
Gender Assessment

FP076: Climate-Friendly Agribusiness Value Chains Sector Project

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Detailed Gender Analysis

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I. BRIEF PROJECT BACKGROUND AND KEY GENDER CONCERNS

1. This report presents the detailed gender analysis undertaken during the preparation and design of the Climate-Friendly Agribusiness Value Chains Sector Project (CFAVCP) in Cambodia.

2. The proposed project will invest in pro-poor and inclusive agricultural value chains in three countries of the Greater Mekong Subregion (GMS) – Kingdom of Cambodia (Cambodia), the Lao People's Democratic Republic (Lao PDR) and the Republic of the Union of Myanmar (Myanmar).¹

3. The project's impact will be enhanced productivity, quality, value addition and rural household income in the project areas of Kampong Cham and Tbong Khmum provinces, and Kampot and Takeo provinces along the South-coastal transport corridor. The outcome will be more efficient resource utilization and climate resilience for competitive and inclusive agribusiness value chains, through the provision of (i) improved critical production and post-harvest infrastructure (ii) reduced energy costs by promoting renewable energy use and (iii) offering targeted agribusiness policy and capacity support services.

4. The approach to project preparation included identifying a small number of core / representative subprojects based on established criteria (e.g., contribution to food security, energy security, water security, environmental sustainability, positive social impacts) and through stakeholder consultations. Cambodia has experience in sector modality in terms of identifying and realizing subprojects during project implementation, and has (i) an agricultural sector development plan, (ii) reasonable institutional capacity to implement the plan, and (iii) suitable policies applicable to the sector. Furthermore, capacity building will be integral to the investment.

5. Under the PPTA three subprojects have been identified and feasibility studies were conducted. Gender analyses of the three subprojects were carried out and the findings which are presented below were used in developing GAP recommendations. The subprojects are:

- (i) Irrigation and Water Catchment Modernization and Rehabilitation: Trapeang Run Reservoir and Irrigation Scheme
- (ii) Drip Irrigation in Mango Production in Trepeang Krangung Commune, Tram Kok District, Takeo Province
- (iii) Cooperative Cassava Chip Drying and Storage for Trading, Tbong Khmum Province

6. The social development consultant team undertook participatory assessments in these three areas, and the gender analysis findings are presented in this report. The gender issues of the target population were analysed to better understand the context and conditions of the target beneficiaries in the subproject areas. In addition, the proposed subprojects were discussed with male and female beneficiaries in order to elicit their views, opinions and recommendations for the interventions.

¹ ADB. May 2015 'Proposed Loans and Grants Cambodia, Lao People's Democratic Republic and Myanmar: Climate-Friendly Agribusiness Value Chains Sector Project'.

A. Method used for preparing the gender analysis

7. Because of limited time allocated (1 person-month for International Specialist and 1.5 person-months for National Specialist), information concerning the beneficiary populations in the subproject areas was collected from:

- (i) secondary data including recent social survey reports and publications
- (ii) focus groups (both mixed gender and with women separately) with target beneficiaries
- (iii) key informant interviews with local Commune and village leaders and Commune Women and Children Focal Points
- (iv) interviews both face-to-face and by telephone with key informants
- (v) meetings with key Ministry staff
- (vi) meeting with ADB Social Sector Development and Gender Specialists
- (vii) meeting with International NGO, Oxfam.

B. Summary of key gender concerns

8. Women are key actors in the value chains especially for rice and cassava. They are producers, collectors/intermediaries and rice millers, and own and operate their own enterprises. Rural women generally have joint access and control over land and capital together with their husbands, and are solely responsible for managing finances for the household. There is equal access of men and women to markets. Both husband and wife jointly agree when, where and to whom to sell the crop, but it is the responsibility of the wife to contact the local (usually female) collector. Nationally women represent about 60% of agricultural cooperative members, and they run 65% of all enterprises, over a third of all fruit and vegetable processing enterprises and almost half of all wholesale agricultural raw materials enterprises. The vast majority of women's businesses are micro-enterprises (4 workers or less).

9. Women are aware of their own technical shortcomings and express an eagerness to learn new techniques, and they are aware that they have had fewer agricultural training opportunities than men, which may be partly explained with the current practice of addressing invitations for agricultural trainings and meetings to the heads of the household (thus mostly men). The use of visual teaching aids during information and training sessions was also found to be crucial in order to enhance farmers' understanding, especially women who continue to have lower literacy levels. During the PPTA consultations, some women expressed interest to learn how to drive two-wheel tractors and operate other agricultural machinery, which would allow them the opportunity to have paid work and also prepare them for future farm mechanization. Other major challenges faced by both women and men although more so by women include lack of access to year-round water, labor force for agricultural production, affordable credit and market related information.

10. Nationally 22% of all households are headed by women. Female-headed households with more than two children and no adult males are much more likely to be poor and the girls more likely to be working. Households headed by women are likely to be more vulnerable, have smaller land holdings than men, and more frequently suffer from labor shortages. For households headed by older women where adult children have migrated and left grandchildren in their care, their workload is very substantial. In addition to taking care of numerous small children, livestock, they also in many cases need to work as day laborers to make ends meet.

11. One of the main drivers of migration is reportedly household debt and concerns about repaying loans both formal and informal. Rural populations are now characterized by labor shortages for agriculture production, and by large numbers of households headed by older women taking care of numerous small children. Remittances from adult children are frequently inadequate for covering household expenditure, and so grandmothers also seek work.

12. While there are specific gender concerns in each subproject area which are described below, in all three subproject locations male and female farmers explained that the over-riding priority was for sufficient water for agricultural cropping purposes. Lack of year-round water is a major constraint in all three areas. Persistent low levels of trust between value chain actors such as farmer-producers and collectors / intermediaries hinders efficiency and innovation in the selected value chains.

II. GENDER IN NATIONAL CONTEXT (GENDER MAINSTREAMING IN CAMBODIA)

A. Institutional and legislative environment²

13. The Government of Cambodia's Rectangular Strategy Phase III 2014–2018 (RS III) provides the framework for policies and strategies addressing poverty reduction and promoting the economic empowerment of women. The objectives of RS III relate to economic growth, employment particularly for youth, and strengthening institutional capacity and governance. The four strategic rectangles of the RS III are (i) promotion of agriculture, (ii) development of physical infrastructure, (iii) private sector development and employment, and (iv) capacity building and human resource development. Gender equality is not explicitly mentioned in the overarching objective of RS III, but the document clearly refers to promoting the role of women in the economy, empowering women, and further mainstreaming gender in government initiatives as priorities.

14. The institutions to support women's economic empowerment include the Ministry of Women's Affairs (MOWA) and gender mainstreaming action groups (GMAGs) in each line ministry that prepare and implement sectoral gender mainstreaming action plans (GMAPs). In 2013, MOWA launched a Millennium Development Goal (MDG) Acceleration Framework Cambodia Action Plan focused on women's economic empowerment to contribute to the achievement of other MDGs in poverty reduction, health, and education. The plan prioritizes three areas of intervention: (i) providing training for jobs for women that are consistent with market demands; (ii) ensuring that women have the capacity to lead and grow their micro, small, and medium-sized enterprises and can move from the informal to the formal sector; and (iii) improving livelihoods in rural communities, especially for poor women. In 2014 MoWA launched the Cambodia Gender Assessment and 5 Year Strategic Plan for Gender Equality and Women's Empowerment (Neary Ratanak IV), which includes policy recommendations on Women's Economic Empowerment (including Agriculture), education, health, political participation, and climate change.

15. MOWA also manages a network of 13 women's development centers (WDCs) nationwide, which are vocational centers offering training programs in areas such as handicraft production, hairdressing, tailoring, and food processing. WDCs face a host of challenges and are not reaching their full potential as centers that promote women's economic empowerment. There is scope to improve training to be more responsive to the labor market and include entrepreneurial skills training, business development services, and current market information. There is considerable

² Fiona MacPhail. 2015. 'Promoting Women's Economic Empowerment in Cambodia', ADB.

interest in MOWA to introduce public–private partnerships at WDCs as a way of increasing their market and entrepreneurial orientation, and to ensure sustainable financing.

16. The Ministry of Agriculture, Forestry and Fisheries (MAFF) has prepared the Gender Mainstreaming Policy and Strategy in Agriculture 2016–2020 which includes objectives relating to greater participation of women in the civil service; enhanced capacity to integrate gender; increased ability of rural women to access and manage resources; and building and promoting gender equality in access to extension services. With regard to the latter, specific mention is given to assistance with social land concessions, participation in the private sector, participation in village and community groups, and access to credit, and extension services. The CFAVCP GAP is designed to align to and support the operationalization of the MAFF Gender Policy.

B. Legal framework³

17. Cambodia has adopted a legal framework which enhances women’s legal position and can contribute to their economic empowerment. It has ratified 13 International Labor Organization conventions and is also a signatory to United Nations human rights covenants and conventions. These include the Convention for Elimination of All Forms of Discrimination against Women, which was ratified by Cambodia in 1992. In addition, Cambodia has its own labor law, adopted in 1997, and human rights are guaranteed by the Constitution. Anti-discrimination provisions are included in the Constitution, and Article 36 of the Constitution specifically recognizes the value of women’s work in the home as equal to that performed outside of the home.

18. Despite the presence of antidiscrimination legislation, there is no provision for ‘equal remuneration for work of equal value’, although ‘equal pay for the same work’ is included in the Constitution.⁴ Minimum wage legislation is in place and has been applied to the garment, textile, and shoe industries, the industries in which a large number of women are employed. However, the adequacy of the minimum wage has been questioned, not least by unions in these sectors. Many women working in the domestic, tourism, and entertainment sectors are not covered at all.

19. Rural women in principle have equal rights to land ownership following the provisions of the Land Law adopted in 2001. In practice, however, there are examples of gendered land grabbing (as well as land grabbing in general) in which men take over the legal title to land even where women have legal rights to it as well. It would seem that women are not aware of their rights and have little recourse to legal advice. Overall 70% of all land titles are issued jointly between husband and wife.

C. Gender realities today

20. Four emerging trends are of particular concern today in promoting women’s economic empowerment in Cambodia: (i) the predominantly young population and the growing number of labor force entrants, (ii) competition from more highly skilled labor in neighboring countries, (iii) increased volatility of employment with a high reliance on export markets, and (iv) vulnerability related to climate change. The gender issues related to these trends will affect the project both directly and indirectly with regards to availability of agricultural labor for production, and livelihood options.

³ Fiona MacPhail 2015 ‘Promoting Women’s Economic Empowerment in Cambodia’ ADB.

⁴ ADB & ILO 2013 Quarterly Briefing Note GMS TRIANGLE Project Oct-Dec Geneva.

21. A growing working age population intensifies the challenge of providing sufficient productive and decent work for job seekers in the country. Over 78% of the 14.7 million Cambodians live in rural areas, although urbanization is occurring as a result of rapid rural out-migration (CIPS 2013). The challenge of generating sufficient jobs will continue in the medium term: the working population is estimated to grow by an additional 1.3 million persons between 2013 and 2020 (calculated from CIPS 2013).

22. Employment creation for unskilled workers, and particularly for Cambodian women disadvantaged by their lower literacy relative to men and to men and women in neighboring countries, will be even more critical with deepening globalization and the recent Association of Southeast Asian Nations economic integration. While Cambodia's export-oriented and open development strategy has contributed to employment growth in the garment sector, the negative impact of the global financial crisis in 2008–2009 and ensuing volatility on women's employment underscores the necessity of diversification and of reducing reliance on external demand.

23. Global climate change is increasing vulnerability, especially for women with marginal access to land. Cambodia is particularly vulnerable to climate change, which is associated with more variable and extreme weather patterns. The devastating floods in Cambodia in 2011 and 2013 had particularly negative impacts on agricultural production, employment in the agriculture sector, rural households, and women. Many households are locked into a brutal cycle of debt caused by borrowing money as a coping strategy during natural calamities and emergencies.

24. In 2013, women accounted for 52% of the total working age population in Cambodia. (CIPS 2013). The working age population as a share of the total population increased from 62.0% to 65.6% between 2008 and 2013. The working age population is currently larger in urban areas at 70.5% compared with rural areas at 64.3%, primarily as a result of enormous rural–urban migration⁵

25. Labor force participation rates for both Cambodian women and men are the highest in the region, and unemployment is virtually non-existent.⁶ However, opportunities for decent work are scarce and underemployment is an issue. The share of women's vulnerable employment — the sum of own-account workers and unpaid contributing family workers — remains high at 70% compared to 59% of men in 2013. Agriculture remains by far the most important sector of the Cambodian economy in employment terms, remaining the main source of livelihood for nearly 53% of employed women in 2012, as compared with 49% of employed men. Services and industry comprised 29% and 18% of women's employment, respectively. 27.6% MAFF staff at national level, 18% at provincial level are women.

26. Women are just over half of the agricultural labour force, and produce 70% of the countries food, but are only 24% of household agricultural holding managers, 12% of agricultural extension officers and 10% of agricultural extension services beneficiaries. 60% of agricultural cooperative members and 34% of agricultural cooperative Board of Directors are women.

27. Although women own 65% of all businesses in Cambodia, the vast majority of women's businesses are microenterprises: 51% employ only one person, and 96% engage four or fewer persons. 37.6% of all fruit and vegetable processing enterprises and 46.5% of all wholesale agricultural raw materials enterprises are run by women.

⁵ Cambodia Inter-Censal Population Survey 2013.

⁶ Fiona MacPhail 2015 'Promoting Women's Economic Empowerment in Cambodia' ADB.

28. The text box below provides key gender and agriculture indicators at a national level, which provides a context and rationale for the gender actions and targets in the GAP and DMF.

Key Gender Issues at National Level

Percentage	Women Representation
51%	Agricultural labor force
75%	Women participate in agriculture
24%	Household agricultural holding managers
60%	Agricultural cooperative members
34%	Agricultural cooperative Board of Directors
65%	All enterprise owners (mostly micro-enterprises)
37.6%	All fruit and vegetable processing enterprises
46.5%	All wholesale agricultural raw materials enterprises
27.6%	MAFF staff at national level
18%	MAFF staff at provincial level
12%	Agricultural extension officers
10%	Agricultural extension services beneficiaries

29. The following table summarises key institutional level indicators at national and sub-national levels (specifically the 4 project provinces), such as women's participation in MAFF, in agricultural cooperatives as board members and committee members. At the national level women make up approximately a third of MAFF staff, agricultural cooperative board members and committee members, and they represent 60% of agricultural cooperative members.

Level	MAFF Staff	Agricultural Cooperative Board Members	Agricultural Cooperative Committee Members
<i>National</i>	27.6%	34%	30%
<i>Kampong Cham</i>	25%	22%	25%
<i>Takeo</i>	19%	29%	17%
<i>Kampot</i>	25%	40%	23%
<i>Tbong Khmum</i>	14.6	25%	25%

D. Gender and poverty

30. In 2012, 22% of all households were headed by women.⁷ In 2011, the difference in income poverty rates between households headed by women and those headed by men appeared very small. However, once household composition is taken into account, female-headed households (FHH) with more than two children and no adult males are much more likely to be poor and the girls more likely to be working. Households headed by women are likely to be more vulnerable; they are also likely to experience shocks differently than male-headed households, largely due to social norms and more limited economic opportunities and income. On average, households headed by women have smaller land holdings than men. 42% FHH compared to 80% MHH are literate, 31% FHH compared to 48% MHH have access to ploughs, 21% FHH compared to 29% MHH produce crops for sale.

31. Evidence of high malnutrition and anemia among women and a high incidence of domestic violence indicate women's inferior position and disadvantaged access to resources.

32. Poverty pushes many students out of school. Among children aged 6–17 years, 11.9% of girls and 10.5% of boys report that they are not attending school because the family is too poor. A higher percentage of girls than boys report that they are not attending school because they must contribute to household income or help with household chores.

E. Migration and disposable incomes

33. Almost 60% of rural migrant women move to Phnom Penh to work. Anecdotal evidence suggests that a significant driver of out-migration from rural areas is high levels of household debt caused by crop failures and emergency medical expenses. While women migrants have lower average earnings than male migrants, they traditionally send more money home than their male counterparts. Consequently, they are receiving less economic benefit in terms of what remains after remittances and in terms of quantity of direct earnings. From the World Bank's recent informal survey findings,⁸ the average monthly wage at factories was reported to be approximately \$162.5/month, which was nearly 50% more than the calculated monthly salary for hired agricultural workers at \$4.56/day, equivalent to \$109/month based on 24 days of work.

34. Official data suggest that average wages have increased by 67%, from \$72/month in 2005 to \$120/month in 2013. Though lower than the wages received by most women working at garment factories, this was still about 10% above the agricultural wage. The gap between the agricultural and construction wages, however, decreased in 2005. The ratio was approximately 1 to 3 in favor of construction.

F. Domestic violence

35. Based on women's focus group discussions in subproject areas, the incidence of domestic violence in rural households is common. It was explained that violence and physical and verbal abuse from husbands occur as a consequence of drunkenness, and arguments about financial problems caused by household debt and gambling. The wife may sometimes be accused of not being competent at managing household finances. In some cases, there is evidence that women

⁷ ADB 2014. 'Cambodia: Country Poverty Analysis'.

⁸ The International Bank for Reconstruction and Development / The World Bank. 2015. 'Cambodian Agriculture in Transition: Opportunities and Risks'.

have even been abandoned because they are blamed for not being able to manage the household budget.

G. Land rights and land titles

36. Land titles are considered an essential prerequisite for farmers investing in on-farm improvements. Between 2001 and 2004, 78% of new titles were in the name of both men and women. Despite gender-aware land laws, it is difficult for women to register land in their own names alone because they tend to lack information, time, documentation, and the necessary levels of literacy. There are also social norms that discourage women from owning land individually. In practice, women's rights may not be fully recognized, nor are women as likely to be aware of their rights.⁹ Demarcation of land use and even administrative boundaries at the district and commune level is still vague.¹⁰

37. Approximately 20% of rural Cambodians are estimated to be landless and another 20-25% have less than 0.5 ha. It is estimated that almost half of all Cambodians currently cannot meet their daily nutritional requirements from their own agricultural production.¹¹ As cited in several rural communities, one of the reasons for land loss by farm households is distress sale caused by indebtedness.

H. Gender in agriculture

38. In general, women have a relatively high level of control over decisions related to agricultural production as decisions are made jointly with husbands. The control of farm household finances however is managed entirely by women. Because of out-migration, rural populations are now characterized by labor shortages and by households headed by older women taking care of numerous small children.

39. Mechanization and migration are changing the structure of rural labor, especially the contributions made by women's labor, family labor and hired labor.¹² Results from the World Bank's rural survey¹³ indicate that while women have historically played a key role in agricultural production, this major role is likely to change slightly moving forward. The anticipated change is not significant but indicates that households are facing difficulties associated with the shortage of labor. Some agricultural operations such as land preparation, transplanting rice seedlings, harvesting and post-harvesting operations have shifted from manual to mechanized operations.

40. Because machinery services are becoming more readily available in rural areas, women are increasingly using remittances to pay for hiring mechanized services and machinery operators. Machinery is typically operated largely by men, although some women in subproject locations expressed interest in learning to drive tractors and operating agricultural machinery, to save labor and acquire technical skills for higher income-generating opportunities.¹⁴

⁹ USAID. 2015 'Property Rights and Resources Governance, Cambodia.

¹⁰ Sar, Sovann. 2010. 'Social Aspects of Land Administration and Land Reform' Land Reform in Cambodia (4633), FIG Congress 2010; Facing the Challenges—Building the Capacity. Sydney, Australia, April 11-16 2010.

¹¹ De Silva, S., R. Johnston, and S. Sellamuttu, S. 2014 Agriculture, Irrigation and Poverty Reduction in Cambodia: Policy Narratives and Ground Realities Compared.' CGIAR Research Program on Aquatic Agricultural Systems. Penang, Malaysia. Working Paper.

¹² The International Bank for Reconstruction and Development / The World Bank. 2015. 'Cambodian Agriculture in Transition: Opportunities and Risks'.

¹³ As before.

¹⁴ Women FGDs during May – June 2016 in sub-project communes in Kampot, Takeo and Tbong Khmum.

41. Almost all World Bank survey respondents agreed that the migration of young rural adults would continue and the subsequent lack of farm labor would negatively affect future farm production and farm budgets. At the same time there was the belief that some households would benefit from migration through remittances, which could provide working capital for investments in agriculture and off-farm activities.

I. Climate change and weather shocks

42. High dependence on rainfall for agriculture makes Cambodian agriculture vulnerable to weather shocks. Male and female farmers reported the negative impacts of shorter rainy seasons, floods, and more frequent drought spells.¹⁵ Climate change is leading to more variable growing seasons and water deficits. Gender inequality intersects with climate risks and vulnerabilities. Poor women have particularly limited access to resources, restricted rights, limited mobility and muted voice in shaping decisions, making them highly vulnerable to climate change. The nature of that vulnerability varies widely and climate change will magnify existing patterns of inequality, including gender inequality.¹⁶

43. Women farmers currently have limited capacity and opportunities to diversify agricultural practices and lessen dependency on climate sensitive and stressed natural resources; limited access to knowledge regarding new agricultural production and post-production techniques and technologies; and limited mobility to avoid disasters stemming from their domestic and agricultural responsibilities.¹⁷

44. Vulnerability is further heightened for women in agriculture, as they are often unpaid family workers with few options for coping with disasters. Climate change vulnerability of both the agriculture and fisheries sectors heightens the level of risk for women's livelihoods, as they have a significant involvement in post-harvest activities.

III. GENDER ISSUES IN PROJECT CONTEXT (AGRIBUSINESS VALUE CHAINS - PRODUCTION TO MARKETING)

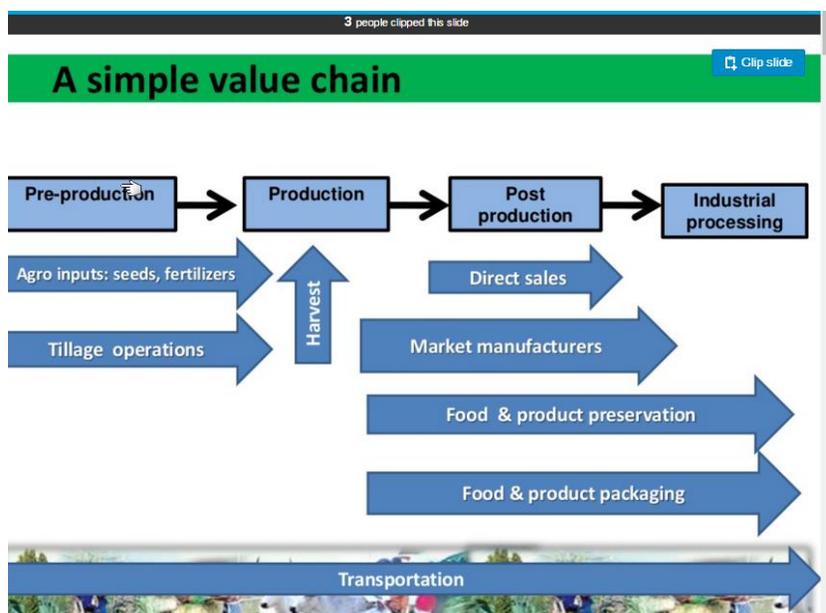
A. Women and value chain functions and market access

45. The following value chain diagram illustrates the main phases of crop production and marketing:

¹⁵ Thomas, T., T. Ponlok, R. Bansok, T. De Lopez, C. Chiang, N. Phirun, and C. Chhun. 2013. 'Cambodian Agriculture: Adaptation to Climate Change Impact.' IFPRI Discussion Paper 1285, Washington, DC.

¹⁶ Ministry of Women Affairs 'Standardized Guideline Mainstreaming Gender and Climate Change in Sectoral Ministries' Planning, Budgeting and Implementation' December 2015.

¹⁷ Ministry of Women Affairs 'Standardized Guideline Mainstreaming Gender and Climate Change in Sectoral Ministries' Planning, Budgeting and Implementation' December 2015.



46. Women are important value chain actors and provide labor inputs for pre-production, production and post-production tasks and functions, thereby creating significant 'value added'. A gender analysis showing where women are currently concentrated in the VC for each sub-project is useful for identifying opportunities for more targeted gender responsive value chain strengthening interventions. As mentioned earlier, women are involved in pre-production and production tasks such as manual tillage operations, purchasing agro-inputs and harvesting. As collectors, they are also responsible for direct sales of crops for industrial processing. Women are very involved in rice production (subproject 1) and cassava production (subproject 3), and less so for mango production (subproject 2) where production is in the hands of private contractors. Mango collectors are generally male.

47. From gender assessments carried out in the subproject areas, it was found that women own and operate their own enterprises in subprojects 1 & 3 and are crop collectors / intermediaries at village and commune levels, rice mill owners and operators at commune and district levels, and wholesalers and retailers.

48. As their collection operations have expanded over time, they have acquired trucks for transporting agricultural produce. Frequently it is the husband who performs the hauling and transporting functions of the crop collection enterprise. Financial operations and management is traditionally the responsibility of women.

49. The buying and selling of crops at commune level is normally a woman-to-woman transaction between the farm household and collector. Inside the household, both husband and wife decide on where to sell crops and to whom and it is then usually the responsibility of the wife to contact the collector and find out about the current market price.

50. When interviewed, female collectors explained that they had learned their skills from other family members, and they were motivated by the desire to educate their children and improve their family's living standards. Since they act as intermediaries, the price they can offer farmers

is dictated by their clients who own mills, plus a small mark-up for themselves. They are also frequently approached by village women for loans. In these cases, small, interest-free advances are given to those households they know well and consider trustworthy.

B. Access to credit

51. As mentioned above, women in Cambodia traditionally are responsible for household purchases, and control household spending. They are assuming greater responsibility for loan repayments – more so than their husbands, and take on responsibility for seeking out local sources of credit. The majority of micro-finance borrowers in rural areas are women. The main reasons for seeking micro-finance are for debt servicing, for purchasing agricultural inputs and paying for production costs. The lack of access to credit which is affordable and at low-interest is consistently cited as a major household problem and constraint.

C. Access to irrigation

52. Both men and women can be members of FWUCs for irrigation schemes although it is usually the husband who represents the household. In subproject 1 (reservoir modernization), there is no water users' association or agricultural cooperative in the commune. When farmers require water for cultivation, they seek permission from the village chief. The amount of available water is limited and water distribution is determined by the village chief. In subproject 2 (mango drip irrigation), there is a Farmer Water Users Group (FWUC) in the commune but it is only involved in water management of rice production, and the irrigation scheme is in need of repair. In subproject 3 (cassava production and storage), there is an agricultural cooperative. The irrigation scheme does not have adequate water control structures.

53. FWUCs currently play a very nominal role in Cambodia as they are still not authorized to collect irrigation service fees, and have little say in system management decisions.¹⁸ The FWUC sub-decree that would assign appropriate responsibilities and rights for irrigation infrastructure to respective FWUCs and allow them to collect irrigation service fees remains unapproved. ADB-financed TA is currently providing technical assistance to MOWRAM to find flexible solutions for fee collection, and the sub-decree would underpin the sustainability of large future irrigation investments.¹⁹ Capacity for O&M of irrigation schemes overall is also weak. In addition to a lack of financial resources, fundamental problems exist with assessment of O&M needs and priority, and capacity of government staff. Provincial Departments of Water Resources and Meteorology currently have limited capacity to maintain irrigation schemes.

D. Contract farming

54. There has been a gradual increase in direct engagement between agribusiness companies and small landholder farmers in recent years, stemming in large part from the country's general economic growth and Cambodia's integration into the global economy. While there are many different models for engagement between small landholder farmers and agribusiness companies, in Cambodia, the principle model has been contract farming where contracts are made either with individual farming households or with agricultural cooperatives and buyers for pre-agreed quantities of agricultural produce. The model is well suited to a system of

¹⁸ The International Bank for Reconstruction and Development / The World Bank. 2015. 'Cambodian Agriculture in Transition: Opportunities and Risks'.

¹⁹ ADB. 2014. 'Water Resource Management Sector Development Program, Ninth Quarterly Progress Report (February 1-April 31, 2014).' Asian Development Bank, Phnom Penh.

agriculture where there are many small landholder farmers and generally weak property rights and legal infrastructure, as exists in Cambodia.

55. Usually, local farmers grow and deliver a specified quantity of produce at a specified quality at an agreed date. In exchange, the company provides upfront inputs, such as credit, seeds, fertilisers, pesticides and technical advice, all of which may be charged against the final purchase price; and agrees to buy the produce supplied, usually at a specified price.

56. Globally, contract farming is most often adopted by agribusiness companies for relatively high-value produce such as fresh vegetables for export or supermarkets, dairy products, poultry, rubber, palm oil, sugar, tea, tobacco and cotton. For such commodities there are generally few competing buyers.²⁰ Typically, both farmers and companies benefit from the contract; the company ensures its raw supply, while farmers receive fixed prices, which reduces their income uncertainty. A guaranteed and fixed price structure is broadly negotiated between the parties based on prevailing spot market prices or as a percentage of world prices, and in some cases it is even indexed to stock market prices (e.g. tea, coffee, rubber).

57. In 2013, AMRU Rice initiated its first contract farming program in Cambodia. The model it adopts is the one that closely matches Government policy which is to promote partnerships with agricultural cooperatives (ACs). AMRU Rice has established direct partnerships with selected ACs in Preah Vihear province, for the supply of certified organic rice paddy. Contracts between AMRU Rice and ACs stipulate targets for quantity and quality of rice paddy supplied. AMRU Rice pays ACs directly for rice paddy and ACs then pay farmers less a service fee of 20-30 KR/kg. When interviewed farmers who participate in AMRU Rice's contract farming program reported that none of the farmers had title to the land that they farm. In addition, only about half of the farmer cooperative members (mostly women) interviewed knew that the ultimate buyer of their paddy was AMRU Rice.²¹

58. For this reason, the study on small landholder farmers' engagement with agribusiness concluded that even poorer, more marginal farmers could take advantage of contract farming opportunities.²² It is often cited that small landholder farmers are typically shut out of contracts because of their small landholdings. However, there is evidence to suggest that small landholder farmers benefit the most from contracts for producing higher value crops. In this case, agricultural cooperatives and other farmer organizations may play an important role in reducing agribusiness companies' transaction costs such as farmer training, input distribution, collection and quality control.

59. Results from the study indicate that perceptions amongst farmers were mixed regarding whether agribusinesses prefer making contracts with women or men. In practice, agribusinesses do not have a preference. Whilst it may be that across Cambodia, men have historically had better access to education, it is also traditional in rural households for women to control the cashbox. Whether contracts were signed with women or men was generally determined by role in

²⁰ In Cambodia, the government policy has heavily promoted the multipartite model of contract farming, and the policy focus has been particularly on rice. This would seem to be a departure from the norm internationally where rice is most often procured through spot market purchases. The adoption of rice contract farming in Cambodia appears to be a reaction to the country's lack of efficient and transparent spot market which is largely a result of the massive exports at harvest of rice paddy to Thailand and Viet Nam.

²¹ NGO Forum on Cambodia 2016. 'Small Landholder Farmer and Agribusiness Engagement: Implications for Corporate Reform and Impact on Rural Livelihoods in Cambodia'.

²² NGO Forum on Cambodia 2016. 'Small Landholder Farmer and Agribusiness Engagement: Implications for Corporate Reform and Impact on Rural Livelihoods in Cambodia'.

household and level of contribution to the activity, rather than an overt preference by the contractor. All farmers reported that in their experience access to contracts provided a net benefit. Additionally, some women reported that they were happy with their contract farming arrangement since it provided enough income so that their husbands and children did not have to seek work away from home, thus keeping their family together.

E. The participation of women in civil works

60. Gender disparities in employment remain extensive in Cambodia, primarily because of traditional attitudes about "appropriate" occupations for women and men. This is particularly true in the construction sector, where it is believed that women either cannot or do not wish to engage in manual labor. However, women are already engaged in manual labor in the agriculture sector, and there are many construction jobs that women can and wish to do in order to earn cash wages. Women's current involvement in similar infrastructure related work varies between 17% to 46%. Women who can read and write would also be well suited for record-keeping jobs during construction work. Targets for women in skilled and unskilled civil works are included in the GAP/DMF.

F. Mechanization and the participation of women in agricultural machinery operation

61. Output 2 of the proposed CFAVCP (climate smart agriculture and agribusiness promoted for key value chains) will focus on the development of public and private human resources and institutional capacity, and the support services to enable climate friendly agribusiness growth and management. Three activities identified include the following (i) deploying climate resilient varieties; (ii) strengthening capacity in climate friendly production practices and technologies; and (iii) promoting farm mechanization and extension. The DMF target indicates that the operation of agricultural machinery will be expanded and that women will represent at least 40% of the labor pool of individuals that can operate a range of agricultural machinery.

62. The Government of Cambodia's vision is to transform and modernize the country's industrial structure from a labor intensive to a skill-driven industry by 2023. In agriculture this is already taking place, by default with migration from the rural areas and labor shortage there is more reliance on mechanization: in 2005 one hectare of wetland rice required 73 working days, by 2013 that had reduced to 48 days. A similar pattern exists for maize from 41.8 days to 31.33 days. In turn the skill levels of those that remain in farming have increased, out of necessity as more farmers and traders become more mechanized. The downside is transplanting, harvest and post-harvest activities, which previously often involved manual tasks usually undertaken by women, are currently executed using machinery mainly with male operators, however, where female operators are given responsibility they tend to be more cautious in the operation with less damage to the machinery.

63. There are several private sector companies importing and distributing agricultural and processing machinery in Cambodia and their numbers are increasing. These imported products meet demand, but operation and maintenance of the machinery does not. Most of the complex machinery is imported which include, power tillers, rice mills, water pumps, combine harvesters, tractors, dryers and threshers. Machinery distributors are finding it increasingly difficult to recruit staff that have a sound mechanical engineering background. The repair and maintenance of the machinery is a major constraint and has substantial cost implications; maintenance costs are 20% and 28% of the total value of tractors and power tillers respectively, with only 20% of users being able to maintain their equipment.

64. The training of machinery contractor operators and the wider use of the operators will contribute to the reduction of GHG due to increased economies of scale in the agricultural operations making savings on fuel and machinery wear and tear. Increasing mechanization in agriculture is predicted to reduce the unskilled labour opportunities that are important to households with little or no land, and particularly for women. Tractors are being introduced to save labor in land preparation, and harvesting machines and threshers are being introduced. The latter two tasks in particular tend to be traditionally undertaken manually by women and so mechanization will reduce the demand for women's unskilled labor. At the same time, women would like the opportunity to learn how to drive two-wheel tractors and other agricultural machinery. This would allow them the opportunity to have paid work as drivers and also prepare them for future farm mechanization. Mechanization can also increase productivity and free up time for more value-added productive work.

G. Bio-digester use as a labor-saving intervention

65. Transformation in rural areas, particularly in the area of labor-saving technology, has also been rapid in recent years. While not widespread in subproject areas, labor-saving technologies such as bio-digester units for cooking and lighting are significantly reducing women's workloads. This is particularly true for households in areas of Cambodia involved in livestock production.

H. Women Farmers Network in Cambodia

66. In 2015 MAFF through its Gender and Children Project Support Unit, together with the international NGO Oxfam has promoted and encouraged women farmers to discuss the challenges they face and the opportunities they see as priorities. Five Women Farmer Forums have brought together around 551 women farmers who agreed on the formation of a women farmers network. The network has been established across five regions in Cambodia, covering 24 provinces. The regions were defined according to geographic zones as follows: Mekong Region (including Kampong Cham and Tbong Kmum), Northern Region including five northern provinces, Southern Region, Coastal Region and the Low-lying Region. Support to the network is provided by MAFF and civil society organizations.

67. The Women Farmers Network has established itself as a self-help forum and utilizes social media to maintain dialogue with its members. Its female farmers are aged between 25 – 50 years old. Oxfam has mobilized resources to assist the 48 members who are the elected province representatives (two women farmers from each province) and represent the national committee of the Network. The Network functions as a platform for dialogue about priority challenges women face as agricultural producers. As it is a 'women-only' forum, it sees itself as being able to provide space and encouragement to women to talk freely about the challenges they face. Issues discussed include access to water, dealing with extreme weather events such as droughts and floods, access to capital, access to markets for agricultural products and supplies. Women farmers have specific challenges related to difficulties in transporting agricultural produce to markets.

68. Many of the network members are also local leaders such as commune members, cooperative members or savings group members, and they are invited and encouraged to attend province-level MAFF workshops for capacity building and training of trainers. Technical information to women farmers in the network is disseminated through social media pages. The Network has links to local Community Innovation Centers – one of which is in Takeo. The Centers

aim to build capacity of young people and farmers and provide training in computer literacy and English classes.

69. Their most important priorities include the following:
- (i) Develop policies that could minimize loan interest rates for women farmers in order to invest in agricultural production
 - (ii) Formulate technical groups to help women farmers with business plans, agricultural plans and product processing. Train women farmers on record-keeping and on cost-benefit analysis.
70. Given that the Women Farmers Network was initiated by MAFF and that it is present and active in the target provinces of the CFAVCP, it is well-positioned to support extending outreach of project activities to women farmers at the local level.

IV. GENDER ISSUES IN PROJECT INTERVENTION AREAS

71. Commune Chiefs of the three subproject areas have provided some gender-specific data concerning the target beneficiary communities:

Subproject area	# households	% FHH	% ID Poor 1&2	Outmigration
Tani, Kampot	708	16%	11%	7%
Trapang Kra, Takeo	1034	15%	25%	9%
Seda, Tbong Khmum	975	7%	24%	7%

72. The sub-project areas have between 11% and 25% ID Poor rates, between 7 and 16% female headed household rates, and 7 to 9% outmigration rates.

73. Women and men differ in their roles and in their economic, educational, and health status. Heavy physical work is almost always men's responsibility. Women are exclusively responsible for managing household budgets. The health status of rural women is likely to be worse than men's and their workload is traditionally greater.

74. Findings from the participatory assessments indicate that there is joint access and control to productive resources such as land. The land title they possess is in both their names and joint agreement is necessary before land can be sold off. There is joint access to and control over capital, i.e. money. For accessing a loan, the bank requires both signatures on the loan agreements. Identifying different sources of loans is mostly done by women. The access to information, knowledge and education is still limited for both men and women. Women are less likely to be functionally literate. In general, invitations to commune-level extension training activities are made to the head of household, who is the husband. Women are only allowed to participate in organized extension training when the husband is absent and he has given his permission – by telephone if he has out-migrated from the village. Women have expressed keen interest in receiving practical information on rice variety selection and they also would like to visit field crop demonstrations. The use of visual teaching aids to enhance understanding has also been specified.

75. There is equal access of men and women to markets. Both husband and wife jointly agree when, where and to whom to sell the crop, but it is the wife who contacts the local (usually female) collector by telephone. There is a low level of knowledge of market information amongst households and the price is set by the local collector. It was recommended that future subprojects should disseminate market information to local farmers particularly women who interact with the collectors.

76. Regarding the beneficiaries' absorptive capacity for the proposed subprojects, the different ways men and women will participate was assessed. There is a good fit for the subprojects in the local society and culture. Both men and women were motivated to take part and gain benefits from the three subprojects. However, their knowledge, skills, and organizational resources differ. Women are aware of their own technical shortcomings but express an eagerness to learn new techniques, and they are aware that they have had fewer opportunities than their husbands to receive agricultural training. Women appear more eager to learn about the potential for income-generating activities and increasing household income. This is driven by the fact that household debt is a constant worry. Since husband and wife jointly control land and capital, the subprojects are unlikely to adversely affect women's access to and control of resources.

77. Regarding the capacity of institutions to address gender issues, anecdotal evidence from interviews and meetings held in subproject areas suggest that the Province-level Department of Agriculture has been less than effective in ensuring that services and capacity building are adequately delivered to women who now make up the majority of rural populations. This should be investigated further both at national level (MAFF-GCPSU) and at sub-national levels through the gender focal points. There are very few female extension agents, and invitations to agricultural training are rarely extended to household members other than the (male) head of household. Building capacity of female staff and female extension workers both at national and provincial levels is therefore considered essential. Low productivity in the target areas stems from weak extension services and farmers' lack of knowledge of optimal techniques and input use. Focus group discussions in the three subproject areas explained that because only heads of households are invited to meetings held by extension staff, women farmers have less access to extension services than men.

78. The Women Farmer Network might be able to contribute to project outcomes by sharing information on appropriate activities and offering support to women farmers. The Network could also be a more substantive partner in implementation and monitoring as it is a good fit for the CFAVCP and can act as a vector for reaching women for all the technical training and cooperative organization and management. The Network is also linked to the Savings for Change Groups which facilitate financial literacy, savings and small-scale lending at community level. At commune level, the presence of Commune Women and Children Focal Points, should ensure follow-up and feedback of women's concerns regarding project activities.

A. Agricultural production and Gender division of labor in the subproject areas

1. Subproject 1: Irrigation and Water Catchment Modernization and Rehabilitation: Trapeang Run Reservoir and Irrigation Scheme - Key beneficiaries:23

- Number of communes: 1
- Number of villages: 3 (Trapeang Run, Trapeang Raing and Ta Pream)
- Size of Population: 3191; number of females: 1711
- Total number of households: 708: number of female headed households:111
- Number of farming households: 689
- Total area of available land for farming: 563 ha
- Average land size per household: 1.30 ha / hh
- Number of ID-Poor 1 households: 21
- Number of ID-Poor 2 households: 59
- Number of ID-Poor 1&2 female headed households: 25
- Out-migration: 219 persons have out-migrated including 30 who have migrated to other countries.

a. Work profiles in agriculture and organization of paddy production

79. With respect to the production of paddy, women are involved in land preparation, clearing grass and weeds; broadcasting rice for seed beds, broadcasting fertilizer, transplanting seedlings, hand-harvesting paddy; threshing and winnowing; collecting and storing paddy and selling paddy to collectors. When selling paddy, both men and women decide and agree jointly on which price to accept. Paddy transportation is mostly done by men and some families hire labor for hauling and transporting paddy.

80. Only one village in the commune is currently able to cultivate three crops of rice a year because they have access to a year-round water supply. In the other villages, there is only one rice cropping season per year because of insufficient water. There is no water users' association or agricultural cooperative in the commune. When farmers require water for cultivation, they seek permission from the village chief. The amount of available water is limited and water distribution is determined by the village chief.

81. The majority of rice collectors / intermediaries in the locality of sub-project 1 in Tani Commune are women. They purchase paddy from local farmers on behalf of their clients the wholesalers – both Cambodian and Vietnamese, who set the purchase price. The collector in this locality is a local woman who lives in the commune and has learnt the trade from a family member. Her husband assists by transporting purchased sacks of paddy from the farms. During interviews with rice collectors, they explained that in order for their businesses to grow, they need access to more paddy. For this reason, they view the proposed irrigation modernization subproject as a positive development that will increase the volume of paddy production. The rice collectors who were interviewed explained that they do not lend money to farmers, but will provide interest-free advances to those farmers they trust.

82. The local female rice miller provides households with interest-free loans of \$75 – \$125 for 4 – 5 days before harvesting paddy. Households pay back the loan in kind. Each season, the rice miller explained she needed 10,000 dollars in order to purchase paddy from farmers. However,

²³ Commune Chief, July 2016.

she frequently does not have sufficient cash for her business and therefore borrows approximately 5,000 dollars from the local micro-credit institution. The rice miller buys paddy from commune farmers and collectors and sells milled rice in the commune and to a client in Viet Nam.

2. Subproject 2: Drip Irrigation in Mango Production - Key beneficiaries:²⁴

- Number of communes: 1
- Number of villages: 3 villages (Bos Taphang, Prek Taloy and Prey Kdourch)
- Total number of households: 1034 hh; total number of female headed households: 154
- Total population: 4527 persons; number of females: 2128
- Total number of farmers: all households
- Total area of land for farming: 4229 ha for rice; 4304 ha for crop production
- Average farm size: 1.5 ha
- Number of ID-Poor 1 households: 55 hh
- Number of ID-Poor 2 households: 201 hh
- Migration: 421 persons have out-migrated of whom 244 are female.

a. Work profiles in mango production and organization of production

83. Most mango farmers in the area have either used revenue from rice production or borrowed money from the bank or used remittances from their children in order to plant their mango orchards which are typically approximately 5-7 ha. Mango cultivation is costly for farmers and because they do not have sufficient capital, labor or knowledge of mango cultivation, it is a common practice for farmers to lease their orchards to private contractors – usually Cambodian companies after 3-4 years when the trees are established and beginning to bear fruit. The cost of a mango sapling is approximately 50 cents to one dollar. The labor cost for harvesting mangoes is KR 50,000 per day. Irrigation water for the orchard is usually from a pond or borehole.

84. Depending on negotiations with contractors, farmers might receive 5-10 dollars for leasing one tree. A typical rent for a 7 ha mango orchard with 4-year old trees is 6-7,000 dollars per year. The contractor then takes care of the orchard using his own hired (male) laborers – for weeding, fertilizing and applying insecticide to make sure the mango trees produce fruit. The orchard owner has no further responsibility or claim to the orchard. All the revenue from mango sales - typically to wholesalers in Viet Nam, goes to the contractor.

85. Contractors provide training to farmers in how to correctly plant mango trees. Local agricultural suppliers frequently provide demonstrations of the recommended agricultural products to use for mango cultivation such as pesticides and fertilizers. They provide a 5-day training for farmers and trainees are exclusively male. In the sub-project area there are many absentee mango farmers.

86. It is mostly men who do the heavy work in mango farming. About 50% of men in this locality also share responsibility for housework and men are responsible for looking after large animals such as cattle. Some men also help women take care of small children. For female-headed households where adult children have migrated and left grandchildren in their care, the workload is substantial. In addition to looking after the grandchildren, these women are the caretakers of livestock, and manage and undertake both paddy and crop cultivation including hiring day laborers. Some women are also directly involved in mango cultivation. Hired labor is

²⁴ Commune Chief, July 2016.

necessary because of family labor shortages as a consequence of migration, and migrants' remittances are used to pay day laborers.

87. There is a Water Users Group in the commune but it is only involved in water management for rice production.

88. When interviewed, a local mango contractor explained that he pays 5-10 dollars per tree for one year and he is able to sell a kilo of mango fruit for KR3,500 to the local mango collector. He said he was able to meet his running costs without having to borrow any money. The local mango collector explained that in order to purchase mangoes, he borrows money interest-free from his client in Viet Nam and the approximate amount borrowed is 10,000 dollars in order to purchase mangoes from his regular contractors. The Vietnamese client subsequently sells the mangoes to his client in China. In this instance, the collector does not act as a local moneylender, as neither local farmers nor contractors have ever approached him for advance payments or loans.

3. Subproject 3: Cooperative Cassava Chip Drying and Storage for Trading , Seda Meanchey Cooperative, Sedasean Chey Village, Seda Commune, Tmbae District, Tbong Khmum

a. Key beneficiaries:²⁵

- Number of communes: 1
- Number of villages: 6 villages (Seda Senchey, Krasang, Andong Lagneang, Beung Thmey, Chung Tasao and Sampor)
- Total number of households: 975 hh; total number of female headed hh: 66
- Total population: 4254; number of females: 2028
- Number of farming households: approximately 90% of total number of hh
- Total area of land for farming: 2106.7 ha including 1948 ha for rice production and 158.7 ha for crop production
- Average farm size: 1.5 ha
- Number of ID-Poor 1 households: 94 hh of which 33 female-headed households
- Number of ID-Poor 2 households: 138 hh of which 33 female-headed households
- Out-Migration: 298 persons have out-migrated – 156 inside Cambodia (of which 78 females) and 142 to other countries (of which 75 females).

b. Work profiles in cassava production and organization of production

89. Regarding cassava cultivation, the main division of labor between men and women is that women are responsible for planting cassava and men are tasked with digging holes for cassava planting and for harvesting. Men are also responsible for cassava transportation. Wage rates are different for male and female day laborers causing a great deal of dissatisfaction. Women who plant cassava receive KR 20,000 (\$5) per day and men who dig the holes receive KR 25,000 (\$6.25) per day. There is joint access to markets although in practice it is women farmers who negotiate with the cassava collector. Access to information, knowledge and education is limited and inadequate for both men and women although more so for women.

²⁵ Commune Chief, July 2016.

90. In this area, the local cassava collector is female and is 32 years old. She has three children and her husband is 40 years old. Both the husband and wife take care of the children. She has been a cassava collector for ten years. She learnt the skill from her sister. She is also one of the local moneylenders. Her husband is responsible for transportation of cassava and both are responsible for weighing cassava. Ten years ago they rented a truck and picked up the cassava from each farm individually, but now they have their own vehicle. Farmers also bring cassava directly to their store. In order to purchase cassava from farmers she borrows approximately 50,000 dollars to add to her own fund of 20,000 dollars. The collector's client is a buyer in Viet Nam who sets the price which has fluctuated in recent years and very low prices have created discontent amongst local farmers. Sometimes the wholesaler in Viet Nam also does not pay her on time.

91. The cassava collector is usually contacted by the female farmer. In previous years she was never asked to lend money to farmers but now farmers ask her for loans of about 50-500 dollars for three months. She lends money to those farmers whom she knows very well, and does not charge them interest. Some farmers are late in repaying. If a farmer asks for a loan of 1,000 dollars, she charges 30 dollars as interest per month. The Commune land title is security for the loan. However, for people that she knows well, she does not take the land title. She also gives loans to people outside the village. The main problem she faces is that some farmers do not pay back the loan, and do not sell them their cassava. She explained that in this area moneylenders are usually women.

V. RECOMMENDATIONS FOR THE GENDER ACTION PLAN

92. The Project is categorized as 'effective gender mainstreaming' and will involve activities that will contribute to gender equality and women's empowerment. The main activities contained in the GAP are described in this section. The GAP mirrors the DMF and has links to MAFF Gender Policy, particularly Objective 4 - increasing the ability of rural women to access and manage resources. The design features take into account local aspirations as identified by women during participatory consultation as well as government representatives during the national consultations. Women expressed the desire to be trained, to be kept up to date with agriculture developments, to participate in planning, demonstrations, decision-making and to be consulted on infrastructure design related to community-based subprojects.

93. In subprojects where there are civil works related to infrastructure (such as subproject 1), community-based construction committees will be established to provide a mechanism for community input to the planning, survey and design of that infrastructure, particularly with respect to canal alignments. Community representatives will disseminate information from construction engineers to their communities. Women's meetings at village level will be held to discuss designs, and feedback will be given to subproject planners and engineers. It is important that the community sign-off on the final design before it is submitted to the EA and ADB for approval.

94. Women will represent at least 40% of all participants in consultations, planning workshops, etc, Efforts will be made to bring meetings and trainings to the village level at appropriate times and to organise community based child supervision will be organised in order to facilitate women's participation in public events.

95. Contractors will target 25% women for skilled and unskilled labour, and regularly report on labour days disaggregated by sex. Contractors will uphold the Core Labor Standards, including not employing child labor. Men and women will receive equal pay for equal work.

96. Women will represent at least 30% of the total trained in infrastructure related construction/ rehabilitation (e.g. masonry skills for bio-digesters construction), and operation and maintenance (e.g. local irrigation schemes).

97. Women will participate in all promotional campaigns in all subproject areas will be implemented related to introducing energy-saving, clean (renewable) power supplies for households such as bio-digester units.

98. Stronger links between small farms operated by women in subprojects 1, 2 and 3 and the agro-processing and agribusiness industry are to be facilitated through productive partnerships (e.g., contract farming), training in business and other skills, and provision of market information. Priority will be given to women led or owned enterprises and cooperatives that meet at least one of the following criteria (i) at least 50% of senior managers are women, and/or (ii) at least 50% of enterprise ownership is controlled by women, and/or (iii) at least 50% staffs are women.

99. At inception, the project will conduct a gender analysis for each of the 4 targeted value chains and develop a set of clear policy and program recommendations to strengthen women farmers' involvement along the different value chains. This activity will also ensure that capacity is built within MAFF/ Gender & Children Project Support Unit (GCPSU) for gender responsive value chain analysis and develop methodology/guidelines that can be used in future analysis. The gender focals will participate in policy dialogue and integrate key recommendations from the gender analysis of value chains and key features of the MAFF Gender Policy into the Agribusiness policy and other related documents prepared under the project. Gender stakeholders (MAFF GCPSU representatives, gender focal points, and WFN) will actively participate in policy committees and meetings.

100. The project will involve women farmers and WFN representatives actively and meaningfully in each individual event for all capacity-building activities (trainings, demonstrations, study tours) supported by the project:

- (i) agricultural extension and technical capacity-building activities including those related to climate change adaptation and mitigation;
- (ii) trainings on O&M a range of agricultural machinery; and,
- (iii) management (incl. leadership, negotiation) and business skills trainings.

101. Women will have the opportunity to be trained to operate a range of agricultural machinery in all subproject areas, representing at least 40% of the increased labor pool over baseline by end of project.

102. In all subproject areas women's ability to prepare for climate-related disasters and build resilience to impacts will be developed. All women in target areas will have access to information on climate change mitigation, improving climate resilience and resource efficiency.

103. Agricultural extension activities related to irrigated rice production (subproject 1), mango production (subproject 2) and cassava production, processing and trading (subproject 3) in project intervention areas will work with the agricultural cooperatives and through the WFN to increase training of more female farmers and extension workers, the use of visual aids, varied information and communication technologies to improve extension outreach, and promotion of more active participation of women in farmer extension groups, as well as making child supervision services accessible, are measures to empower women and bring economic benefits.

A. GAP Implementation

104. The EA and IA, especially the PMU and PPMUs, will be responsible for GAP implementation and monitoring, and will work in close partnership with the WFN, MAFF GCPSU and Provincial Gender Focal Points. The principles underpinning the GAP are to ensure sustainable improvements in gender processes and outcomes at an institutional and policy level by building capacity as follows:

- (i) To mainstream gender into partner institutions such as: EA (MAFF), IA, at national and sub-national levels (i.e. Dept. of Ag extension, etc.), agribusinesses and cooperatives, FWUCs, MFIs, etc.; and
- (ii) Of existing gender responsive entities such as the MAFF GCPSU and WFN, to advocate for, facilitate and monitor expanding women farmers' access to services and opportunities through collaboration and partnership in all project activities.

105. The PMU will appoint a safeguards officer to be also responsible and accountable for gender, who will closely liaise with representatives from the MAFF GCPSU at national level and from WFN, agricultural cooperatives and gender focal points at provincial levels. The PMU will collect and analyze data disaggregated by sex where relevant and integrate gender sensitive indicators (from DMF and GAP) in the PPMS, and ensure regular monitoring and reporting (at least semi-annually to ADB) on the progress of GAP implementation.

106. Gender consultants (international 8 person-months; national 40 person-months) as part of the project implementation consultants team will build capacity of the gender focal points, the PMU and provincial implementing unit staff in gender analysis and mainstreaming, and support GAP implementation, monitoring and reporting. Work plans and budget to implement the GAP activities will be prepared annually.

107. The EA and the PMU will actively involve the MAFF GCPSU, the sub-national gender focal points (province, district, commune), and the WFN and the agricultural cooperatives as key partners in project implementation and monitoring, especially for the GAP activities and capacity development for gender mainstreaming in the agriculture sector. The project will partner with the WFN as facilitators/resource persons for agricultural extension and technical capacity-building, awareness-raising and information sharing targeted at farmers including provision of market information. WFN social media pages should be used as one of the ways to disseminate information to women farmers.

108. Adequate financial resources have been allocated to implement the GAP. Implementation of the majority of its activities should be covered by the budget allocated for implementation of the regular project activities under the corresponding outputs. An estimated amount of \$120,000 will be required to cover any extra costs implied by special arrangements made to facilitate and increase women's participation in the regular project activities (e.g. such as series of shorter training sessions at venue closer to their communities, child care stipend for WFN members as facilitators, etc.) and the costs related to the conduct of a gender analysis of the targeted VCs (international and national consultants; 3 person-months each).