



***Gender sensitive research enhances agricultural employment in conservative societies: the case of women livelihoods and dairy goat programme in Afghanistan and Pakistan***

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### **Abstract**

Gender roles in agricultural activities in the developing world where agriculture accounts for up to 80% of employment, are still not fully documented and recognized. This information gap affects the success of any development interventions targeting beneficiaries whose livelihoods depend on agriculture. This paper reports results from participatory gender-sensitive research undertaken in Afghanistan and Pakistan where a different approach had to be used to unravel gender roles in agricultural activities in conservative societies. It further explains how this information was used to inform the implementation of research and development activities in the communities leading to enhanced agricultural employment. Results indicate that in general, females have greater involvement in livestock-related activities compared to males in the two countries. Males on the other hand are more involved in crop-related activities than females. In terms of access to and control over the agriculture-derived incomes and decision-making, males have more access and control over these incomes and resources though with greater variation between and within the two countries. The cultural norms in the conservative societies of the two countries, particularly in Afghanistan, do not allow women to move out of their home without their guardian, limiting hired agricultural jobs for women. This is particularly important as more women-headed households are landless with severe resource poverty. Research and development interventions that target this vulnerable group of the society therefore should consider the variations. The current project, funded by IFAD, has demonstrated that village women can be organized into effective women groups. Such interventions would increase women's access to markets and improved production technologies, and allow the production of nutritious food to their families and generating income on a sustainable basis.

## 1. Introduction

In societies where cultural norms restrict women leaving their home unaccompanied or appear in public meetings, undertaking gender-sensitive research is a big challenge. Information about gender roles, constraints and priorities in such areas, is therefore scarce. In terms of labour market, lower educational attainment coupled with social norms that restrict mobility confine women to a limited range of employment opportunities and low wages. When it comes to disaggregating gender roles in agricultural activities, its necessity is often not given due attention at the decision makers level. In the tribal regions of Afghanistan and Pakistan, women are allowed for interview by female interviewers only by a strict approval of the husband of the interviewee. The female interviewers themselves, however, cannot travel on their own without the accompanying *mahrammat*<sup>2</sup> (acceptable male guardians such as father, brother son and any other male with whom a woman may not marry) which increases cost of such research considerably. All these restrictions severely limit women's activities, including access to education and employment outside their home, leaving them largely confined to their homes. For example, in Afghanistan, only elderly widows without sons can go to the bazaar (Grace 2004).

Disparity in literacy levels by gender is huge in Afghanistan and Balochistan province of Pakistan. It is relatively better in Punjab province of Pakistan where 42.2 % girls are educated compared to 73.4% males. The difference, however, is much higher in rural than in urban areas. In most rural settings, girls have little access to education both for cultural and infrastructural reasons. In many provinces in Afghanistan well below 15% of school age girls attend primary school and this figure drops dramatically as girls' progress towards higher grades (Strand and Olesen, 2005).

The contribution of women in agricultural activities in the Central and West Asia and North African countries is still not fully documented and recognized in economic terms. Jaim and Rehman (1988) identified five categories of economic activities for rural women viz. i) household work ii) family farming iii) family non-farming (sewing, hand-knitting) iv) non-agricultural work (teaching, civil service) v) agricultural work outside of the family (hired by others, post-harvest operations), which are further grouped into: a) crop activities, b) animal husbandry, and c) other professional and technical work.

This paper explains the approach taken by an on-going research programme (funded by IFAD) on Women Livelihoods and Dairy goats in conducting gender-sensitive research and addressing the limited access of scientists to the target beneficiaries. The paper summarises the work share of women and men in agricultural activities, focusing on livestock and particularly goats, and their roles in decision-making in Pakistan and Afghanistan applying participatory approaches. It further explains how this information was used to inform the implementation of research and development activities in the communities.

## 2. Methodology

The project “Rehabilitation of agricultural livelihoods of women in marginal and post-conflict areas of Afghanistan and Pakistan: Participatory Research, dissemination and adoption of improved dairy goat production systems” is being implemented by ICARDA with NARS, NGOs and Ministries etc in Balochistan and Punjab provinces of Pakistan and in Baghlan and Nangarhar provinces of Afghanistan. It started its activities by interacting closely with all members of local communities, supporting already established groups of women and initiating new ones with the help of women facilitators. The approach used in pursuing gender-sensitive research in these countries was very different compared to conventional approach. As women are not allowed to directly interact with male researchers, educated women coordinators, female facilitators and female activists were used to reach to target women beneficiaries.

Three methodologies based on FAO (2003, 2005) were followed to identify the role of women in goat production:

- (1) Informal rapid appraisal using PRA techniques was conducted for qualitative understanding of the farming systems, identification of agricultural production constraints, setting priorities for research and development which allowed a rapid and progressive learning of the multidisciplinary scientists.
- (2) In Pakistan, quantitative data was collected using semi-structured questionnaires. A total of 150 female community members (i.e. 15 females per village) were interviewed. Data collected included on conventional goat management practices, poverty profile, tenancy status, gender division of labour and percent share of income sources in different categories of the participating households etc. Trained female enumerators were used to collect data from participating women. Male members of the households were also interviewed to clarify and crosscheck the information given by female household members. A separate set of questionnaires were used targeting producer, middlemen, commission agent, processor/butcher, and consumers. Data were then entered in the SPSS for statistical analysis.
- (3) Focus group interviews were conducted which consisted eight to ten farmers and two to three interdisciplinary scientists (with at least one women scientist) participated. In this interview participants discussed ideas, issues, insights and experiences with facilitation of a moderator. The group dynamics helped to collect useful and detailed information on each topic. Issues covered included village characterization, livelihood source and relative importance of each source, gender division of labour, goat production practices and marketing practices of small ruminants. The main findings of each village group were written on charts with the help and endorsement of the participants of each group.

### 3. Results and Discussions

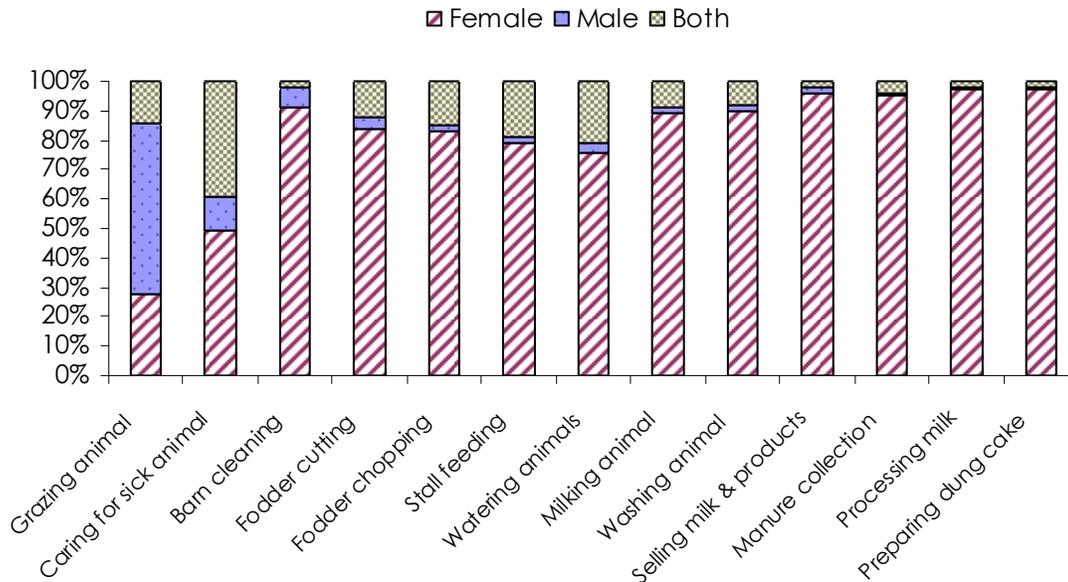
#### *Livestock production systems*

In Afghanistan and Pakistan, livestock play a crucial role in the fulfilment of basic subsistence requirements of the poor. According to Livestock Census (2006)<sup>3</sup>, in Pakistan, the contribution of the sector to the national GDP at 11% is higher than crops (10.3%). The same survey reported 29.56 million cattle, 27.33 million buffaloes, 26.49 million sheep and 53.79 million goats in Pakistan. In Afghanistan, the first-ever census undertaken in 2003 by FAO<sup>4</sup>, reported 3.7 million cattle, 8.8 million sheep, and 7.3 million goats. In mixed crop-livestock system, resource poverty worsened by climate change (e.g. drought, low and erratic rainfall), have forced many people to rely largely on livestock rearing. Three farming systems are identified in Afghanistan: mixed crop-livestock, agro-pastoral and pastoral (nomadic) systems. More than 45% of Afghanistan land is rangeland with only 5.1% irrigated and 7% rain-fed, which shows the potential for livestock production. Products from goats are mainly milk, meat, and cashmere and from sheep are meat and wool. Nomadic Kochis are known for their specialisation in sheep herding. Previous project by FAO<sup>5</sup> has found out poultry raising in Afghanistan is done by women.

Large and small ruminant livestock are largely maintained on grazing, some cultivated fodder, crop residues, and under special circumstances on some concentrates. The rangelands, uncultivated wastelands and cultivated fallow lands are the main grazing sources. Depending on season and physiological status, goats are supplemented with cut-and-carry tree leaves and concentrates. Breeding is largely uncontrolled – males are allowed to stay in the herd/flock all year-round mating. Fattening for meat is practiced particularly by business-oriented folks targeting holidays.

#### *Gender roles in livestock related activities*

Sex disaggregated information for livestock related activities in the Punjab province of Pakistan is given in Figure 1. Results clearly indicate that most livestock related activities are undertaken by females. Females play a major role in barn cleaning, fodder cutting and chopping, stall feeding, watering, washing, milking, and processing milk by-products into useful food items (cheese, butter, yoghurt, etc), manure collection and preparing dung cake. Grazing is core responsibility of the males although females also graze animals in the periphery of villages and on fallow lands near homestead as they are not allowed to go far alone because of the community's norm.



**Figure 1.** Gender roles in livestock related activities in Punjab, Pakistan

In Afghanistan, men are responsible for herding, preparing/purchasing feeds, and making up shelter for livestock. Males are also hired for making up shelter for the animals. On top of other home activities, women are responsible for tethering, milking, processing milk, cleaning barn, preparing dung cakes, and disposal of animal wastes. Cleaning/washing, feeding, watering, collecting forages, marketing animals and their products are done both by men and women. In general, women's work varies from place to place in Afghanistan. Among most settled rural families, women participate in agricultural work only during light harvesting periods, and are responsible for the production of milk products. Some women specialize in handicrafts such as carpet and felt making. Nomadic women care for young lambs and kids and make a wide variety of dairy products, for sale as well as family use. They spin the wool sheered by men and weave the fabric from which their tents are made. Felt-making for yurt coverings and household rugs is also a female activity.

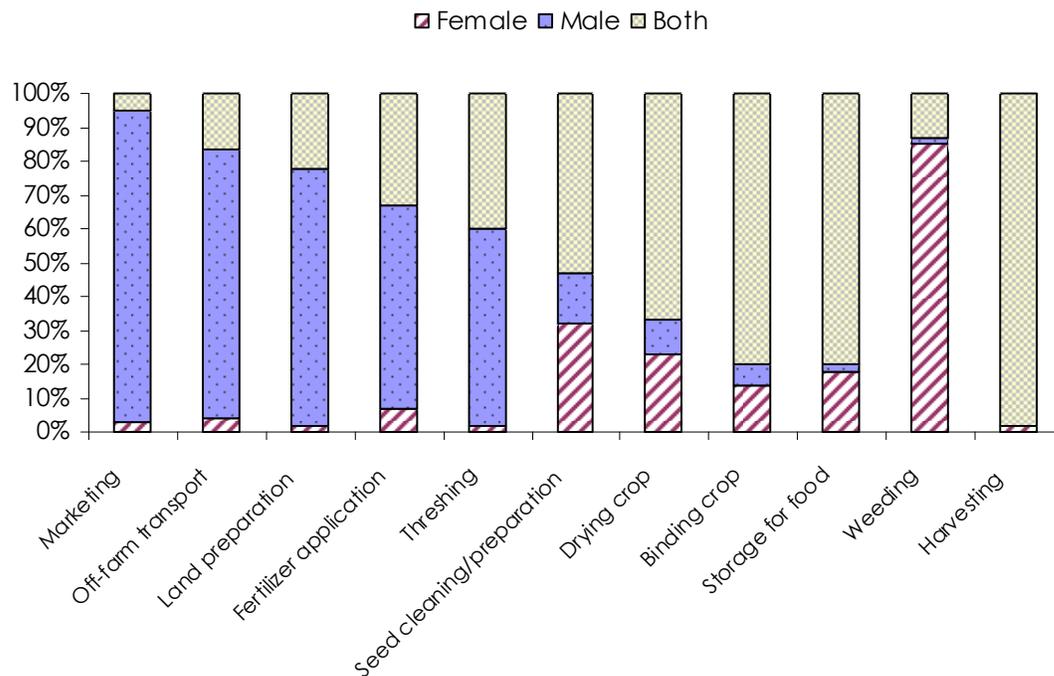
Our finding for Afghanistan is consistent with Fattori<sup>6</sup> who reported that women and children are the main tenders of animals – boys take animals for grazing; women and girls take care of newborn and sick animals, milking, collecting fodder and stable feeding.

Our findings for Pakistan (Figure 1) are consistent with previous reports by Ahmed *et al.* (1988, 1990) who reported that majority of rural women are engaged in livestock related activities with up to 70% contribution for the sector. Freedman *et al.* (1988) have pointed out that livestock production and management is mainly the job of women in Barani agriculture. Masood and Mahjabeen (1989) also noted that women are engaged in

10 out of 14 livestock production and management activities in the Barani areas of Pakistan. Taj *et al.* (2007) who studied the gender involvement in rain-fed agriculture of Pothwar in Pakistan has reported similar trend in which women role in livestock related activities is high (60-90%).

### ***Gender roles in crop related activities***

Gender roles in various cropping activities for Punjab province of Pakistan is shown in Figure 2. Results indicated that most crop-related activities are done by males. However, females play a major role in weeding, seed cleaning and preparation. Land preparation, fertiliser application, threshing, off-farm transport, and marketing are all major activities performed by men. Activities such as binding, harvesting, drying and storing of the produce are done by both females and males in Punjab.



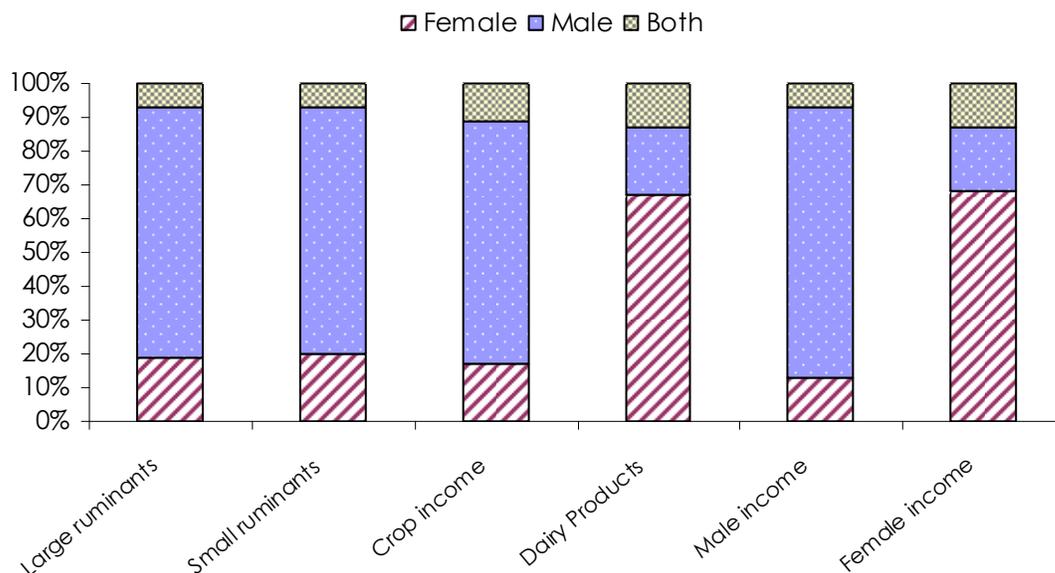
**Figure 2.** Gender roles in crop related activities in Punjab, Pakistan

In Afghanistan, females are largely responsible for weeding, harvesting and threshing. Men undertake seed preparation, fertilization, spraying, threshing, hauling, cleaning, marketing, buying seeds, fertilizers and chemicals, selling products and by-products. Males are also involved in hired cropping activities such as seed and land preparation, ploughing, transplanting, broadcasting, weeding, fertilization, spraying, hauling, cleaning, harvesting, and marketing. Females' involvement as hired is limited and when this happens they are hired for activities such as broadcasting, fertilization, threshing, hauling, cleaning and sometimes marketing.

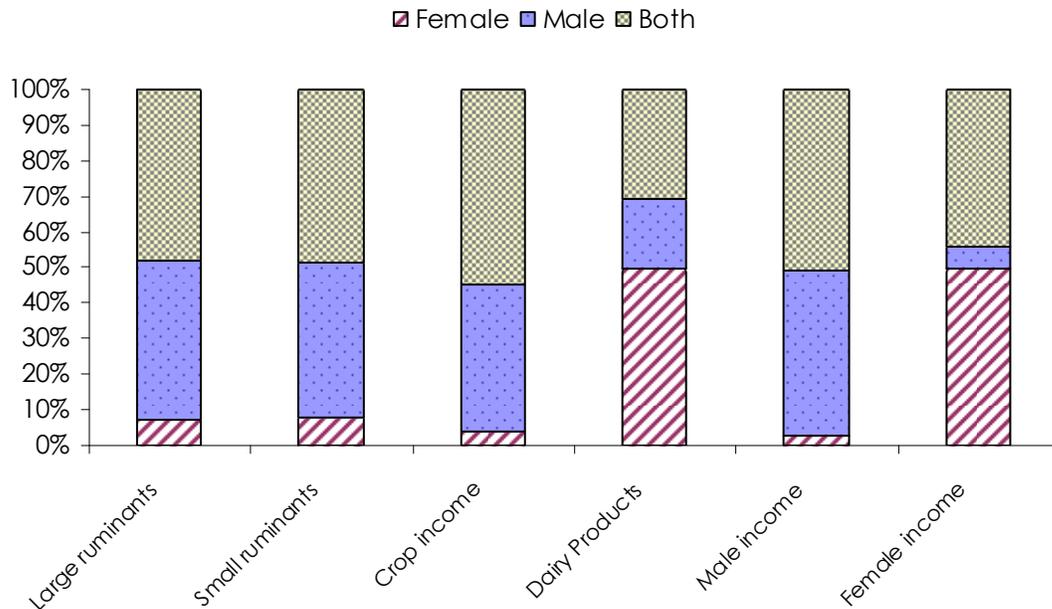
Khan *et al.* (1999) studying in Pothwar found out that generally females were not involved in sowing, application of fertilizer, ploughing or irrigating the fields. With some degree of variations, the present results for Pakistan are consistent with previous reports by Bahar (1987) and Freedman and Wai (1988) who found 90 percent of the Barani women participating in agriculture. Ahmed *et al.* (1988) identified that men’s participation is dominant in heavy and mechanized farming operations while women participation is significant in post-harvest activities, which is confirmed by our studies. Taj *et al.* (2007) studying on gender involvement in rain-fed agriculture of Pothwar (Pakistan) reported that similar trend in which women role in livestock related activities is high (60-90%) compared to their role in crop related activities. Similar trend was reported by Abdelali-Martini *et al.* (2008) who studied gender dimension in the conservation and sustainable use of agro-biodiversity in four West Asian countries (Jordan, Lebanon, Palestine, and Syria).

***Gender difference in access to and control over agriculture-derived incomes***

Huge gender difference was observed in keeping and spending agriculture-derived incomes in Punjab province of Pakistan (Figures 3 and 4). Except their own incomes (69%) and the income from selling dairy products (67%), the income from all other sources is kept by males. In Punjab, females are largely independent to decide on their own income and the income from selling dairy products. Males are largely dominant in spending the income from crops and most livestock sales. Females are consulted for only half (48-54%) of the incomes in making decisions.



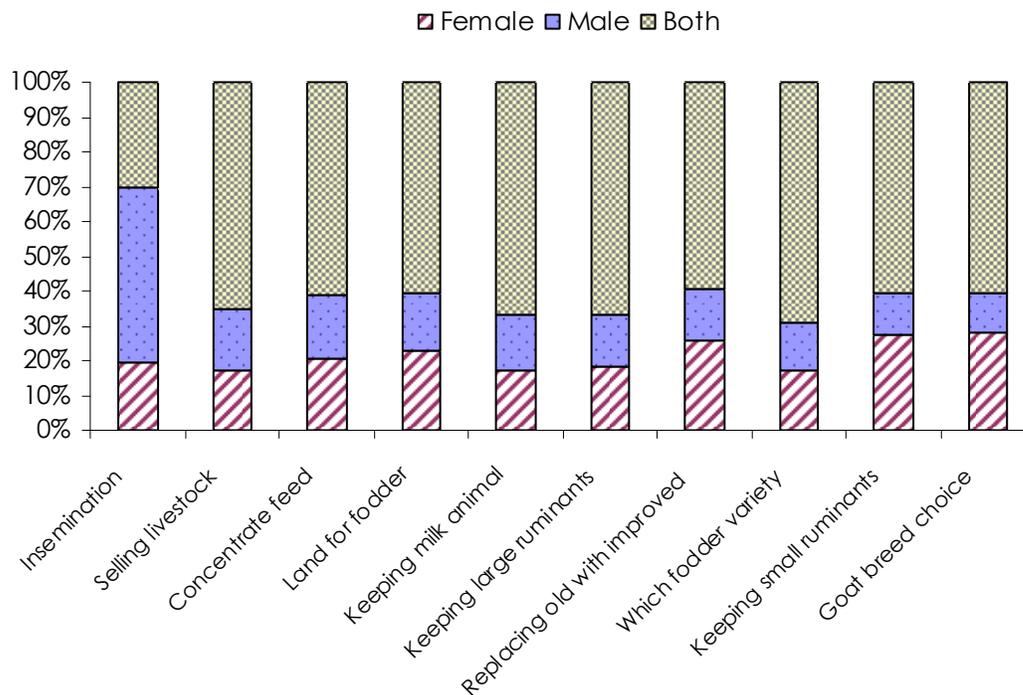
**Figure 3.** Pattern of keeping income in Punjab province, Pakistan



**Figure 4.** Pattern of spending income in Punjab province, Pakistan

***Gender difference in decision making***

In the patriarchal family system, particularly in the tribal regions of Pakistan including Balochistan and Afghanistan, men are mostly involved in formal economic and social affairs and decision making processes in the community and their family. However, in Punjab province of Pakistan women have significant role in the decision making process regarding family affairs, farm and livestock management activities (Figure 5). As reported during interview, except for decision regarding insemination of cows where their participation is low (19-30%), females are actively involved in decision making with their husband regarding most other livestock-related activities. The analysis reflects that although mutual consultation seemed to be the norm for most of the livestock related decisions yet females’ role in decisions to keep goat or sheep, breed selection, replacing old breeds with improved one, allocation of land for fodder and putting animals on concentrated feed is found to be more prominent.



**Figure 5.** Gender role in decision making in Punjab province, Pakistan

***Activities performed by women each day***

A separate analysis on time-spent on specific activities indicated that rural women are performing multiple roles in rural setup and hence, are over burdened. In Punjab, women remain busy, on average, for more than nine hours a day. Up to 13 major activities were performed daily by rural women. Besides taking care of different household activities, a considerable time (158 minutes, 25% of working time) was spent on livestock-related activities (fodder cutting, feeding, watering and animal care), which are largely accepted as a part of routine household activities.

***Off-farm activities***

Some striking information from Baghlan-e-Sanhati district of Afghanistan is that traditional customs prohibits recording the number of females in a family. Muslim men can get married to up to four wives and national census has never been accurate. This may mean that women can easily be ignored from future development plans worsening their situation. In Nangarhar and Baghlan, women are not allowed to go out alone except to a village elder’s home<sup>7</sup>, which is acceptable by men and the community. Inaccessibility due to lack of roads connecting villages, limited access to health care centre, market, education, potable water, seasonal livestock and human diseases, drought,

and cold stress are all important issues in that region. In some areas, old women and children are engaged in on-farm activities with men (about 60% done by men, 30% by women and 10% by young children). Landless people sell their labour outside their village. In some villages up to 70% of the households can be landless. Men had to work hard as women are not allowed to move outside of their homestead unaccompanied. Incomes are largely (90%) controlled by men and decisions for the whole household are made entirely by men. However, incomes from goats are largely used by women and children for purchasing shoes and cloths.

#### **4. Best practices: the case study of Women livelihoods and dairy goat programme in Afghanistan and Pakistan**

The result of gender analysis reported here is part of an on-going IFAD-funded programme on “Rehabilitation of agricultural livelihoods of women in marginal and post-conflict areas of Afghanistan and Pakistan: Participatory Research, dissemination and adoption of improved dairy goat production systems”. The best practice here is that the programme used information gathered during baseline study on gender and livelihoods by the programme to fine-tune its activities in the two countries. The programme reached its target beneficiaries by interacting closely with all members of local communities, supporting already established women groups and initiating new ones with the help of female facilitators. Since the programme started in 2006, over 800 women (546 women in 14 villages in Afghanistan and 255 women in 15 villages in Pakistan) became members of local women’s organizations<sup>8</sup>. The project has managed to convince communities on the value of collective action in solving their common problems through participatory adaptive research. The following activities were (are being) undertaken:

- Re-stocking of dairy goats through credit-in-kind: restocks goats that were lost during the war with adapted goat breeds; women and women-headed households are target beneficiaries through a ‘credit-in-kind’ scheme, in which a woman participant forwards a young female goat to another beneficiary, allowing the programme to reach out to many more women.
- Training of basic community animal health workers<sup>9</sup> and providing vaccination and prophylactic dosing or spray of animals against parasites
- Training of women trainers on hygienic milk handling, milk quality control and milk processing with provision of the necessary equipments to women beneficiaries
- Undertaking adaptive research and introducing successful technologies to improve the feed resource base (e.g. mulberries, intercropping of legumes with maize, etc), animal health status (participatory identification of prevalent livestock diseases), and enhancing gene flow (‘pass-on-the-gift’ approach and proper use of bucks for breeding), evaluating supplemental feeding (with balanced ration, improved forages, least cost diet, etc) on goats’ milk yield, fattening performance of kids.

- Undertaking benefit-cost analysis and socio-economic impact assessment of the introduced technologies

Establishing and supporting women's groups through training their members and female facilitators, were core elements of the project in the two countries. Testing improved feeding technologies, animal health care, fattening targeting markets, and improving feed resource base and using local goat genetic resources were specific activities undertaken with participation of women farmers in the two countries. Organised women groups are now procuring improved feeds and preparing to improve their bargaining power to access better markets. Lessons learnt in undertaking gender-sensitive research in such challenging cultural settings and man-made problems would be an asset in setting-up important action research for development benefiting the poor women and their families in other parts of the developing world.

The PRA tools in gender analysis, which were adapted to local needs had helped the project to achieve its mission. Quantitative approach was also useful in Punjab province of Pakistan where the women restriction to move is a bit relaxed and level of literacy is better. Resistance to gender analysis was overcome by the use of trained women to interview women and trained men to interview men separately. Some already available women's groups had helped the project to take off smoothly. Respect paid to local culture and the use of local scientists was the pillar for the success achieved so far.

In Afghanistan, earlier project called the PIHAM<sup>10</sup>, highlighted gender-differentiated roles and responsibilities in livestock management, showing the magnitude of women's involvement in and knowledge of livestock rearing. Our present finding is consistent with this report and related report (Hill, 1997) which noted that, unless both women's and men's knowledge about animals are included, effective responses to livestock production constraints could not be developed.

The project has also established links with private sectors, feed suppliers and veterinary inputs, women's groups, farmers' organizations, NGOs and donors through training, workshops, information sessions through involving them at all stages of project cycle.

## 5. Conclusions and Recommendations

- In the two countries, as compared to men, women participation in most of the agricultural activities was important, and particularly their contribution in livestock-related activities was amazingly high. Therefore any investment programme in livestock in the rural areas of these countries should consider women participation in the planning and implementation phases.
- Women are largely denied from off-farm income generating activities due to socio-cultural norms which restrict them to move outside of their homestead and

limitations for access to education of girls have largely hampered their employability and competitiveness.

- Trainings women in income generating activities (to create in-house jobs) such as dairy processing, cashmere production and processing, handicrafts, carpet and felt making would offer them more opportunity. This could be further strengthened by forming women producer groups which will improve their access to markets, credits, and bargaining power.
- Educating women is educating family: they are not only equal partners in crop and livestock production and management but also are responsible for the food, nutrition and well-being of the family and society.
- Easing mobility constraints would require fundamental cultural shifts which could only happen over time through education; long-term cultural change will come most powerfully from educating girls
- Female enrolments in school could be increased by bringing schools to where the girls live or bringing girls safely to schools. This could be facilitated through careful consultative process respecting cultural and traditional norms.
- Increasing funding for capacity building program and stipends to increase girls' school attendance would be necessary.
- It is important to make women feel secure enough to work outside their homes, even when this is not the norm.
- As men are overburdened for off-farm activities when this is available, cultural shifts to encourage women employability would significantly improve the food security situation of the families.
- In tribal regions of the two countries, females do not make decisions on major incomes except in isolated cases where they are allowed to keep incomes from sale of dairy products.
- Policies should incorporate measures to create an environment that enables the reduction of gender gaps

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## Notes

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<sup>2</sup> [http://womenshistory.about.com/library/ency/blwh\\_ghanistan\\_gender\\_roles.htm](http://womenshistory.about.com/library/ency/blwh_ghanistan_gender_roles.htm)

<sup>3</sup> <http://www.statpak.gov.pk/depts/aco/publications/pakistan-livestock-census2006/lsc2006.html>

<sup>4</sup> <http://www.fao.org/english/newsroom/news/2003/25511-en.html>

<sup>5</sup> [www.globalfoodchainpartnerships.org/cairo/papers/TomFattoriAfghanistan.pdf](http://www.globalfoodchainpartnerships.org/cairo/papers/TomFattoriAfghanistan.pdf)

<sup>6</sup> [www.globalfoodchainpartnerships.org/cairo/papers/TomFattoriAfghanistan.pdf](http://www.globalfoodchainpartnerships.org/cairo/papers/TomFattoriAfghanistan.pdf)

<sup>7</sup> In Afghanistan, each village has its own elder which is respected by the community.

<sup>8</sup> [http://www.ifad.org/newsletter/pi/s\\_109.htm#3](http://www.ifad.org/newsletter/pi/s_109.htm#3)

<sup>9</sup> Because of the prevailing cultural norms that restrict women to move around provide service to others, only men were trained as basic animal health workers; however, women were also trained to do some very basic activities like de-worming or spraying for external parasites control.

<sup>10</sup> Afghanistan "Promotion of Farmers' Participation through the Implementation of Animal Health and Production Improvement Modules (AHPIM) in Afghanistan" (TCP/AFG/4553(T))