui et al., 2002*).

Picture 6: Washing of clothes and buffalo in an irrigation channel

Economic growth is often seen as the most important way to increase human well-being and decrease poverty. The FAO (2011b) states that better access to markets should increase the income of poor agricultural people, and an improved farm management will change the situation for the better. But as already mentioned, such possibilities are very limited in peri-urban areas.

During the study it became very clear that women and their working conditions are neglected not only by the governmental institutes but also by NGOs. The peri-urban areas are neither supported by urban poverty alleviation projects, nor by the rural area investigations. Because they are at the outskirts of the city, no institution feels responsible to improve the living conditions of poor people in these areas.

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Figures

Tables and pictures

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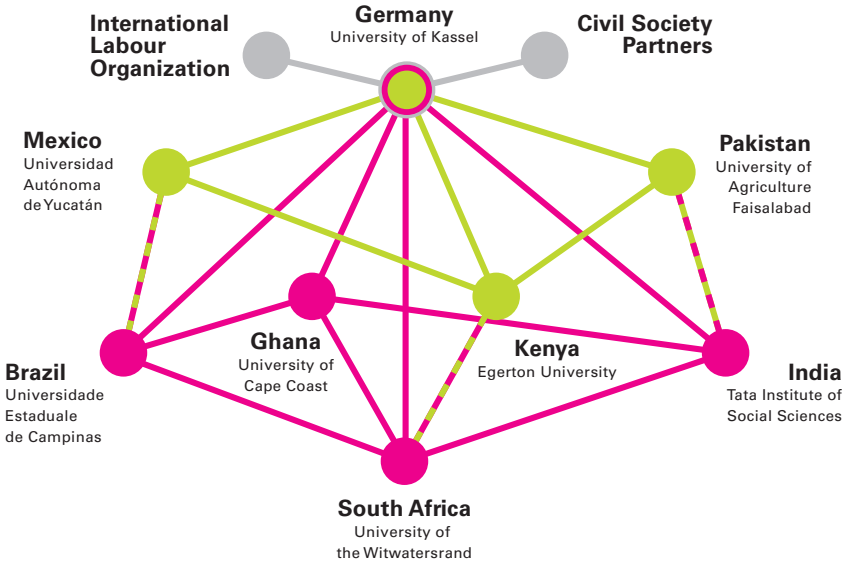

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