

# A STUDY OF THE ROLE OF WOMEN IN THE PIG SECTOR IN KAILALI & DHANKUTA DISTRICTS, NEPAL



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## 1. Background

Samarth-NMDP is a five year, UK Aid-funded market development programme implemented by Adam Smith International, The Springfield Centre and Swiss Contact. The programme aims to increase incomes of 300,000 smallholder farmers and small-scale entrepreneurs through a Making Markets Work for the Poor (M4P) approach<sup>1</sup>. The programme defines poverty, and its target groups, as those farmers and small-scale entrepreneurs living on less than US\$2.50 a day<sup>2</sup>.

The M4P approach is different from traditional poverty-reduction approaches as interventions are not carried out directly with beneficiaries, i.e. poor farmers and entrepreneurs. Instead, Samarth-NMDP acts as a facilitator outside the market system to influence market players inside the system, to strengthen the functioning of the market in favour of the poor. In M4P, the challenge is to unlock and develop the incentives and capacities of public, private and/or civil society actors to target new market segments, i.e. poor and disadvantaged people.

The M4P framework is designed to impact 'the poor', but poor people are not homogenous. Therefore understanding and unpacking 'the poor' is imperative for all M4P programmes so that they can be adequately targeted. This means identifying distinctions in the socio-economic and cultural position of men and women, different castes or ethnicities, or between those of different geographic locations, as well as when and where they face additional barriers to markets<sup>3</sup>.

The roles of the poor, and the specifics of inclusion and exclusion varies by sector. Samarth-NMDP works in ten rural sectors: Dairy, Pigs, Fish, Livestock Feed, Ginger, Vegetables, Crop Protection, Mechanization, Media and Tourism. This research examines the role of women in the Pig sector in Nepal by looking at the sector in Kailali District, Far-West region and Dhankuta District in the Eastern region (see map, Figure 2).

## 2. The Pig Sector in Nepal

The pig sector in Nepal is widespread and mainly characterized by small-scale, mixed farms. Pig farming is dominated by small household (HH) production units of 1-2 pigs, which accounted for 86% (464,200 HH) of all households raising pigs in 2011 (see Figure 1 below). Pork meat serves to meet socio-religious obligations and also brings additional income to rural, peri-urban and urban families.

Production is typically low-input low-output, using unimproved breeds. The most common sources of pig feed are food industry by-products, kitchen waste, and grain by-products. Pigs therefore serve to convert limited waste and by-products of low value into high value food for consumption or/and sale. In addition, rearing pigs helps rural households to have a safety net, as pigs are used as a form of saving, as well as source of cash for household expenditure. In Nepal, pig rearing is still a very traditional practice and very common among Dalit<sup>4</sup>, Adibasi/ Janajatis<sup>5</sup> represented by Rai, Limbu, Tharu, Magar, Damai, Kami, Sarki,

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<sup>1</sup>DFID & SDC. 2008. The Operational Guide for the Making Markets work for Poor (M4P) Approach.

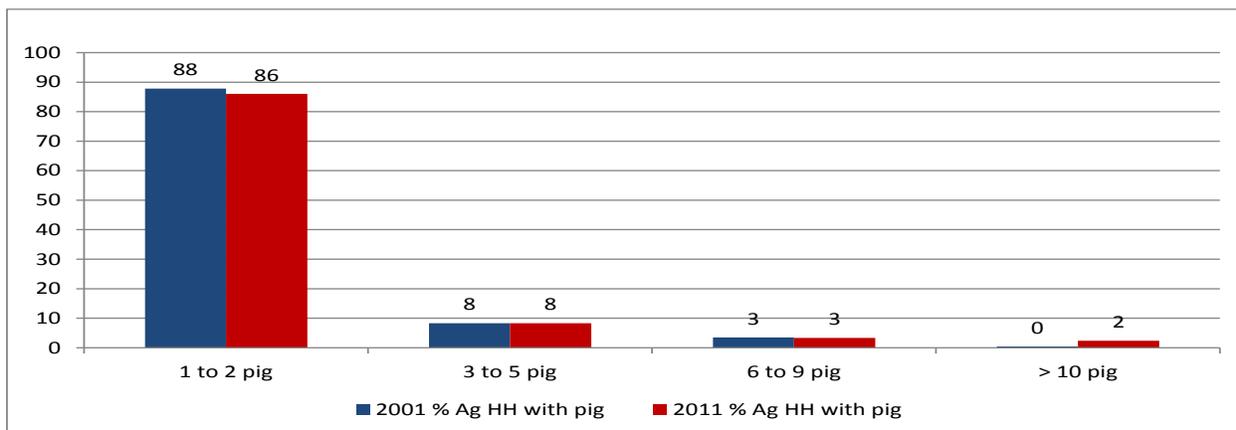
<sup>2</sup>Per capita daily consumption, upper international poverty line. Precise definitions of 'poverty', 'farmers' and 'small-scale entrepreneurs' are provided in the explanatory note to the Samarth-NMDP logframe.

<sup>3</sup> Samarth-NMDP. Gender and Social Inclusion Strategy 2013.

<sup>4</sup> Dalit Caste are those identified by Government of Nepal, National Dalit Commission. Cited on: <http://ndc.gov.np/site/cms/4>

and other marginalised<sup>6</sup> social groups<sup>7</sup>. Women are quite often seen as central to pig-rearing activities in Nepal, with women rearing small livestock either as a form of personal property (known as *pewa*) or a household income source. The higher participation of poor people, women and other marginalized caste/ethnic groups in pig rearing makes it one of the priority sectors for Samarth-NMDP to create positive income change.

**Figure 1: Trend of distribution of pig rearing HH with respect to Pig Herd Size In Nepal (in percent)<sup>8</sup>**



## 2.1 Backyard Farming

Backyard farming is a traditional way of rearing pigs in Nepal. The socio-economic condition of backyard pig farmers is very poor, and production is accompanied by low-skill / low-investment incentive. Backyard pig farming is characterized by rearing one or two pigs per household on the property. Women of the household are usually responsible for rearing, feeding and management of the pigs. Farmers are often not very knowledgeable about breeding, feeding, farm management, health and hygiene issues related to pig rearing and its effect on pig outputs (weight, fertility, growth etc.). The women of the household feed pigs with kitchen waste and cereal by-products. Backyard pig farming is done with low input cost and risk which leads to low productivity and low output<sup>9</sup>.

<sup>5</sup>List based on the newly enacted law, The National Foundation for the Development of Indigenous Nationalities (NFDIN) Act 2002 (Adibashi Janajati Utthan Rastriya Prastisthan Ain 2058)

<sup>6</sup>42 percent of marginalised and ethnic people in Nepal are poor (NLSSIII, 2010-11). There are over 75 separate ethnic (Jana Jati) and marginalised groups who rear and eat pigs.

<sup>7</sup>Central Bureau of Statistics: Population Census 2001. Cited on Lynn Bennett, Dili Ram Dahal, & Pav Govindasamy. 2008. *Caste, Ethnic and Regional Identity in Nepal: Further Analysis of the 2006 Nepal Demographic and Health Survey p3.*

<sup>8</sup>CBS. 2011. Nepal Living Standards Survey 2010/11. Volume 2, Statistical Report.2010-2011. Government of Nepal.

<sup>9</sup>Samarth-NMDP. Pig Sub-Sector Analysis and Vision 2013.

## 2.2 Commercial Farming

In Nepal, with the commercialization policy of the government<sup>10</sup>, new commercial farms including pig farms are being established in different parts of the country. About 50% of cooperative pig farmers are driven by the government subsidies in the eastern region and the proportion of cooperative farms supported by government increases as we move from the east to west. Approximately 70 to 80 percent of cooperative farms in the mid-west and far-western region could be driven by the government subsidy. The larger commercial breeders and pig fatterer farmers are supplying piglets to other smaller fatterer farmers and food processors. The centre for promotion of pig and poultry office of Department of Livestock Services (DLS) has estimated that there are more than 200 large farmers in the country with more than 50 pigs each. Most of these commercial farms are integrated types of farms but without specialization in fattening or breeding or both for pig production<sup>11</sup>.

In recent years, many poor farmers are also forming groups and cooperatives to run commercial farms. The formation of these new farms is driven by recent government efforts<sup>12</sup> and is profoundly dependent on resources from the government. Government supports these cooperative farms by providing assistance for shed construction, piglet purchase, health services like vaccination, drenching, training, and transportation costs<sup>13</sup>.

Samarth has focused its interventions on increasing the production and supply of improved pig breeds, breeding services from artificial insemination, improving animal husbandry at village level, facilitating expansion of pig-meat processing and further pro-poor (smallholder) commercialization in the sector<sup>14</sup>.

## 3. Study Purpose

In line with Samarth's Gender and Social Inclusion (GESI) strategy, this qualitative study was carried out with an aim to investigate the situation of women in pig rearing households. This information would help Samarth-NMDP's pig sector team to fine-tune interventions so that they actually reach and benefit these women, and to ensure that impact upon women at the household level could be measured.

Additionally, it is hoped that this and similar research in other Samarth sectors will help to address the following key questions around the benefits to women from interventions using an M4P approach:

*Does raising overall household income from an agricultural enterprise (pig rearing) mean women have access to income, and participate in decision making on how the money is spent?*

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<sup>10</sup>Central Pig and Poultry promotion was established under Directorate of Livestock Production, Department of Livestock Services in Ministry of Agriculture Department, Cited from: <http://www.dolp.gov.np/index.php>. In 2071 BS (2014 AD) Department of Livestock Service (DLS) has introduced Youth Focused Program to attract youth (identified aged between 18-50 years) by providing seed money for technology and training for commercial dairy, pig and goat farming. Cited from: [http://www.dolp.gov.np/downloadfile/Yuvalaxit%20Karyabidhi\\_2071\\_1418800130.pdf](http://www.dolp.gov.np/downloadfile/Yuvalaxit%20Karyabidhi_2071_1418800130.pdf)

<sup>11</sup>Samarth-NMDP. Pig Sub-Sector Analysis and Vision 2013.

<sup>12</sup>Nepal Agricultural Cooperative Central Federation Ltd. was established in 2008 with an aim to lead sectors for economic development of the country benefitting small scale farmers. Cited from: <http://www.nacccfl.org.np/index.php> & <http://www.deoc.gov.np/en/>

<sup>13</sup> Samarth-NMDP. Pig Sub-sector analysis and Vision 2013.

<sup>14</sup>Samarth-NMDP Pig Sector Strategy and Business Plan 2015

This question addresses whether elevating overall household income from pig rearing benefits, is detrimental to, or has no effect on women in the household. Because a systemic approach does not select direct beneficiaries but aims to impact markets as a whole, it is assumed that this creates large scale, positive impacts on household income, equally benefiting women and men. It is important to try to ascertain whether elevated household income does in fact benefit women in the household and if so, how.

*Does increasing productivity in a given agricultural enterprise (pig sector) improve women's situation?*

Market systems development interventions often aim to raise overall productivity of a given agricultural activity. In the case of pig farming, productivity may be increased by e.g., increasing access to quality pig breeds, information on pig rearing techniques, and easy and low cost pig feed. It needs to be considered whether women would have the means and ability to access and implement productivity-enhancing measures, and whether increasing pig rearing productivity would impact positively, negatively or negligibly on the demands on women's time/overall burden of women's work and women's decision-making influence and other relationships within the household. Would women be displaced from pig rearing activities and lose their ability to engage directly in market activities and transactions once it is commercialized?

*Does women's involvement in direct transactions (pig sales) give them economic agency?*

Market systems development interventions may seek to increase women's direct participation in the sale of the commodity they produce with the assumption that if they transact, they have increased say in how the money is spent and are likely to spend it in ways which benefit them and their families. It is necessary to test this assumption and also to look for unintended consequences, such as increased tension in household relationships (and potential domestic violence), as a result of women's changing roles and increasing autonomy.

This paper: (i) describes the research approach and presents a summary of the research findings; (ii) describes how the research was used in programming and discusses implications for the three key questions on M4P benefits to women at the household level; and (iii) proposes recommendations for further research and for Samarth pig sector-specific interventions.

## **4. Methodology**

### **4.1 Study Area**

Samarth-NMDP has been implementing pig sector interventions in both Kailali and Dhankuta districts since 2013. The two districts, Dhankuta in the Eastern region and Kailali in the Far-Western region were chosen to compare the situation of women in pig rearing households in two different regions/ecological belts<sup>15</sup>. Almost all of the study participants were from the Janjati ethnic group but within those Janjatis, there are two distinct Janjati groups with different social practices and backgrounds - indigenous Kirat Janjati of Dhankuta District in the Hill ecological belt and indigenous Tharu/Chaudhary of Kailali District in

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<sup>15</sup>Nepal has three distinct ecological belts- Mountain, Hill and Terai (plain land). Dhankuta district lies in the Hill ecological belt of the Eastern Development Region, and Kailali district in Terai ecological belt of the Far-Western Development Region. Cited on [http://www.nepal.gov.np/portal/npgea/cms/GeaCMSportletWindow?p=p\\_DOI&action=e&windowstate=normal&n=Geography.html&mode=view&i=2](http://www.nepal.gov.np/portal/npgea/cms/GeaCMSportletWindow?p=p_DOI&action=e&windowstate=normal&n=Geography.html&mode=view&i=2)

the Terai ecological belt<sup>16</sup>. The study hoped to identify opportunities and constraints affecting women from two different geographic locations and cultural backgrounds, which would help the Samarth pig sector team to develop regionally-specific interventions and activities. The study districts are highlighted with an arrow in Figure 2.

**Figure 2: Pig Sector Study Districts (Source: clicknepal.com 2015)**



## 4.2 Sampling and Analysis

In both Kailali and Dhankuta districts, study participants were selected purposively; i.e. the people selected for group discussion and individual interviews were involved in pig rearing activities. A semi-structured interview technique was used, based on three questionnaires (see Annex I), one each for individual interviews and focus group discussions (FGDs) with pig rearing households, and one for individual interviews of other market players<sup>17</sup> on the supply side of the value chain. Two FGDs were held in each district, one men only and one women only. All interviews were conducted in Nepali and responses noted English.

<sup>16</sup>In Nepal, we could generally determine ethnicity of a person from his/her surname. Indigenous Kirat Janjatis of Hill region are those inhabitants of eastern and central Hills- Magar, Tamang, Sherpa, Rai, Gurung. They migrated from China and are known as Indo-Burman language speaking group. Indigenous Tharu/Chaudhary Janjati are inhabitants of Southern plain of Nepal known as Terai region. Arjun Guneratne (2002) *Many Tongues, One People: The Making of Tharu Identity in Nepal*.

<sup>17</sup>Samarth-Nepal Market Development Programme defines market players as organizations or individuals participating in a market system who are either directly involved in or influential to the core function (supply/demand), 'Market player' is the common term that captures both organizations and individuals from private, public, or civil society sectors. The market players of supply side of value chain interviewed were Bhuni farmers, who rear female pig for selling piglets, Commercial Breeder farmer who do pig farming in small and large scale for commercial purpose, and Pig Market Agents who keep boar for providing insemination service to female pigs.

In both the study districts, respective District Facilitators<sup>18</sup> of pig sector interventions helped to identify pig farmers. Individual interviewees were selected randomly among the pig rearing households in both the study districts. Focus group discussions and individual interviews were carried out in Fulbari and Geta Village Development Committee (VDC) of Kailali district and various wards<sup>19</sup> (Danabari, Chara Gaun, Karmi Taar, Hulak Tole, Srijana Tole, Shita Pati) of Dhankuta municipality<sup>20</sup>. Three pig market players above the household level in the value chain in Kailali (two female and one male) and four in Dhankuta (all male) were also interviewed in order to understand women's access to market and to information, and also to triangulate the information provided in farmer group discussions and individual interviews.

A total of thirty-nine pig farmers in Kailali and twenty-six in Dhankuta were interviewed. The sample sizes and breakdown by gender and interview type are given in Table 4.2.

Table 4.2: Sample Sizes

Interview Type	Kailali 39		Dhankuta 26	
	Women	Men	Women	Men
FGD	23	11	9	8
Ind. Interview	4	1	5	4
<b>Total</b>	<b>27</b>	<b>12</b>	<b>14</b>	<b>12</b>

Data gathered from FGDs and individual interviews was entered into spreadsheets by categorizing into three groups (FGD household pig farmers, individual interviews of household pig farmers and individual interviews of other market players). Data was analyzed manually. Each district's findings and conclusions were drawn from respective data separately (see Annex II and III). A comparative analysis of the research conclusions from both districts was then undertaken and has been used as the basis for this paper.

Study findings from the pig sector and two other sectors were shared among Samarth's sector teams in a half-day workshop, with participants divided into sector-based groups, led by sector analysts. The pig sector group was asked to consider and apply the pig sector study findings to their proposed interventions and develop recommendations for improving women's access to and benefits from these interventions. The recommendations were presented at the end of the workshop and form the recommendations section of this paper.

<sup>18</sup>Those district facilitators are staff of the Center for Environment and Agricultural Policy Research, Extension and Development (CEAPRED). CEAPRED is an implementing partner of Samarth-NMDP's pig intervention.

<sup>19</sup>In Nepal, settlements have been divided into different administrative units. A few settlements together form a ward, which is the lowest administrative unit of the Government of Nepal. Nine wards together form a Village Development Committee (VDC). Settlements, ward and VDC are the major spatial units of grass-root level planning, decision-making and policy-making exercises. Settlement pattern varies as per these ecological belts (Mountain, Hill and Terai). In mountainous region, settlements are generally scattered and even few households clustering together may form a settlement whereas in Terai region settlements are generally dense and there can be many households clustered in one settlement. Cited on: Pathak and Dhakal. Settlements: A Ground Reality in Nepal. Retrieved on 9/1/2015 on [http://lgcdp.gov.np/home/gis\\_articles\\_reference/Settlements-A%20Ground%20Reality%20in%20Nepal.pdf](http://lgcdp.gov.np/home/gis_articles_reference/Settlements-A%20Ground%20Reality%20in%20Nepal.pdf)

<sup>20</sup>Government of Nepal can declare any urban area as municipal area which has minimum population of 20,000 and basic facilities like road, electricity, drinking water and communication are available. In the hilly and mountain regions however, minimum population has been fixed at 10,000 people and other requirement remains the same. Retrieved on 9/1/2015 on <http://www.geocities.ws/gknepaleyn/data/data/municipalities.html>

## 5. Findings

### 5.1 Profile of Respondents

Altogether sixty-five farmers engaged in pig rearing were interviewed in Kailali and Dhankuta districts. In Kailali, among thirty-nine participants, twenty-seven were female and twelve were male; thirty eight were married and one unmarried. In Dhankuta, of twenty-six pig farmers interviewed, fourteen were female and twelve male; twenty-one were married and five were unmarried. Among the total sample, 97% (63 participants) identified as Janjati and 3% as Brahmin/Chettri ethnic groups. A majority of respondents (98%) identified as Hindu and 2% identified as Buddhist.

Table 5.1: Profile of Respondents

Districts	Gender		Marital Status		Ethnicity		Religion	
	Female	Male	Married	Unmarried	Janjati	Brah./Chettri	Hindu	Buddhist
Kailali	27	12	38	1	39		38	1
Dhankuta	14	12	21	5	24	2	26	
Total	41	24	59	6	63	2	64	1

### 5.2 Household Decisions

The majority of individual interview respondents in both Kailali and Dhankuta reported male headed households (MHHH), with one woman in Kailali and two women in Dhankuta identifying as female head of the household (FHHH).

Table 5.2: Household Decisions

Kailali	Dhankuta
Majority MHHH	Majority MHHH
1 self-reported FHHH	2 self-reported FHHH
Husband and wife jointly make decisions	Women have strong role in decision-making

In Kailali, in almost all cases, husband and wife made joint decisions on family matters like marriage, child bearing timing, child's education, healthcare and community participation, with few exceptions of man only or woman only decision making. Some women had made their own decisions about marriage. In Dhankuta, women appeared to have a slightly stronger role in decision making on family matters, either making decisions themselves or jointly with husbands, with few exceptions. The view that marriage should be decided by the individual was common.

### 5.3 Division of Labour

In both districts, women reported doing the majority of household tasks, although a few men reported helping their wives in household activities. In Kailali, women worked 5-7 hrs/day on tasks inside the HH, and up to 8 hours caring for livestock including pigs, and vegetable farming. Some women also worked as construction laborers. In Dhankuta, women worked up to 9 hours/day doing household tasks and 1-5 hrs/day caring for pigs. They appeared to spend more hours on both household tasks and pig farming than men.

In Kailali, a majority of men worked 8-14 hrs/day in agriculture during the agricultural season, including caring for livestock, and a majority also had waged employment or did other income earning activities during the agricultural off-season. In Dhankuta, a few men spent 1-3 hours/day on rearing pigs; most reported spending 10-12 hours on other income earning activities.

Table 5.3: Division of Labour

Kailali	Dhankuta
Women do majority of HH tasks	Women do majority of HH tasks
Women work 5-7 hrs/day on HH tasks & up to 8 hrs/day on agriculture, caring for livestock including pig rearing. Some do paid work outside the home.	Women work up to 9hrs/day on HH tasks & up to 5hrs/day on pig rearing
Men work 8-14hrs/day during ag season; also have waged employment or other income earning activities in off-season	Some men spend 1-3hrs/day pig rearing; most spend 10-12 hrs on other income earning activities

## 5.4 Land Ownership

In Kailali, all households owned land, and in the majority of cases this was due to the government's land redistribution program. A majority reported that land ownership was in the name of male family member. Only 4 out of 39 HHs (10%) reported land in a female family member's name. In individual interviews, 1 out of 3 women reported being able to make decisions about buying/selling land, and other assets. The male in individual interview made the decisions on buying/selling land and other assets.

**Table 5.4: Land Ownership**

Kailali	Dhankuta
Majority reported land in husband's name	Women have higher land ownership than in Kailali, but men still own most land
In 10% of HHs women had land ownership	HH land ownership is 31% women, 62% men and 7% both husband and wife

In Dhankuta also, all HHs had land. Women had greater ownership of land than in Kailali (8 out of 26 HHs, or 31%), but male land ownership was double this amount (62%). In 2 HHs (7%), land ownership was in both husband and wife's name. A few men noted the decision about buying/selling land would be made jointly with his wife. One woman (female head of household) reported making the decisions about buying/selling land and house herself.

## 5.5 Other Assets

Information on ownership of assets other than land was collected from individual interviews only, resulting in limited data sets. In Kailali among the four women in individual interviews, items of personal property (able to make the decision to buy/sell) besides land, were reported as a house, small livestock including pigs, furniture, sewing machine and clothes. The one male in individual interview reported that he made the decisions on buying/selling house, cattle, pig/goat, and clothes, as well as land.

In Dhankuta, five women in individual interviews reported items of personal property (able to make the decisions to buy/sell) as a house, pigs, poultry, mobile phones and clothes. Only one reported being able to make decisions about buying/selling land and house. The four men in individual interviews reported that buying or selling the house would need to be a joint decision with wife. In addition, they identified pigs, poultry, mobile phones and clothes as property they could decide to buy/sell.

## 5.6 Income Sources

Households had multiple sources of income including pig rearing, which was a traditional activity for most people in both districts. In Kailali, pig farming was often reported as the 3<sup>rd</sup> or 4<sup>th</sup> source of income and a majority seemed to sell 1 fattened pig per year for around NPR<sup>21</sup> 18,000/pig. A few women sold from 1-3 fattened pigs/year to more than 5 fattened pigs and piglets/year. Other sources of income were agriculture, vegetable farming, waged labour, businesses and foreign employment/remittances.

**Table 5.6: Income Sources**

Kailali	Dhankuta
Multiple income sources	Multiple income sources
Pig rearing reported as 3 <sup>rd</sup> or 4 <sup>th</sup> income source	Pig rearing probably ranked 3 <sup>rd</sup> or 4 <sup>th</sup> income source
Pig rearing- traditional activity	Pig rearing- traditional activity
Sell 1 fattened pig/yr at around 18,000 NPR each	Sell 2-5 fattened pigs & 10-20 piglets/yr Income ranged from 30,000- 80,000 NPR/yr

In Dhankuta, households sold 2-5 fattened pigs per year and some also sold 10-20 piglets per year. Income from pigs ranged from NPR 30,000 to NPR 80,000/year. A majority earned NPR 50,000-60,000/year, and the next most common amount earned was NPR 60,000-80,000/year. Most men

<sup>21</sup> One American dollar equivalent to 104.48 Nepalese Rupees (NPR) [selling rate of Nepal Rastra Bank on October 14, 2015]

were engaged in other income earning activities, including agriculture, vegetable farming, animal husbandry, small businesses and paid employment in varieties of jobs. Pig rearing probably ranked in 3<sup>rd</sup> or 4<sup>th</sup> position among the sources of household income.

## 5.7 Pig Farming Practice

In Kailali, the majority of respondents reported spending the same amount of time in rearing pigs now as in the past, but it was not clear what breeds were being reared. Most reported that women were predominantly engaged in taking care of pigs, spending 1-3hrs/day. In contrast, in Dhankuta, the majority had increased the time spent on pig rearing (up to 5hrs/day). Respondents in Dhankuta were rearing fast-growing crossbred pigs and had changed their pig-rearing practices, as these pigs require extra care (eg, dietary feed, clean shed, healthcare) compared to local pig breeds. Women appeared to spend more time caring for pigs than men.

In Kailali, both men and women had access to improved pig breeds and information on better pig farming techniques. Almost all women reported having information about crossbred pigs, but they considered them expensive to buy and needing extra care, while butchers paid the same price per kilogram for both local and crossbred pigs.

A majority of men and women had access to crossbred piglets (not necessarily knowing the name of pig breeds) in Dhankuta. Few women reported having access to knowledge of better pig rearing techniques. Most learned from seeing other villagers rearing pigs and advice from the vet. Similarly, few men reported having knowledge of better pig rearing techniques. Three had received formal training in pig rearing, two from the District Livestock Service Office (DLSO), Dhankuta, and one from the Zoonosis Control Program.

The market players<sup>22</sup> further along the value chain (suppliers of artificial insemination services, crossbred and local breed piglets) who were interviewed in both the districts provided information related to pig rearing to their customers (pig rearing households). The male Commercial Pig Breeder Farmers (CPBFs) in both districts reported having more male customers than female. In Kailali, the female Pig Market Agent (PMA) reported having mostly female customers, whereas the male PMA of Dhankuta reported mostly male customers. Kailali's female bhuni farmer had equal number of both male and female customers, whereas the male bhuni farmer in Dhankuta had more female customers, who asked him for information about rearing pigs.

## 5.8 Prices and Markets

In both the districts, both men and women reported being able to access information on the current price of pig meat, sourcing information from markets, butchers, and other villagers. Dhankuta pig farmers also got pricing information from the Meat Management Committee of Dhankuta (which has a procedure to fix prices). Respondents in Kailali noted that demand for pig meat was high, with butchers coming to homes to buy fattened pigs, saving them time and the cost of transport. The situation in Dhankuta was similar,

Table 5.7: Pig Farming Practice

Kailali	Dhankuta
Same amount of time	Increase in time spent
Men & women have access to improved pig breeds	Men & women have access to buying crossbred piglets
Women thought crossbred pig was expensive & need extra care, but receives same price as local pigs from butchers	Women were rearing crossbred piglets

<sup>22</sup>The other supply-side market players interviewed were Pig Market Agents (PMA), Commercial Pig Breeder Farmers (CPBF) and bhuni farmers (who rear female pigs in order to sell piglets).

with most households selling fattened pigs from home to butchers or other villagers, and only taking excess piglets to local markets.

## 5.9 Sales Transactions and Control of Income

In Kailali, husband and wife jointly decided on when to sell pigs in the majority of households and both handled the sales transactions. In very few cases, a woman received the money from selling pigs; and in other cases either the husband or both husband and wife received the money.

In Dhankuta, the decision about when to sell pigs was made by wife and husband jointly in many households, but the second highest response was women making this decision alone. In individual interviews, respondents reported that sales transactions were mostly done by women, or jointly by husband and wife. Income from selling pigs was received by women in just over half the households, while in most other households both wife and husband received the income.

**Table 5.9: Sales and Control of Income**

<b>Kailali</b>	<b>Dhankuta</b>
Jointly decide when to sell	Either jointly or women alone made decision about when to sell
Both men & women carried out sales transactions	Women mostly conducted sales (in individual interview)
Very few women received sales income; either husband or both husband and wife received income	Women received money from sales in over half of the HH

## 5.10 Decisions on Use of Pig Income

In Kailali, the decisions about how to spend income from selling pigs was either made by the husband or jointly by husband and wife. Income was used for household expenses, children's education and healthcare. Besides these, some women indicated purchasing a bicycle, small machines (water boring pump, sewing machine), fertilizers and also renting land to grow crops; whereas some men indicated buying piglets which was their first priority, agricultural needs and other things depending upon the situation.

**Table 5.10: Decisions on Use of Pig Income**

<b>Kailali</b>	<b>Dhankuta</b>
Either men alone or jointly made decisions	Joint decision-making, sometimes woman alone
Income used for HH expenses, children's education, healthcare	Income used for HH expenses, children's education, healthcare, infrastructure, vehicle, phone
Women indicated purchasing bicycle, small machines, ag inputs, rent land	n/a

In Dhankuta, the decision about the use of income was made jointly by the husband and wife in most households, but sometimes by a woman alone. Income was used for household expenditure like basic needs, healthcare, children's education, reinvestment in pigs, household infrastructure, vehicles and mobile phones.

## 5.11 Access to Savings and Credit Facilities

Almost all men and women in both the districts have access to credit from village associations, mother's groups, cooperatives or banks. In Kailali, a significant number of women had received loans. Male family members would take out loans for household emergencies.

One man received fertilizer on credit. In Dhankuta, some women and men reported taking out loans.

**Table 5.11: Access to Financial Services**

Kailali	Dhankuta
Almost all men & women have access to credit/loans	Almost all men & women have access to credit/loans
Significant no. of women received loan	Some men & women had received loan
Almost all women but fewer men save money	All women & majority of men save money

In Kailali, all women except one, had savings accounts, and most had more than one account with village associations, saving groups, literacy class group saving, or mother's group. The amount saved ranged from NPR 5-100/month. Fewer men reported saving money. Those that did saved in village associations and cooperatives, with the amount ranging from NPR 5-10/month. In Dhankuta, all households had saved money, and in almost all households, women saved money, usually having several accounts with village associations, cooperatives or banks. The amount saved ranged from NPR 50-500/month. A majority of men also saved money with these institutions and reported saving NPR 10-1,000/month.

## 5.12 Leisure

In Kailali, women understood leisure as free time from doing household tasks or labour, and men understood it as free time from agriculture. Most women and men reported having leisure sometimes or rarely. Almost all women did household tasks or income earning activities if they had leisure time. Women nominated making handicrafts, laboring and vegetable/crop farming as preferred income-generating activities if they had more free time. Men did activities such as labouring, outside HH tasks and business or community work during free time but some did recreational activities. If they had more leisure time, they preferred to do income-earning activities such as laboring, carpentry, agriculture or small business.

**Table 5.12: Leisure Activities**

Kailali	Dhankuta
Most women and men reported having leisure time sometimes or rarely	Almost all men & women reported having some leisure time
Women did HH tasks & income earning activities with free time; if more leisure time would do income-earning activities	Majority women did HH tasks, a few preferred to relax & socialize; if more leisure time would do income-earning activities. One would open a slaughterhouse.
Men did income-earning or recreational activities with free time; if more leisure time would do income-earning activities	Most men did outside HH tasks, income earning and recreational activities; if they had more leisure time, would do business, including commercial pig farming

In Dhankuta, almost all men and women reported having some leisure time. The majority of women did HH tasks during leisure time and a few women reported relaxing or socializing. Most men did outside household tasks or income earning task during leisure; some did recreational activities. If they had more leisure time, most women expressed a preference to do income earning activities such as tailoring, running shops and paid employment, and one woman wanted to open a slaughter house. A few women could not explore other opportunities because they had small children to care for. Almost all men wanted to do business or a salaried job if they had more time, with 5 nominating commercial farming of high quality pig breeds as their preferred business.

## 6. Discussion

The aim of this research was to improve the understanding of women's roles in pig farming in two districts of Nepal, and to use this knowledge to inform Samarth-NMDP pig sector intervention design, and results measurement. The research findings did provide a valuable insight into women's situation within both the household and the family pig rearing enterprise, both of which need to be considered to understand women's agency and economic empowerment. The research was guided by three key questions to test assumptions about the benefits to women at the household level from M4P interventions (as noted in Section 3 of this paper). The research results are discussed below against these three questions.

### 6.1 Does raising overall household income from pig farming mean women have access to income, and participation in decision making on how the money is spent?

The research conducted in Kailali and Dhankuta Districts was not designed to quantify household income and increases in income from pig rearing above traditional levels, but households were able to report the number of pigs and piglets sold in a year and estimate the income earned from sales. Data were also collected on whether or not women participated in decisions about selling pigs, whether they conducted pig sales transactions, received the money from sales and whether they were involved in decisions about use of the income from selling pigs.

In Kailali, the findings suggest that the income from rearing pigs has not necessarily increased as pig rearing remains at the level of traditional backyard practice in most cases. Most respondents indicated selling one fattened pig per year. Only a few women reported increasing their pig sales to 3-5 fattened pigs per year and selling piglets. Women's responses regarding the pig breed used also indicates that they have been rearing local pig breeds rather than improved cross-bred pigs.

Women in Kailali were primarily responsible for pig rearing, following tradition. Decisions about selling pigs were made jointly by husband and wife in most households, and conducting sales was also done by both. In most households, either men alone or both husband and wife received the money from sales and either men alone or husband and wife jointly made decisions about use of pig sales income. This suggests that, at the household level, in many cases men are controlling pig sales income and determining expenditure of this income, even where their wives were directly involved in sales transactions. In these households, it cannot be assumed that increasing the income from pig farming will result in women having access to that income or having a greater role in decision-making about its use. In households where both men and women appear to share control of pig sales income and decisions about its use, it might be assumed that women could access the increased income from pig farming and participate in decisions about its use.

In Dhankuta, women also appeared to spend more time on pig rearing than men. Households reported an increase in the time spent on pig rearing and a larger number of fattened pigs (up to 5) and piglets sold in a year. This is an increase on the traditional level of pig rearing. Respondents were rearing fast-growing crossbred pigs and had to change their pig rearing practices as a result. It could safely be assumed that these households had increased their income from rearing hybrid pigs.

In many cases, Dhankuta women made the decisions about selling pigs and carried out the sale transactions alone. In more than half of the households, women received the pig sales income, even where the sales transactions were carried out by husbands or jointly by husband and wife. Decisions about use of income from pig sales were either made by woman alone or jointly by husband and wife. In no case did a male household member report having control of pig income and decision-making over its

use. The data strongly suggest that in Dhankuta, women will have access to increased income from pig farming and will also have a strong role in making decisions over use of that income.

In both the Districts, women's labour contribution in rearing pigs is higher than men's, but this does not automatically result in access to or agency over the increased income from rearing pigs. Women's agency over any increased pig income seems to depend more upon the cultural and traditional role of women in the particular society. Thus, Dhankuta women may directly benefit from increased household income from pig farming (positive impact) whereas the impact on Kailali women may be either positive or neutral.

None of the data collected suggests that raising household incomes from pig farming would have a negative effect on women's access to income and participation in decision-making, however, this can only be tested through follow-up surveys.

## **6.2 Does increasing productivity in a given agricultural enterprise (pig sector) improve women's situation?**

Samarth-NMDP's pig intervention strategy envisions increasing pig rearing productivity of households by increasing their access to crossbred pigs which grow faster and therefore can be sold earlier, which ultimately results in positive income change. Access to information about the particular needs of crossbred pigs (e.g. feed, health care, shelter and hygiene) and the financial means to provide those needs, is also required.

In both the study districts, women were reported to be the primary care takers of pigs but there were differences in their attitudes to productivity-improving measures. Women in Kailali had access to improved pig breeds, but were reluctant to buy them. They perceived crossbred pigs to be more expensive to buy than local breeds and time consuming in terms of shed and feed management, while the income from selling a fattened crossbred pig was apparently not great enough to offset the perceived costs. Increasing productivity was perceived to be more labour intensive by women in Kailali. They already worked 5-7 hours per day on household tasks and up to 8 hours a day on agriculture, caring for livestock (including pigs), and some also worked as paid laborers outside the home. Increasing pig productivity for these women could result in an even greater workload, so they were (understandably) hesitant to do so. It was unclear whether women also felt they did not have the financial means to invest in buying crossbred pigs and to pay for veterinary and feed requirements.

In Dhankuta however, women were rearing crossbred pigs in a more commercial way and the herd size was comparatively larger than in Kailali; pig farming also seemed to be more labour-intensive than in Kailali. Women were spending more time on pig rearing, but were also earning comparatively more than Kailali women. However, the total time burden for Dhankuta women was similar to that of women in Kailali, perhaps due to Dhankuta women spending less time on agriculture, laboring and other tasks than Kailali women. Women in Dhankuta spent up to 9 hours a day doing household tasks and up to 5 hours a day caring for crossbred pigs, around 14 hours per day in total, compared to the total 13-15 hours per day of Kailali women.

Increasing productivity is likely to be beneficial for women in Dhankuta because they seemed to have overall control over pig farming. If women in Kailali were more aware of the economic benefits of rearing improved pigs in larger quantities, they might consider expanding pig farming over other income generating activities. However, in households where the benefits of increased income from pig rearing were likely to be neutral for women, with a possibly increased workload, there may not be an incentive for women to pursue a more commercial farming approach. Ability to negotiate a reduction in other tasks to accommodate spending more time on pig farming may also influence women's attitude towards

increasing pig farming productivity. Conversely, in households where women were likely to benefit directly from increased pig rearing productivity, the potential for commercialization is likely to be greater.

There is documented evidence indicating that when an agricultural activity done by women gets more commercialized and profitable, women will often be displaced by men<sup>23</sup>. Additionally, in the Nepali context, while pig farming has been the tradition of some caste groups in the past, with the commercialization policy of the government, so-called upper caste groups<sup>24</sup> are increasingly investing in commercial pig farming, and the commercial sector is dominated by men. There is therefore a possibility that women in Kailali could be displaced by men as pig farming becomes more commercialized. In Dhankuta, women appear to have strong agency over pig farming, sales and income, hence less likelihood of being displaced.

In summary, for Kailali women, increasing productivity of pig rearing may have a negative impact through increasing their work burden, but may have either a neutral or positive impact upon their access to and agency over the pig sales income. There is also the potential for an unintended negative consequence of men displacing women if a more commercial approach to pig rearing is adopted. Increasing pig rearing productivity in Dhankuta beyond current levels is likely to result in an increased work burden for women but also likely to have a positive economic impact for them, given their relatively stronger position of influence within the household compared to women in Kailali. The situation of women in Dhankuta also suggests there is less risk of women being displaced by men if commercialization of pig production increases. The study results did not point to any potential negative consequences for intra-household relations in either location, but this is an issue that should be investigated in follow-up studies.

### **6.3 Does women's involvement in direct transactions (pig sales) give them economic agency?**

The research findings on women's involvement in pig sales and their ability to influence use of pig sales income varied between the two districts. In Dhankuta, pig sales were mostly carried out by women alone or by both men and women in the household. The income from selling pigs was received by women in just over half the households, and decisions about use of the income were made by either women alone or jointly with husband. On the contrary in Kailali, though both men and women carried out pig sales, decisions over use of the income were often made by men alone, or jointly by men and women in the household, and rarely by women alone. However, in Kailali, it was also noted that people would rear and sell a pig to raise money for specific purposes and women could rear pigs if they needed to buy things like a sewing machine.

Overall, women in Dhankuta do appear to have more direct involvement in pig sales transactions and also more economic agency in relation to pig income than women Kailali. In both Districts, it was also common for both women and men to sell pigs and for both to decide how to use the income, so a degree of women's economic agency might also be assumed in these households as well. Interestingly however, if women in Kailali with no involvement in pig sales transactions may rear a pig specifically to fund purchases of their choosing, this suggests they too have a measure of economic agency, at least with regard to pig income. This may reflect pig-rearing traditionally being a women's domain.

There may be a strong positive relationship between a woman's direct involvement in pig sales and her economic agency within the household, but this is not definitive or exclusive. The apparently stronger position of women in Dhankuta households in terms of economic agency may be more reflective of differences in ethnic background and socio-cultural attitudes more generally between Dhankuta and

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<sup>23</sup>The World Bank, FAO, IFAD 2009 Gender in Agriculture Sourcebook, pp173; 604

<sup>24</sup>Brahmin/Chettri are regarded as 'upper caste' people who were traditionally believed not to touch pig or eat pork.

Kailali districts and corresponding differences in household-level gender relations. Studies have identified differences in women's access to and decision-making influence over resources among different ethnic groups in Nepal; for example, women from ethnic groups in Hill and Mountain regions had significantly more decision-making ability on many issues compared to women from ethnic groups in the Terai (plains) region<sup>25,26</sup>.

## 7. Conclusions and Recommendations

### 7.1 Conclusions

We conclude that the use of small-scale research efforts such as this study allows a deeper and more nuanced understanding of the role of women within the household as well as in a target market sector, and that using these research findings to fine-tune interventions will improve the prospects of Samarth-NMDP delivering measurable benefits to women at the household level in the pig sector. Practical application of these research findings through a workshop process resulted in the pig sector team modifying proposed interventions or identifying additional interventions to increase the potential benefits to women in pig rearing households. The sector team's direct engagement in and responsibility for this process meant that they understood and 'owned' this aspect of their work. The process should have increased their ability to address gender and social inclusion at earlier stages of market analysis and intervention design in the future.

In terms of the three key questions about the actual benefits to women from M4P approaches, this study cannot draw firm conclusions but the data has provided useful indications as to where, how and if women involved in rearing pigs might benefit from M4P interventions in the pig sector. The study sites would need to be re-visited for results measurement purposes after a period of implementation for learning and intervention-adjustment purposes, and/or after the programme completes, to assess whether potential benefits eventuated or whether effects were neutral or negative. The importance of the socio-cultural context and its influence on gender relations at the household level in different locations, for example, why women in Dhankuta have an apparently stronger position within the household and economic enterprise than women in Kailali and therefore may benefit more from pig sector interventions, was also brought out through this study.

We are able to state with confidence that it cannot be assumed that raising household income from pig farming alone means women will have access to, and participate in, decisions over use of that income. Differences in gender relations at the household level in different locations, related to socio-cultural differences as identified in this research, suggests that the assumption may be valid in some locations and in some ethnic groups, but not others. Effects on women may be positive or at worst neutral, and the data is insufficient to assess whether impacts might be negative in some cases.

Regarding whether increasing productivity in pig farming improves women's situation, it seems that an increase in productivity will be labour intensive for women and increase their workload, because they are the primary care taker of pigs in the household. Household-level gender relations with respect to income access and use and division of labour around daily tasks appear to determine whether women's situation will improve or not. If an increase in time spent on pig farming is accommodated by a corresponding decrease in time spent on other daily tasks, in order to maintain a sustainable overall daily workload for women, and if women have access to and can influence how the resulting increased income is used, her

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<sup>25</sup> FAO 2010 Integration of Gender in Agriculture: An Analysis of Situation pp8-9,11

<sup>26</sup> Bennett, Dahal & Govindasamy 2008 Caste, Ethnic and Regional Identity in Nepal p27

situation is almost certain to be improved. If one or both of these conditions is not met, increasing productivity in pig farming may leave women no better off, or worse off.

It is not possible to draw definitive conclusions about cause and effect in the relationship between woman's involvement in sales transactions and her economic agency, but there does appear to be a positive relationship between the two factors in our data. It is also clear that socio-cultural factors play a significant role in women's ability to engage in an enterprise and benefit economically from that enterprise.

In summary, we conclude that raising household income from pig farming appears to be at worst neutral for most women in these districts, and that measures taken to increase labour productivity including access to crossbred pig breeds, techniques of rearing hybrid pigs and to improve women's participation in sales transaction of pigs is likely to have a neutral to positive effect on women's access to income, participation in decision-making on use of income, and well-being. More data from a wider range of locations and with larger sample sizes would be required to make more definitive statements, due to the heterogeneity of Nepali communities. More empirical research is needed on the labour productivity of cross-bred vs. local pig rearing.

## **7.2 Recommendations for Research**

### **7.2.1 GESI Research**

Samarth-NMDP should continue with GESI research activities in key sectors, to maximize the benefits to women in households from Samarth interventions.

A follow-up pig sector study should be carried out in the same wards of Dhankuta and same VDCs of Kailali districts towards the end of the programme, to document what if any changes have occurred in the situation of women in pig rearing households and what impact Samarth-NMDP interventions might have had on those changes.

### **7.2.2 Testing Assumptions about Benefits to Women from M4P Approaches**

Sample study sites from different Samarth sectors should be re-visited at least 2 years after the programme has completed, to look for evidence of sustained changes catalyzed by the Samarth-NMDP programme. This process should also specifically seek out and document information about changes to the situation of women in households as a result of Samarth interventions or other factors. Analysis of this data across sectors will give a broader picture of whether, where and how women may benefit from M4P interventions more generally.

## **7.3 Recommendations for Programming**

Samarth's pig sector team and other staff, led by the pig sector analyst, considered the findings and conclusions of research into women's role in the pig sector in Dhankuta and Kailali districts in a half-day workshop. The workshop process allowed the sector teams to apply the research findings in a practical way and was intended to ensure they viewed the research as a tool to help them to get the best outcomes from their interventions. It also allowed teams to integrate the understanding and accounting for gender differences that might be relevant to interventions, into their day-to-day work, engaging them in thinking through how to make interventions more gender-inclusive or beneficial to women. The pig sector team considered the research outputs in the context of their sector strategy and interventions and

developed actions that they felt were appropriate and achievable, that could increase the benefits to women. The actions they proposed are presented below, as recommendations for programming. Ownership of the actions, implementation and results lies with the sector team.

### **7.3.1 Action Research**

The majority of sow-rearing (bhuni) farmers are females and artificial inseminators are males. Female farmers might face difficulties to explain to male inseminators regarding the heat period for sows for artificial insemination (AI). Thus, AI service providers will be assisted to carry out action research to understand the comfort level of female farmers on explaining the phenotypical state to male service providers. The research will be helpful to understand whether female farmers are comfortable to carry out role of inseminators if they get trainings and design intervention based on it.

### **7.3.2 PEAN Membership**

Women receiving membership in Pig Entrepreneur Association of Nepal (PEAN) is very minimal. Female bhuni farmers will be encouraged to take membership of PEAN, which will open women's access to information and knowledge sharing to other female pig farmers, and decision making for the benefit of women farmers.

### **7.3.3 Access to Marketing**

Under the trade and marketing intervention, female fattener and bhuni farmers could be encouraged to gather information on fattened pigs (within a village/community) which are ready for slaughter and connect them with traders or pig collectors. By giving women pig farmers the opportunity to interact with market agent and make decision on their own could be a means to ensure their access to decision making capacity and control of income from pig sale.

### **7.3.4 Trainings**

The study shows that mostly women are engaged in taking care of pigs but they are less likely to be exposed to information and trainings. There is a strong need to include female farmers in the training programs on pig husbandry. Thus, a training program would be provided by breeder farmers which will increase pig productivity of female farmers and leading to increase in income.

### **7.3.5 Disaggregated Data**

The programme should be disaggregating for gender and ethnicity where practical and possible. If women are under-represented in access to the programme through market players, then action should be taken to work with market player partners to target women more effectively.

### **7.3.6 Record Keeping**

Introduction of record keeping of pig investment cost in extension service which could be done through District Livestock Services Office (DLSO). Women farmers could be taught to keep a record of all the investment cost (cost of piglet, feed, shed maintenance, vet service etc.) which will help women to set price for selling pigs and confidence to bargain with butcher for appropriate price.

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## Annex I: Questionnaires

### Focus Group Discussion Questionnaire

1. Firstly, we are interested to find out who does what kind of task in the family (*Identify whether male or female, adult, child*) :

a. Who does the Income earning activities in the family, including foreign employment, and how much time do they spend on these activities? (*This will also identify if they are involved in pig/vegetable farming*)

b. Who does the Household work (*including cleaning, cooking, caring for children/elderly, tending garden, etc* ) and how much time do they spend on these activities?

c. Does anyone in the family participate in Community activities (*eg, working as a community group member or Female Community Health Volunteers*)? If yes, what do they do and how much time do they spend on these activities? Whatever kind of role do they play – participant, organizer, leader?

2a. What is the main source of income in your family? (*If livestock: do you have any livestock as 'pewa' meaning personal property?*)

2b. Approximately what percentage of your total household income comes from this activity?

3a. Do you have any other sources of income?

3b. If yes, approximately what percentage of your total household income comes from each of these activities?

4. Why did you decide to become involved in pig/vegetable farming, and how long have you been doing it?

5. Do you spend more or less time now than before in rearing pig/growing vegetable?

6. Can you get better quality vegetable seed/ pig breed? If yes, which family member does this?

7. Can you learn about or buy better technology/techniques for farming pigs/vegetables (*eg, machinery, fertilizers, drugs, training, etc*)? If yes, who gets access in the family?

8. Who makes the decisions about selling pigs/vegetables? (Man/Woman?)
9. Where do you sell the pigs/vegetables, any particular place/person/trader/vendor/market (local/regional/national)?
10. How do you transport the product to the market?
11. How do people get information about current prices, best place to sell vegetables/pigs and so on? Who in the family gets this information (Man/Woman)?
12. Who in the family receives the money earned from selling pigs/vegetables? (Man/Woman?)
13. How does your family make decisions about use of household income? (*Are decisions made by the one who receives the income or is it joint decisions?*)
14. What does your family do with the income from selling pigs/vegetables?
15. Do you have access to microfinance/loan? If yes, who in the family usually gets the loan (Man/Woman)?
16. Do you save money? If yes, how do you save? (*eg, saving at home, village saving group, bank account, etc*)? Who in the family usually does the saving (Man/Woman)?
17. After pig/vegetable farming, what would be the next economic activities you would prefer to do?
18. Do you own the land you use for farming? In whose name is the land ownership (Man/Woman)?
19. Who usually takes the lead in decisions related to family affairs about:
  - a. Marriage (own/children's):

**b. Timing of child bearing:**

**c. Birth control:**

**d. Child education:**

**e. Health care**

**f. Taking part in community activities:**

**g. Any other decisions (please detail):**

**20a. Do you have leisure time?**

**20b. If yes, what do you do in your leisure time (allow them to nominate)?**

**21. Do you prioritize income earning activities over leisure time?**

**22. If you had more leisure time, how would you spend it**

## KEY INFORMANT INTERVIEW AT HOUSEHOLD LEVEL

NAME:  
 GENDER:  
 MARITAL STATUS:  
 EDUCATION:  
 ADDRESS:  
 NO. OF FAMILY MEMBER: ..... ; MALE: ..... ; FEMALE: .....  
 Daug.: ...  
 (details of the family- education of kids...)

AGE:  
 ETHNICITY:  
 RELIGION:  
 PHONE NO.:  
 NO. OF CHILDREN: Son: ...;

QUESTIONS	INDICATOR	ANALYSIS
1. Who is the head of the household? (If female headed household, where is your husband/father/brother/son?)	percent of FHH	
2. What is the main source of family income?	% of families with agriculture as the main source of income	
3. How many are working in pig/vegetable farming in the family?	average income productivity per person	Total income/HH member
4. Approximately how much of your total income is from pig/vegetable farming? (If reluctant to tell, what percentage of total household income is from this activity)		

5. Proportion of sales/transaction								women's and men's involvement in direct transaction	gender analysis of sales
Products	Number/kilos/litres								
		woman (♀)	man (♂)	Both (♀♂)	woman (♀)	man (♂)	Both (♀♂)		
Pig									
Vegetable									
Ginger									
Dairy									
Other									

<i>(please list)</i>									
<b>6. Use of income from pig/vegetable farming</b>									
<b>Goods/services</b>		<b>Who decides</b>							
		<b>woman (♀)</b>				<b>man (♂)</b>			
<b>Basic needs (food, clothes)</b>									
<b>Healthcare</b>									
<b>Education</b>									
<b>pig/vegetable</b>									
<b>Infrastructure</b>									
<b>vehicles- motor bike/cycles</b>									
<b>Gadgets- mobile phones</b>									
<b>Other (please list)</b>									
7. Why did you decide to do pig/vegetable farming? How long have you been doing it?									
8. Do you spend more or less time now than before in rearing pig/growing vegetable?									
9. Can you get better quality vegetable seed/ pig breed? If yes, which family member does this?									
10. Can you learn about or buy better technology/techniques for farming pigs/vegetables (eg, machinery, fertilizers, drugs, training, etc)? If yes, who gets access in the family?									
11. Who makes the decisions about selling pigs/vegetables? (Man/Woman?)									
12. Where do you sell the pigs/vegetables, any particular place/person/trader/vendor/market (local/regional/national)?									

13. How do you transport the product to the market?				
14. How do people get information about current prices, best place to sell vegetables/pigs and so on? Who in the family gets this information (Man/Woman)?				
15. How does your family make decisions about use of household income? ( <i>Are decisions made by the one who receives the income or is it joint decisions?</i> )				
16. Do you have access to microfinance/loans? If yes, who in the family usually gets the loan (Man/Woman)?				
17. Do you save money? If yes, how do you save? ( <i>eg, saving at home, village saving group, bank account, etc</i> )? Who in the family usually does the saving (Man/Woman)?				
18. After pig/vegetable farming what is the next economic activities you would prefer to do?				
19. Do you own the land you use for farming? In whose name is the land ownership (Man/Woman)?				
20. Decisions over other family issues			women's decisions over household affairs	decisions show women's empowerment
<i>Decisions</i>	<i>Who decides</i>			
	<i>woman</i> (♀)	<i>man</i> (♂)		
<i>marriage</i>				
<i>child bearing</i>				
<i>child's education</i>				
<i>health care</i>				
<i>taking part in community activities</i>				
<i>Other (please list)</i>				

<b>21. What do you think is your personal property (Pewa/Daijo)?</b>			women's access, control and decisions over the asset they own	
<b>Assets owned (Tick ✓ if appropriate)</b>	<b>Decision to sell and/or buy</b>			
	<b>Yes</b>	<b>No</b>		
<b>Land</b>				
<b>House</b>				
<b>Cattle</b>				
<b>goats/pigs</b>				
<b>chicken/ducks</b>				
<b>clothes</b>				
<b>mobile phone</b>				
<b>Other (please list)</b>				
<b>22. Tasks you usually do everyday</b>			total hours worked	work burden or leisure at work
<b>Tasks</b>	<b>Yes</b>	<b>No</b>		
<b>Cleaning house</b>				
<b>Cooking and cleaning dishes</b>				
<b>caring children and elderly</b>				
<b>caring livestock</b>				
<b>kitchen gardening</b>				
<b>vegetable farming</b>				
<b>office job</b>				
<b>Business</b>				
<b>Other (please list)</b>				
<b>23. Do you have leisure time?</b>				
<b>24. If yes, what do you do in your leisure time (allow them to nominate)?</b>				

<b>25. Do you prioritize economic activities (income earning) activities over leisure time?</b>		
<b>26. If you had more leisure time, how would you spend it?</b>		

END

**KEY INFORMANT INTERVIEW: MARKET PLAYERS (Vegetable /pig)**

NAME:

AGE:

GENDER:

ETHNICITY:

MARITAL STATUS:

RELIGION:

EDUCATION:

ADDRESS:

PHONE NO.:

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1. What is your main business?
2. What type of services do you provide to vegetable farmers/pig farmers?
3. Do you go to the farmers? Or do they come for the services?
4. Who are you customers in terms of gender (men/women)?
5. Who reaches you often, men or women, to receive the services?
6. What type of caste group you usually serve?
7. Any positive discrimination to promote women customers?

END

## Annex II: A Study of Pig Sector in Kailali District - Results

### Research sites

- Two Village Development Committees (VDCs) of Kailali district- Fulbari and Geta (Sri Lanka village).

### Research Sample

- Total farmer sample size: 39
- Women – 27, Men – 12
- [Women's FGD 23, individual interview 4: total 27
- Men's FGD 11, individual interview 1: total 12]
- All Janjati.
- 38 participants are Hindu and 1 Buddhist.
- 38 people are married, 1 is unmarried.

### Other

- Bhuni Farmer, keeps female breeder for selling piglets: 1 [female], Kailali.
- Commercial Pig Breeder Farmer (CPBF), those who do pig farming in large scale: 1 [male], Kailali.
- Pig Market Agent (PMA), keeps boar for servicing sows and female breeder: 1 [female], Kailali.

### Family/HH characteristics

- In individual interviews, 1 out of 4 women reported herself as the head of the household, 3 reported a male member as the HH head. In male individual interview, one reported himself as the HH head.
- 22 respondents reported a HH size of 3-6 members; 8 reported a HH size of 7-8; and 9 reported 9+ HH members.
- In individual interviews, 3 out of 5 reported having 1-2 children, and 1 each reported having 3-4 and 5-6 children. Number of children of group discussion participants is not available.
- Majority of HHs are involved in one or more community groups, often for savings and loan purposes. Women in group discussion noted that women have an association for small business.

### Family decisions (Individual Q22; FGD Q19)

- Women in individual interviews indicated that all family decisions like choice of marriage, child bearing, child's education, healthcare and community activities are either made by themselves (women) or jointly by husband and wife, except in one case where one woman indicated children's education and one indicated community participation is decided by husband.
- In women's group discussion, a majority of participants reported decisions about child bearing, birth control, child's education, health care and participation in community activities are joint decisions of husband and wife. One respondent reported child bearing timing is unplanned and some respondents said birth control is unplanned. 6 out of 23 reported marriage is own decision (they married without parent's consent). Some reported marriage of their offspring is joint decision of husband and wife.
- Man in individual interview indicated that all family decisions (marriage, child bearing, education and healthcare) are decided jointly by husband and wife.
- In men's group discussion, majority of respondents reported joint decision of husband and wife in making decisions of child bearing, birth control, child education and healthcare. 50% of respondents reported offspring decide about their marriage (not the parent), 1 reported 5-10% of marriage are decided by parents. All reported that participation in community activities is a self-decision.

### Land (IQ 21; FQ 18)

- In women's individual interviews, all reported owning land. Land was in the name of a female in 2 cases and a male in 2 cases. 3 out of 4 reported land ownership in the name of in-laws (2 male, 1 female) and 1 woman reported having land in her name which was distributed by the government.
- In women's group discussion, everyone reported having 5 kattha (about 1,7000 m<sup>2</sup>) of land provided by the government. Majority reported land is in the name of male family member, 2 reported they (woman) own the land.
- Man in individual interview owns land himself, which was given by the government (to the landless people).
- In men's group discussion, all reported land is in their (men's) ownership.

### **Personal property (IQ 23)**

- In individual interviews, 1 out of 3 women reported being able to make decisions on buying/selling land, house and clothes. 2 reported being able to make decisions on sale of small livestock including pigs. 2 women reported being able to decide buying sewing machine and 1 decided buying furniture.
- Man in individual interview said that he has the decision of buying/selling land, house, cattle, pig/goat, and clothes.

### **Division of labor in HH work (IQ 24; F Q1)**

- All women in group discussion reported that they did the HH tasks such as cooking and cleaning, spending 5-7 hours/day on these tasks. 5 women out of 23 said their husbands helped. Women reported spending a further 8 hours/day in pig, goat, chicken rearing and vegetable farming. Typically they would wake around 5am and sleep around 10pm. All reported male family work outside home as construction labourers/ mechanics, and some women also do these jobs.
- In individual interviews, women reported spending 1 to 3 hours in doing HH tasks (cleaning house, cooking, cleaning dishes, caring child/elderly) and 1-7 hours in kitchen gardening and vegetable farming.
- In men's group discussion, majority reported spending 8-9 hours and some spend up to 14 hours doing agriculture in season. 3 reported spending 3-4 hours cutting grass in off-season from agriculture. Majority of men are engaged in other income earning activities (waged employment) besides agriculture.
- Man in individual interview did not report doing HH tasks. He spends time in caring livestock with all family members and doing agriculture, but did not give a time estimate for either.

### **Division of labor in pig farming (IQ3, 24 FQ 1, 2 and 5)**

- Women in group discussion spent around 2-3 hours caring pig and said all women were involved in pig rearing. Women in individual interviews reported spending from less than 1 hour to 3 hours. 3 out of 4 women reported women mainly did the pig farming but other family members may also help.
- All men in group discussion, except one, said that women do the task of caring pigs. One reported men do 10% of the pig rearing task, while one said men spend only half an hour on pig farming. Man in individual interview reported all 6 family member feed the pig, he did not report the time he gives in rearing pig.

### **Income sources (IQ 2; FQ 1a, 2a, 2b & 3)**

- All interviewees reported multiple sources of HH income. This may in part be due to the number of working adults in the extended family HHs. Both women and men in group discussion and individual interviews indicated pig rearing, agriculture as other employment as main income sources for the family.
- Women in group discussion reported that men in the family work as construction labourers, carpentry and mechanics, and many of the respondents also worked as labourers. Income from pigs tends to

supplement the income of the household. None of the women in group discussion reported that family members were in foreign employment.

- Men in group discussion reported doing various waged jobs/businesses including mason, electrician, carpentry, tailoring, motorcycle mechanic, painting/arts, vegetable nursery and foreign employment. Pig rearing was supplementary income source for the family and is used as a saleable asset to pay for HH needs.
- In individual interviews, women reported income source from vegetable farming (2), agricultural crops (2), male HH member working as labourer/mechanic/vet (3), and male family member remitting money from abroad (2).
- Man in individual interview reported son's remittance is the source of income besides agriculture and pig rearing.

#### **Why in pig farming? (IQ 7; FQ 4)**

- All respondents, except two, reported that pig rearing is their tradition, with women in group discussion specifying it was traditional for women to do pig farming. Two respondents said that they copied from others doing pig farming.
- In group discussion, majority of women regard pig breeding and selling piglets is profitable, and men regard pig rearing as a supplementary income source.

#### **Farming practices (IQ 8, 9 & 10; FQ 5, 6 & 7)**

- In individual interviews, women had mixed responses regarding time spent in pig rearing in past and present. 1 reported spending less time because she buys feed rather than preparing it by hand; 1 reported same time as before; and 2 reported more time now because they have improved their techniques, giving better feed, clean shed and bathing pigs. Women in group discussion reported spending same time as before.
- Both individual interview and group discussion men reported that there is no difference in time spent in rearing pig.
- 2 out of 4 women in individual interviews said they know about hybrid pigs and one said both she and her husband got this information. Among them, one woman has not reared hybrid pig yet thinking that it is expensive and needs extra care, but she is willing to give a try. In group discussion, women said that access to better pig breed is available to both women and men, but they think it is expensive and also requires more care. One woman commented that buyer pay same amount of money for meat of ordinary and hybrid pig (though hybrid piglets cost more than ordinary one). Some women in the group had no knowledge of better quality pig breeds.
- Man in individual interview reported having information on pig breeds. He owns a hybrid of Duroc and Land-race. In men's group discussion, none of them reported knowing about pig breeds. Although they do not know about the breeds, the place they buy piglets from says the higher priced piglets are hybrid.
- In individual interview with women, 3 out of 4 reported having access to information about techniques of better pig farming, from agrovets/vet services (2), and seeing other people's rearing techniques, such as use of cemented sty (1). None reported receiving any training in pig-rearing. In group discussion, some women reported having access to information on pig-rearing techniques, from government veterinarian services and a Cooperative. Some reported that they give worm medicine, use government veterinarian services including for vaccinations, and all reported buying bran and rice husk for pig feed. Food waste from hotels used to be bought for pigs, but now hotels used it to rear their own pigs.
- The majority of men in group discussion and the male individual interview reported having access to information on better pig farming techniques.

### **Comment of Pig Market Agent (PMA)**

The pig market agent (PMA) reported having different sources of HH income. In her pig market business, she rears male pigs for breeding services, breeds female for selling piglets. According to her, a female pig gives birth to around 17 piglets at one time, which she sells for Rs 3000 at one month old and Rs 4000 at 2 months old piglets. She is paid Rs 10,5000/month by National Development Volunteer Services (NDVS) for providing vet services to pig farmers (she provides the service even on credit if needed). She has received 3 month course of Council for Technical Education and Vocational Training (CTEVT) provided by village vet.

She also provides brokering service to pig farmers who are unable to sell their pigs/piglets. She trains farmers in the district on rearing livestock (pigs, chicken, goat, buffalo and cow), and gets paid for providing vaccination and feed treatment services. She is going to try breeding hybrid pigs and teach people on rearing hybrid pig (regarding cleaning, feed etc.).

She goes to pig farmers (owns a motorbike) to give vet treatment and some farmers come to her to buy animal medicines. She goes to district venue to deliver training, and sometime provide paid services to farmers who come to receive training on vet skills. According to her most of her customers are women, and training participants are both men and women, but mainly women. District office provides her name to farmers and advertises her name on radio and TV. Women in the district try to copy her (she is a role model) and even their husbands are supportive to their wives.

According to her the village has Janjati ethnic groups, and Janjati are her customers most of the time. She estimates 60% Janjati, 20-25% Dalit, up to 20% Brahmin/Chhetri customers.

### **Comment of Bhuni Farmer**

The bhuni farmer has been doing pig farming as a business since 10 years, and it has been a profitable business for her. Besides pig farming, the family has several other businesses. She feeds pigs on bran, HH leftover mixing with a little market feed. She has received training on raising hybrid piglets. She supplies hybrid piglets, gives information to farmers on raising piglets, feed, and appropriate time to sell pigs. According to her, piglets get sold easily in winter compared to summer. Farmers (both male and female equally) come to her to buy piglets which she sells for 2500-3000Rs each. Most of her customers are Janjati (Chaudhary and Tamang).

### **Comment of Commercial Pig Breeder Farmer (CPBF)**

He is commercial pig farmer, owning a pig farm jointly with father. The HH has several sources of income, brother has a small spices industry, and father works in a brick factory. He sells hybrid piglets at one month old at Rs 4000 each. He provides advice to buyers about pig feed. Both husband and wife work full-time in pig farming. Usually he sells piglets, but if he is out his wife sells. According to him some customers are reluctant to give cash to his wife, and demand to pay him. He does not provide piglets on credit because he has taken loan from a bank to start the business.

Farmers come to the farm themselves. He has not done any marketing yet, but these days many people are starting such business, so he thinks he might need to start marketing in the future. According to him 80% of his customers are male, 20% female. Earlier few women used to come to buy piglets, but these days the number of women customers is increasing. People come to buy piglets on bicycle or motorbike, and buy up to 4-5 piglets. His customers are local (living within 1/2 hr bicycle ride distance) and some are from neighbouring district. He has started keeping customer records since CEAPRED District Coordinator, Kailali, provided the record book.

All kind of caste/ethnic groups come to buy piglets. According to him, these days, Brahmin/Chhetri are dominant ethnic group engaged in commercial farming (estimates 95%), they buy more than 10 piglets from him. Sometimes husband and wife come together to buy piglets (as happened during interview).

### **Pig production and sales (IQ 4 & 5; FQ 2 & 3)**

- In women's individual interviews, 2 reported selling 1-3 fattened pig in a year and 2 reported selling more than 5 pigs and piglets in a year. 2 reported earning around Rs 16,000 to 29,000 /year; 1 earns around Rs 80,000/year, and 1 earns around Rs 134,000/year from selling pig and piglets.
- Women in group discussion estimated earning around Rs 18,000/year from selling 1 fattened pig.
- The man in individual interview rears 1 hybrid pig, earning Rs 7000 to 8000 profit from rearing 15 month.
- Men in group discussion reported earning Rs 10,000 to 20,000 from sale of 1 pig. Selling pigs for meat was no problem as both villagers and butcher would buy it. Prices were fixed within the village through discussion.

#### **Pig sales, control of earnings in the family (IQ 5, 11, 12, 13; FQ 8, 9, 10, 12)**

- In women's individual interviews, none reported making sales decisions alone. 2 women reported husband makes the decision about when to sell pigs and 2 reported both husband and wife jointly make this decision. In terms of selling pigs, 2 women reported men handle sales and one each reported the woman handles sales and both husband and wife handle the sales. 3 women reported their husband received the sales income, and 1 reported she received it. All sold fattened pigs from home to the butcher and piglets to villagers, so transport was not needed.
- Majority of women in group discussion reported that both husband and wife decide when to sell pigs. A majority of women also said they (women) sell the pigs themselves, but either wife or husband would do the selling depending on who was available. Both men and women receive the sales income from the pig. They sell pig to butchers from home, thus transport for pigs was not required. Demand for pig meat was high and it could be sold at any time.
- Man in individual interview listens to wife's suggestion regarding appropriate time to sale pig. He butchers the pig and sells meat from his home, so no transport is needed. His wife receives the money from selling meat.
- All men in group discussion indicated both husband and wife jointly make decisions about selling pigs. All of them sell pig to the butcher from their home, so transport was not needed. Men received the income from selling pigs.

#### **Information on Prices of pig (IQ 14; FQ 11)**

- 3 out of 4 women in individual interview reported that men have access to current market price for pigs. Men get the information from market or butcher. One woman reported receiving information from meat shop and nearby village.
- Women in group discussion reported both man and woman have access to the information about the price of pig. Women cross-check information with neighbouring villagers and meat shops; men check prices on the way to and from work. 3 women reported that they also go to the market and cross-check the price. Some respondents commented that even uneducated women can bargain for the good price.
- Man in the individual interview did not report on how he knows about the current market price for pig.
- Men in group discussion reported that they check price in the market and discuss among the villagers. They also cross-check with neighbouring village. According to them, men are the ones who usually get the information on the price.

#### **Use of Income from Pig Production/Decisions on HH Expenditure (IQ 6 & 16; FQ, 13 & 14)**

- In individual interviews, 1 out 4 women reported man make decision regarding the use of HH income, whereas 3 reported making joint decisions with male in the HH. About the areas of investments of income earned from pigs, one (FHH) reported she herself make decision on using it on basic needs, education, reinvestment on pigs, infrastructure, buying vehicle (motor cycle/bicycle) and farming equipment. 3 women reported either man or both man and woman jointly decide to spend the income

in HH requirements like- basic needs, healthcare, education, reinvestment in pigs, infrastructure and vehicle.

- In women's group discussion, all reported that decisions about use of income are made jointly by husband and wife. They reported using income for HH expenses, children's education, sometimes purchasing equipment like bicycle, water boring, sewing machine, fertilizers, and also used in renting land to grow crops.
- Man in individual interview reported using income on basic needs, healthcare, education and reinvestment on pigs. Wife makes decision about spending on basic needs; decisions on others are made jointly by husband and wife.
- In group discussion, majority of men reported that they control and spend the income from pigs. Though they give pig income to their wives, they (men) make the decisions about what it should be spent on in half the cases, while half the respondents said they decided jointly with wives how to spend income. All said they spend on buying piglets (which is first priority), food, children's education, healthcare, clothes, also on agricultural needs and other things depending on the situation. People decide beforehand what they will spend on when they decide to rear a pig. One participant clarified that if a woman needs to buy things like sewing machine, they ask her to rear a pig to buy it.

#### **Access to financial services (IQ18 & 19; FQ 15 & 16)**

- All women in individual interviews reported they have access to credit/loan, with 2 women reporting she herself have the access to take loan, and 2 reporting her husband have access. 2 out of 4 have taken out a loan in the past, in the husband's/brother-in-law's name in one case. One said husband/brother receive credit from rich people of their community; whereas other (woman) had received loan from saving and loan group for educational expenses and vegetable farming, which she paid back. Other 2 have access to credit from literacy class group savings and microfinance organization. All reported having access to saving. Two reported they (women) save money, one saves in literacy class group saving (Rs 10/month), and other saves at home to pay son's garage loan and saves in bank too. One woman said her husband and brother-in-law are members of village group and cooperative, and also have bank account. In one case, the family has a joint account but father-in-law hold the decision to withdraw money. They reported saving Rs 5 to 20 per month.
- In women's group discussion, all reported having access to credit/loan from women's saving and credit groups. 10 out of 23 indicated they got credit for pig farming from cooperative. All women reported saving up to Rs 100 per account in village associations and saving groups. One saved with a bank. Some husbands had a bank account.
- Man in individual interview has access to credit for fertilizer from nearby shop. He gets urea and DAP on credit, and repays with 200kg paddy for 100kg urea and 200kg for 50kg DAP. He comments that he is not involved in any groups for saving because he does not have money and sometime have to buy even basic food like salt in credit.
- In men's group discussion, all men reported having access to credit/loan from cooperatives and groups, and their wives can receive credit from mother's group, where they are member. According to the group, usually male family members take out loans for emergencies. Receiving loan outside groups has high interest rates. 50% of the respondents reported having saving account in village association and cooperative saving Rs 5-10 per month.

#### **Leisure (IQ 25, 26, 27 & 28; FQ 20a, 20b, 21 & 22)**

- 3 out of 4 women in individual interviews reported having leisure time. Two nominated to do productive tasks like making handicraft items (1) and shelling corn, fishing, doing HH work (1); 1 nominated for recreation activities playing with kids, talking with neighbours or likes to take midday nap. None of the women reported that they prioritize economic activities over leisure, yet 3 out of 4 indicated they would do productive tasks like making handicrafts, working, washing clothes, utensils if

- they had more leisure time. 1 reported she would socialize with friends if she had more leisure time.
- In group discussion, women reported having no leisure or sometimes/rarely, because they understood leisure as free time from doing HH or labour work. All women prefer to use their time to earn income. If they had more leisure time, all women nominated to do tasks like cut grass; collect firewood from forest; make fan, basket, small towel; labour; fishing; one woman has a shop and goat; bathing and washing clothes etc.
  - Man in group discussion reported having leisure sometimes/rarely. They understood leisure as time not doing agricultural activities. 6 out of 11 responses nominated to do productive tasks like construction and contractual services (1); social work, helping fish farming group (1); cutting grass and rearing oxen (3); and land broker (1). 2 reported staying at home, doing politics, whereas 3 did not give their responses. If they had more leisure time, men nominated doing recreational activities like visiting friends and playing cards.

#### **Next Preferred Economic Activities (IQ 20; FQ 17)**

- In individual interviews, 2 out of 4 women reported their next preferred economic activities as making handicrafts; and buying land for farming crops and vegetable to earn income. In women's group discussion, a few reported wanting to make handicrafts, and work as labourer (construction work like brick carrying, cement mixing), while others nominated vegetable farming and growing crops.
- In men's group discussion, other preferred economic activities were labouring and carpentry work; half of them reported agriculture; 1 reported wanting to open a fancy shop; 1 wants to do mechanical work.

#### **Conclusions**

- All the people interviewed were Janjati ethnic group. Majority were male headed household with one woman identifying as female head of the household.
- In almost all cases, husband and wife made joint decision on family matters like child bearing, child's education, healthcare and community participation, with few exceptions of man only or woman only decisions making.
- All household owned land, and in majority of cases this was due to government's land redistribution program. Majority reported land ownership was in the name of male family member. Only 4 out of 27 women had land in their name.
- Women do the majority of household tasks (cleaning house, cooking, cleaning dishes, caring child/elderly) and doing outside task (pig, chicken goat rearing, and vegetable farming), working around 10-15 hours/day. Some women also worked as construction labourers (waged based). Majority of women wake up at 5am and sleep around 10pm. Men often worked outside, doing agriculture, caring livestock, and majority involved in waged employment. Majority of men work from 8 up to 14 hours a day during the agricultural season, and also care for livestock. During off-season from agriculture, most of the men are engaged in income earning activities like waged employment.
- Women understood leisure as free time from doing household tasks or labour, and men understood as free time not doing agriculture. All women preferred to do household task or income earning activities during leisure time, except one woman who prefers to do recreational activities and one who does not have leisure time. Men nominated to do recreational activities if they more leisure time.
- All household have multiple sources of income and pig rearing is often the 3<sup>rd</sup> or 4<sup>th</sup> source of income in the family. Pig rearing is a tradition for some people, and supplementary income source. Majority of people seemed to sell one fattened pig in a year which could be sold at around 18,000Rs/fattened pig. A few women also sold from 1-3 fattened pigs/year to more than 5 fattened pigs and piglets/year.
- Both men and women appear to have access to better pig breeds and information on better pig farming techniques. Almost all women reported having information about hybrid pigs, but they think it

is expensive and need extra care. Butcher pays same price for meat from both local and hybrid pigs.

- Majority reported spending same amount of time in rearing pigs, but it was not clearly stated what breed they rear. Most reported women were predominantly engaged in taking care of pigs, spending 1-3 hours a day.
- Mostly husband and wife jointly decided on when to sell pigs. Woman and man both do sales transaction of pigs. In very few cases, woman gets the money from selling pigs and in other cases either man or both man and woman receive the money. Demand for pig meat is high, and butchers come to their house to buy fattened pigs. The decision of spending income from selling pigs is either made by man or jointly by man and woman. They use the money in household expenses, child's education and healthcare. Besides these, some women indicated purchasing bicycle, small machines (water boring, sewing machine), fertilizers and also renting land to grow crops; whereas some men indicated buying piglets (1<sup>st</sup> priority), agricultural needs and other things depending upon situation.
- Both men and women were able to access information on the price of pig, and they cross-checked information from market, nearby meat shop and neighbouring village.
- Almost all women and all men have access to credit/loans. Significant numbers of women have received loans from saving and loan group, cooperative or mother's group. Male family members would take out loans for household emergencies. One man received fertilizer on credit. All women, except one, have saving accounts, and most of them have more than one account. They save money in village associations, saving groups, literacy class group saving, or mother's group, and the amount saved ranged from 5-100Rs/month. Most men save money, in village association and cooperative, and the amount ranged from 5-10Rs/month.
- Pig Market Agent (PMA), Commercial Pig Breeder Farmer (CPBF) and Bhuni farmer provide pig stock, information on rearing pigs and/or services (vet, pig rearing training). Most of the customers of CPBF are men, whereas PMAs customers are more women than men, so women receive services and information from her. Bhuni farmer's customers are both men and women equally, and both receive information from her.

## Annex III: A Study of Pig Sector in Dhankuta District - Results

### Research sites

- Various wards of Dhankuta district- Danabari, Chara Gaun, Karmi Taar, Hulak Tole, Srijana Tole, Shita Pati.

### Research Sample

- Total farmer sample size: 26
- Women – 14, Men – 12
- [Women's FGD 9, individual interview 5: total 14
- Men's FGD 8, individual interview 4: total 12]
- 92% Janjati (24 people), 8% Brahmin/Chettri (2 people).
- All participants are Hindu.
- 21 out of 26 people are married, 5 are unmarried. 4 are between the age of 18-30 and 5 are between 31-50 years of age.

### Other

- Bhuni Farmers, those who keep female pigs for selling piglets: 1 [male], Dhankuta
- Commercial Pig Breeder Farmer (CPBF), those who do pig farming in large scale and in commercial way: 2 [male], Dhankuta.
- Pig Market Agent (PMA), those who keep boar and provide service to female pig: 1 [male], Dhankuta  
Note: Bhuni farmer (1) and PMA (1) also participated in the Men's FGD.

### Family/HH characteristics

- In individual interviews, 1 out of 5 women indicated living in a female-headed household. She is separated from her husband, lives with her son's family and regards herself as the head of the family. 4 women reported husband as the head of the household. In male individual interviews, 1 out of 4 reported a female as the head of the household. He lives with his wife's family and regards his mother-in-law as head of HH. 2 men reported they are the head and 1 said father is the head of household.
- 17 respondents reported a HH size of 3-6 members; 4 reported a HH size of 7-8, and one each 1-2 and 9+.
- 17 respondents reported having 1-4 children, 4 reported having no child and 5 respondents are unmarried.
- Majority of HHs are involved in one or more community groups, often for savings and loan purposes.

### Family decisions (Individual Q20; FGD Q19)

- Women in individual interviews indicated that all the family decisions (marriage, child bearing, child's education, health care and community participation) are either made by themselves (women) or jointly by husband and wife, except in one case where one woman indicated marriage is the decision of the individual and one woman indicated her husband makes health care decisions in the family.
- In women's group discussion, decisions about birth control, child's education, health care and participation in community activities were reported to be joint decisions by all participants, except one respondent who takes part in community activities because of her sister's suggestion. Marriage was reported to be joint decision by 5 participants, whereas 4 reported it was an individual decision. Decisions about timing of child bearing were reported as the decision of women themselves by 2 participants; 2 reported both husband and wife decide; 2 reported child birth was unplanned and 3 participants did not respond.
- Men in individual interviews also indicated that family decisions are either made by women or joint

decision of husband and wife, except one man who indicated that he made the decisions about taking part in community activities.

- In men's group discussion, decisions about timing of child bearing child and birth control were reported as either the decision of women or of both husband and wife. Decisions about healthcare and taking part in community activities were either men's decision or joint decisions. All reported decisions about children's education were jointly made by husband and wife. All reported that decisions about marriage should be made by the person who marries.

#### **Land (IQ 19; FQ 18)**

- All households have land. Of the 26 participants, 8 or 31% reported land ownership was in a woman's name (herself, wife or mother). If cases where both wife and husband own land is included (2 participants), this increases to 38%. Men (respondent, husband, father) had sole ownership of land in 16 cases, or 62%.
- All 9 women in group discussion reported land was owned by either husband or father-in-law. However, in individual interviews, 3 out of 5 women reported land ownership was in their or mother-in-law's name; one reported land was in both her and husband's name and one reported her husband owned the land.
- In group discussion, 4 out of 8 men reported land ownership was in their name; 2 reported land was in their father's name; and two reported land was in mother and wife's name. In individual interviews, 3 out of 4 men reported land ownership was in a woman's name (wife, mother or mother-in-law) and one reported both he and his wife had land in their own names.

#### **Personal property (IQ 21)**

- In individual interviews, only 1 out of 5 women reported being able to make decisions on buying/selling land and house, with one respondent commenting that land sale had to be a family decision. Regarding selling/buying pigs, 4 women indicated they could decide (one reported pigs were her pewa, meaning personal property owned by a woman, protected by law as a property right of a woman). Of 3 women reporting HHs with cattle and poultry, 1 reported being able to make decisions on sale of poultry. All women reported that they could decide on buying clothes. Of 4 HHs with mobile phones, 3 women reported they could decide to buy a mobile phone, 1 could not.
- Among men in individual interviews, all reported that decisions about buying/selling land or house would need to be a joint decision with wife. Out of 4 men, 2 reported they could decide to buy or sell pigs whereas 2 could not; one reported having HH cattle but he was not the decision-maker; and one reported making decisions about HH poultry. 3 out of 4 reported making decisions to buy clothes and all 4 men reported making decisions to buy/sell mobile phones.

#### **Division of labor in HH work (IQ 22; F Q1)**

- In women's group discussion, all women reported spending 3 to 7 hours in HH activities in a day.
- In individual interviewees, women reported spending 1 to 5- 9 hours in doing HH tasks (cleaning house, cooking, cleaning dishes, caring child/elderly).
- In men's group discussion majority reported that women family members (wife/mother/sister) do HH tasks. 3 men reported helping their wives in HH tasks. One claimed that he spends 4 hours in a day buying HH needs from market and he claims that he works more than female member in a day (doing income earning task and HH tasks).
- In individual interviews, 2 out of 4 men reported doing HH tasks (cleaning house, cooking, cleaning dishes, caring child/elderly) an hour or less in a day. 2 men reported that they do not do HH tasks.

#### **Division of labor in pig farming (IQ 22; FQ 1 & 2)**

- Women in individual interviews reported spending 1 to 5 hours in a day in caring pig.

- Men in individual interviews reported spending 1-3 hours caring pig.

#### **Income sources (IQ 2 & 3; FQ 1a, 2 & 3)**

- All interviewees reported multiple sources of HH income. Both women and men in group discussion and individual interviews indicated pig farming as one of the major income sources for the family. Besides pig farming 6 women and all men (8) in group discussion reported agriculture to be the other major income source. 3 women and 3 men in individual interviews also reported agriculture, vegetable farming and animal husbandry as one of the main sources of income.
- In individual interviews a majority of women and men reported that 2 people in the family, themselves and another family member (spouse, in-law, parent), were engaged in pig rearing. Two women reported doing pig-rearing alone.
- Other income sources reported in group discussion and individual interviews were foreign employment, bank job, biscuit factory job, working as mason, making alcohol, chicken rearing, goat rearing, tea shop, retail shop, making dried foods, construction, real estate rental, cyber café and tea shop.
- In women's group discussion, all reported spending 3-7 hours to whole day in income earning activities working together with their family member, except one respondent who reported working alone.
- Men in group discussion reported spending 10-12 hours to whole day in income earning activities.

#### **Why in pig farming? (IQ 7; FQ 4)**

- All respondents except two reported that pig rearing has been their tradition for generations. One respondent has been rearing pig since 32 years (since 2045 B.S.) and other since 26 years (since 2039 B.S.). Other reasons given for pig rearing are for income, using food waste and easier to rear than other livestock.
- One woman belongs to the Brahmin caste/ethnic group which believes handling pigs is unclean, however, she has broken with this tradition.

#### **Farming practices (IQ 8, 9 & 10; FQ 5, 6 & 7)**

- In individual interviews, 4 out of 5 women reported spending the same amount of time on pig-rearing as in the past. 1 reported spending more time now than before because the local pigs reared earlier did not need much care, but now hybrid pig rearing takes more time and investment in dietary feed (rice husk, maize flour, wheat flour) and health care (vet visits, medicines, vaccinations). In group discussion, all women reported spending more time on pig-rearing now than before; all have hybrid pigs.
- In individual interviews, 2 out of 4 men reported giving same time they used to give in the past, whereas 2 reported spending more time now because they have to provide the pigs with better diets including bran and rice husks, clean the sheds, and give vaccinations. In men's group discussion, all reported they spend more time now due to change in practice of rearing pig. Pigs in the past were free-range, but now pigs are reared mostly in closed cemented sheds and need to be fed on time.
- Only 2 women in individual interviews said they get to buy good quality breeds, and they themselves are able to buy those fast-growing breeds. Three reported they do not know about pig breeds. In women's group discussion, all participants said they do not know the name of pig breeds but they know they are getting hybrid pigs.
- In individual interviews, 2 out of 4 men reported being able to get information on good quality breeds. One reported he himself has access to information and 1 reported both he and his wife can get this information. Two men did not have access to this information. One usually buys pigs locally, whatever breed is available. In men's group discussion, 6 participants said that they don't know about the types of pig breeds, but they are rearing hybrid pigs that grow fast. Two participants reported knowing about

- pig breeds. One commented that 2 indigenous, highly disease-resistant breeds have become extinct.
- Only 1 out of 5 women in individual interviews reported getting information on better techniques/technologies for pig rearing. Other women commented that knowledge was gained from seeing other villagers rear pigs and the vet was a source of advice.
- Only 1 out of 4 men in individual interviews reported knowing about better techniques of pig farming. His family often calls the vet for health checks, vitamins, vaccinations and dietary needs.
- In the group discussion, 2 women participated in a training related to pig rearing, 18 years ago (in 2053 B.S.) but they do not remember much about the training.
- Out of 8 men, 3 participants have received training. One got 2 days training organized by District Livestock Office (DLSO), Dhankuta; one received training related to rearing male pig; and one received training on pig farming management and used to work in Zoonosis Control Program (ZCP). One gave vaccinations to pigs but had no formal training to do this.

#### **Comments of PMA, CPBF and Bhuni farmer:**

The Bhuni farmer provides piglets, PMA provides mating service to female pigs and does pig castration, CPBF provides piglets in large scale. All of these market players- Bhuni farmer, PMA and CPBF also give information related to pig farming and services to pig farmers, but they do not go to farmers, farmers must come to them to receive the information. In individual interviews only 1 man and 1 woman out of 9 interviewed reported knowing better pig-farming techniques. 2 CPBF and 1 PMA reported men are usually their customers so men get the pig-rearing information. The Bhuni farmer who sells piglets reported dealing mostly with women and women customers ask for information about rearing pigs and about the standard number of nipples a female pig should have for better feeding of piglets. All 4 reported dealing with a range of ethnic/caste groups. One reported helping women buyers living nearby by transporting piglets to them in his own vehicle and he has offered delivery service to women hotel owners in his town if they buy piglets from him. One commercial breeder commented that demand for piglets and the profit margin on sales were low, making it difficult to run a large-scale business.

#### **Pig farming and sales (IQ 4 & 5; FQ 2 & 3)**

- In women's individual interviews, 4 reported selling 2-3 fattened pigs in a year, and one also sells 15 piglets per year and other sells 20 piglets in a year. One woman sells both fattened pigs and piglets but the sale per year was not reported. One reported selling 4-5 fattened pigs in a year. 2 reported earning Rs 30,000- 40,000/ year; 2 earned 69,000-72,000/year; and 1 earned 80,000/year.
- In women's group discussions, 1 woman reported earning Rs 30,000/year from selling pigs; 1 earned Rs 48,000/year; and 7 earned Rs 50,000/year from pig sales.
- Among 4 men in individual interviews, 3 reported selling 2-3 fattened pig, and 1 reported selling 4-5 fattened pigs in a year. One respondent sells 10 piglets in a year in addition to 2 pigs and other also sells 20- 22 piglets in a year. One respondent did not report the number of pigs sold. 3 out of 4 indicated earning Rs 60,000 to 70,000/year and 1 indicated earning Rs 75,000 in a year from selling pigs.
- In men's group discussion, 3 men reported earning Rs 40,000-45,000/year from selling pigs; 3 reported earning Rs 50,000- 55,000/year; and 1 earned Rs 60,000/year. One respondent could not estimate his income from pigs, but said he earns Rs 70,000- 75,000 from pig and goat sales in a year.

#### **Pig sales, control of earnings in the family (IQ 5, 11, 12, 13; FQ 8, 9, 10, 12)**

- In women's individual interviews, 3 reported handling the sales of pigs themselves and they also received the sales income, whereas 2 reported both husband and wife did the selling and both received the sales income. 3 women reported they make the decision about selling pigs and 2 reported both husband and wife make the decision. 4 reported selling from home to the butcher, 2

also sell to other villagers from home and take unsold piglets to the local markets. No transport was needed; piglets could be easily carried to market when required.

- In women's group discussion 4 women reported the decision to sell pigs is their own, 4 reported a joint decision by husband and wife and 1 reported her husband decides by fixing the sale price of the pig. 2 women reported they receive the income from pig sales, and 7 reported both husband and wife receive the sales income. All participants sold fattened pigs from home to the butcher, and also to villagers and all sell piglets at the market. No transport was needed, piglets were carried by hand.
- In men's individual interviews, 1 reported his wife handles pig sales, 1 reported he himself sells and 2 reported both husband and wife sell. 3 men reported their wives receive the sales money, and 1 reported both he and his wife receive the income. 3 men indicated both he and his wife jointly make decisions about selling pigs, and 1 indicated his wife makes the decision. All male respondents reported selling fattened pig from home to the butcher. One also sells piglets to villagers from home. No transport was needed.
- Of the 8 men in group discussion, 5 indicated both husband and wife jointly make decisions about selling pigs; 3 reported his wife or mother making the decision. In 4 cases a wife or mother set the selling price. 6 men reported women in the family receive the money from pig sales; 1 said he receives the money but if he is absent wife receives it; and 1 said both husband and wife receives it. All said they sell fattened pigs and piglets from home, and no transport is needed. One participant commented that sometimes he takes piglets to the weekly market, but has to pay people to transport them back home if the piglets are not sold. The market for piglets is weak so people sell from home even though they get a lower price.

#### **Information on Prices of pig (IQ 14; FQ 11)**

- Among women in individual interviews, 3 reported they had access to the current market price for pigs and 2 said both husband and wife had access to price information. 3 reported getting information of the market price from other villagers; 1 got information from the butcher; and one said both she and her husband get current prices from the weekly market.
- All the women in group discussion said that they get information on the current price of pigs from the market and from villagers. One respondent also said that her husband gets information from market.
- In individual interviews, 3 men said both husband and wife get information on current prices for pigs, and 1 said his wife gets the information. 2 said the information comes from other villagers, 1 said from market, and 1 said his family cross checks the price in the market and with the local people who rear pigs/piglets.
- All men in group discussion reported that the Meat Management Committee sets the price because Dhankuta municipality has a working procedure for meat sales. All said both men and women in the family get information on prices.

#### **Use of Income from Pig Production/Decisions on HH Expenditure (IQ 6 & 15; FQ, 13 & 14)**

- All 5 women in individual interviews reported that decisions on use of income were made either by herself or jointly with husband. This covered expenditure on basic needs, healthcare, children's education, reinvestment in pig farming, HH infrastructure, vehicles, mobile phone and tools. None reported husbands making decisions alone on use of income.
- In women's group discussion, all 9 reported that decisions about use of income are made jointly by wife and husband. All reported they use income for HH needs, education, buying piglets and health care for the family.
- In individual interviews, all 4 men reported either women or both man and woman jointly make decisions on use of income from pig sales. Income was spent on household needs, healthcare, children's education, reinvestment in pigs, HH infrastructure, vehicles and mobile phones. None reported that they made decisions alone on expenditure of income.

- In group discussion, all 8 men reported that decisions about use of income are made jointly by husband and wife. All said they spend on household needs, education and healthcare. One participant also said that he spends Rs 1,000-2,000 every month for veterinary care of his pigs and maintenance of the shed.

#### **Access to financial services (IQ16 & 17; FQ 15 & 16)**

- All women in individual interviews reported they have access to credit/loans, with 1 reporting she herself had the access and 4 reporting both she and her husband had access. 2 out of 5 women reported having taken out a loan, in the husband's name in one case; they received loan from village association and bank. Others have access to loan from village associations, mother's group, cooperative or banks. 4 out of 5 women reported having savings. 3 saved money themselves and one reported her husband did the saving. Respondents who reported saving had more than one saving account in village associations, cooperatives, Mother's Group, and savings and credit group and banks. The amount saved ranged from Rs 50 to Rs 500 per month.
- In women's group discussion, all 9 women reported having access to credit/loans but it was not recorded whether this was available to them directly or through another family member, or whether or not they had received a loan. All reported saving money themselves and also reported saving in more than one association, saving group or bank. The amount saved ranged from Rs 50 to Rs 300 per account.
- In individual interviews, all 4 men reported that they have access to credit/loans, but none of them have received loan. Two reported they (men) have access; and one each reported wife has access, and both husband and wife have access to get loan. They get loan from village associations, micro finance/cooperative or bank. All reported saving money and some individual have more than one saving accounts. Two reported men save the money, whereas two said both man and woman save money. They reported saving money in village associations, micro finance/cooperative or bank, amount ranged from Rs 200 to Rs 500 per month.
- In men's group discussion, all 8 men reported having access to credit/loan. 6 reported they have received loan, among them 3 took loan by themselves and 3 reported women family member took the loan. Potentially, they took loan from their membership village associations, cooperatives or banks which provide loan to their member account holder. All reported saving money. 3 out of 8 reported they (men) save, 4 reported women family member save and 1 reported both man and woman save the money. They reported saving money in village associations, cooperative and banks. The amount saved ranged from Rs 10 to Rs 1000 per month.

#### **Leisure (IQ 23, 24, 25 & 26; FQ 20, 21 & 22)**

- All but one of the women in individual interviews and group discussion reported having leisure time. All women in group discussion reported doing HH tasks like cutting straw for thatching roof, cutting grass, cutting firewood and collecting water, with one saying she also watched TV. In contrast, all 4 women in individual interviews with leisure time said they relaxed or socialised, watching TV, visiting friends/family or resting. Only one woman reported having no leisure time. 1 woman reported prioritizing economic activities over leisure, and 2 reported they have small children (which stops them from doing economic tasks).
- All men in individual interviews and group discussion said they have leisure time. 5 out of 8 men in group discussion reported doing productive tasks in their leisure time, including goat and pig rearing, cutting grass for cattle, vegetable farming, fencing or making shed, working in cooperative/NGO. 3 men reported spending time chatting with friends, playing with mobile, watching TV and resting. In individual interviews, 2 men reported doing productive tasks (cutting grass, tending to pigs, minding shop) and 2 reported sleeping, watching TV and visiting friends.

### **Next Preferred Economic Activities (IQ 18; FQ 17)**

- In women's group discussion, 4 said they would like to do tailoring (cutting & sewing), and 5 nominated various activities - making pickles & chips, running a shop, paid employment, government job and opening a slaughter house. Among women in individual interviews, two respondents reported their next preferred economic activities as running a tea shop and running a retail shop. 3 could not explore other possibilities because they had small children to care for.
- In men's group discussion, 5 said commercial farming of high quality pig breeds would be their next preferred economic activity, as it was a good income source. Among the other respondents, one wanted a salaried job, one wanted to do hotel business, and one did not have any other preference. In individual interviews, 2 men wanted to expand or start poultry farming, one wanted to open a shop, and one had no other preference.

### **Conclusions**

- The majority of those interviewed were Janjati (92%), and 8% identified as Brahmin/Chettri. For the majority (in individual interview), a male was the head of household, and in 2 cases female were the head of household.
- Women appear to have strong role in decision-making on family matters (marriage, child bearing, child's education, healthcare and community participation), either making decisions themselves or jointly with husband, with few exceptions. In few cases, decision of marriage was regarded as the decision of one who marries.
- All households owned land. In 31% of household, land was in the sole ownership of a woman in the family, in 7% of household land ownership was in name of both husband and wife, and 62% of household land ownership was in name of men. A few men noted decision of buying/selling land would be made jointly with wife. One woman (FHH) could make the decision of buying/selling house.
- All households have multiple sources of income including pig farming which was a traditional activity for almost all. Households sold 2-5 fattened pigs in a year; some also sold 10-20 piglets in a year. Income from pigs ranged from Rs 30,000 to Rs 80,000 per year. Majority earned 50,000-60,000 Rs/year, and the next most common amount was 60,000-80,000Rs/year. Majority of men were engaged in other income earning activities, including agriculture, vegetable farming, animal husbandry, small businesses and paid employment in varieties of jobs. Pig farming probably ranked in 3rd or 4th position in the sources of HH income.
- Women appeared to spend more hours on both household tasks and pig farming than men. The number of hours women spend doing household tasks varied widely from 1-9 hours, but majority worked 3-7 hours/day; and spent 1-5 hours in caring pigs. Few men reported helping their wives in household tasks. A few men spent 1-3 hours in rearing pigs. Majority reported 1 person himself/herself or spouse, or 2 people in the family (in-law/spouse/parent) are engaged in pig farming. Men spend 10-12 hours to whole day in income earning activities.
- Almost all men and women reported having some leisure time. Majority of women nominated to do HH tasks during leisure and few women nominated to relax or socialize. Most men wanted to do outside household tasks or income earning task during leisure. If they had more leisure time, most women expressed a preference to do income earning activities and one woman wanted to open a slaughter house. A few women could not explore other opportunities because they had small children to care for. Almost all men wanted to do business or salaried job if they had more time, with 5 nominating commercial farming of high quality pig breed as the business they would like to do.
- Majority of men and women have access to buying hybrid piglets (not necessarily knowing name of pig breeds). Few women reported having knowledge of better pig rearing techniques. Some learned by seeing other villagers rearing pigs and some got advice from vet. Few men reported having knowledge and techniques about better rearing of pigs, among them three have received trainings related to pig rearing, and one reported having vet visits, providing vitamins, vaccination and

managing dietary needs of pigs.

- Majority had increased the time spent on pig rearing probably due to rearing hybrid pigs which need extra care in dietary feed, cleaning sheds and health care (vet visits, medicines and vaccinations).
- In most households the decision about when to sell pigs was made by wife and husband jointly and the second highest response was women making decision of when to sell pigs. In individual interviews, sales transactions were mostly done by women or jointly by man and women. Income from selling pigs was received by women in just over half the households. Most of the sales transaction was done from home, selling fattened pigs to butcher and piglets to villagers. Unsold piglets were taken to weekly market.
- Decisions about use of income was made jointly by wife and husband in most households, but sometimes by a woman. Income was used for household expenditure like basic needs, healthcare, children's education, reinvestment in pigs, household infrastructure, vehicles and mobile phones.
- Both men and women were able to access information on the current price of pig, and they got information from weekly market, butchers, other villagers (who rear pigs), and also from Meat Management Committee of Dhankuta (which has procedure to fix price).
- All women and men had access to credit/loans from village associations, microfinance institutions, cooperatives or banks and some women and men had taken out loans. All households had savings. In almost all households women saved money, usually having several accounts with village groups/associations, cooperatives or banks. A majority of men also saved money with these institutions.
- Bhuni farmer, Pig Market Agent (PMA) and Commercial Pig Breeder Farmer (CPBF) had been providing information related to pig farming to their customers. CPBF and PMA had more male customers so males received pig rearing information, whereas Bhuni farmer had more female customers, who asked for information about rearing pigs. The CPBF reported helping women buyers by transporting piglets to them in his own vehicle.

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