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APCAS/10/26  
April 2010

## Agenda Item 9

### ASIA AND PACIFIC COMMISSION ON AGRICULTURAL STATISTICS

#### TWENTY-THIRD SESSION

Siem Reap, Cambodia, 26-30 April 2010

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## Gender Profile in Agricultural Households in Cambodia 2008

### I Introduction

#### 1.1 The Agricultural Sector

Cambodia is a country located in Southeast Asia with a population of almost 14 million people in 2008, with Phnom Penh being the capital city. The country shares border with Thailand to its west and northwest, with Laos to its northeast, and with Vietnam to its east and southeast. There are two bodies of water, Mekong River and Tonlé Sap Lake, flowing within the jurisdiction of Cambodia.

About 80 percent of the households were living in rural areas. A large majority of these households engaged in rice-based agriculture, collection of forest products and raising livestock. The agricultural sector generates 32 percent of the Gross Domestic Product in 2008 and provides employment to about 80 percent of the country's labor force. The sector is dominated by small farm households engaged mainly in subsistence production. Most of those employed in agriculture are self-employed or unpaid family workers in their own subsistence production system.

In view of the country's economic and historical background, it is important to evaluate the actual agricultural situation especially the contribution of the male and female headed agricultural households in the country. The assessment should be based on the available agricultural statistics compiled at the national level as well as those gathered in the administrative reporting system in the local level to identify the characteristics of the households and its population that are engaged in the agricultural activities.

This report attempts to give a quick view of the situation of Cambodia with respect to the Role of Gender in the Agricultural Sector. Some key indicators on this gender analysis profile in agricultural sector are based on data derived from the latest Cambodian Socio-Economic Survey in 2008 (CSES 2008). However, due to small sample households used in the said survey, the indicators are presented at the zone level.

This report will focused on the female headed and male headed agricultural households and their characteristics pertaining to their demographic and social profile, access to productive resources, information on their agricultural activities and state of these households with regards to some proxy indicators that will imply whether these are poor or non-poor.

## **1.2 Agricultural Data Sources**

The CSES was designed to provide information on social and economic conditions of the households for policy studies on poverty, household production and final consumption for the National Accounts and also to update consumer price index of goods and services. It also served as a medium for training and improving the survey methods and analysis within the National Institutes of Statistics (NIS) of Cambodia.

The CSES 2008 is the latest and most ambitious in a series of multi-objective national surveys that have been conducted by the NIS with the following considerations:

1. It is the largest multi-objective household survey ever undertaken in Cambodia, including a total of 3,600 households interviewed in 360 Primary Sampling Units(PSU) during a 12-month period from January 2008 through December 2008.
2. It is the first multi-objective household survey that covers the entire country.
3. The CSES 2004 collects data on household consumption using two different data collection methodologies, i.e., recall questions similar to those used in previous surveys and a calendar month diary in which all household economic transactions were recorded. Consequently, the CSES 2004 survey teams spent more than one month in each surveyed village.
4. The range of data collected in the CSES 2008 was also more extensive than that collected in previous multi-objective household surveys.
5. In addition to data on household consumption and a wide range of social indicators, the CSES 2008 collected data on sources of household income, village data on land use and access to community and social services (for examples, roads, electricity, water, markets, schools and health facilities), and data on up to three prices from local markets for 93 food and non-food items.

### Sample

The survey sample was selected to be representative of the country and representative monthly samples of 300 households based on the twelve months data (January to December 2008) was collected from 3,600 households with a total of about 16,900 individuals.

The fieldwork started in November 2007 and supposed to end in December 2008. However, some more basic data was needed for the analyses and the fieldwork was extended to include January 2009.

Survey estimates were produced for the first nine months of fieldwork for two strata: 1-Urban area and 2-Rural area in the five following zones:

- 0 = Phnom Penh
- 1 = Plain
- 2 = Tonlé Sap
- 3 = Coastal
- 4 = Plateau/ Mountain

At the end of the 12 months, reliable estimates were produced for 11 individual provinces; Bantey Meanchy, Battambang, Kampong Cham, Kampong Speu, Kampong Thom, Kandal, Phnom Penh, Prey Veng, Siem Reap, Svay Rieng and Takeo. The other 13 provinces were grouped according to zones.

### **1.3 Rationale for a gender profile of agricultural households in Kingdom of Cambodia**

In Kingdom of Cambodia, inadequate gender-disaggregated data is a major constraint to provide full understanding of the roles and responsibilities of women in the agricultural sector. Although a number of National Surveys has been conducted such as, CSES 2004, 2007, 2008 and 2009, Cambodia Demographic and Health Survey 2005 and Population Census 2008, gender data related to agriculture are not enough to be analyzed, tabulated and disseminated.

In the Kingdom of Cambodia, women are major contributors to the economy but their efforts and worth remain unseen due to lack of sex disaggregated data (SDD). For this reason, there is a pressing need to produce this gender profile to present more gender information through a re-tabulation plan of the existing data sources. This gender profile of agricultural households provides a picture of the differences between male and female headed households in country wide. The information provided in this profile can be used by the planning and the policy making community to improve the situation of the agricultural households specifically those headed by women. The profile will be useful in the following: (1) to provide directions in setting priorities when it comes to providing agricultural and forestry extension services; and, (2) to transfer knowledge and skills that will improve agricultural productivity and livelihoods of rural populations.

The availability of high quality, reliable statistical data disaggregated by sex and age for the food and agriculture sector and national capacity to produce such data are critical for the development and implementation of effective poverty reduction, food security and rural development policies.

## **II Demographic and Social Profile of the Agricultural Household**

### **2.1 Agricultural Population and Household Characteristics**

- The total agricultural population in Cambodia includes about 9.5 million persons (71 percent) out of a total population of 13.5 million. These include those living in the four zones such as Plain, Tonle Sap, Coastal and Plateau/Mountain who are depended for their livelihoods on agriculture, fisheries or forestry activities. Of the agricultural population, 48.5% are males and 51.5% are females.
- The total number of agricultural households is 2.3 million or about 85 percent of the total households in the country. Of these, 80 percent of the agricultural households are male

headed and 20 percent are female headed. The number of male and female headed households varies per zone (Chart 2.01). The Plain Zone which includes Phnom Penh (217,665) has the highest number of female headed households; followed by Tonle Sap Zone with 136,046 female-headed households. Thus, in these two zones the first two highest proportions of female headed households are reported; Plain Zone (53%) being the first and Tonle Sap (33%), the second. The lowest proportion of female-households can be seen in the Coastal Zone (6%).

### **2.1.1 Age**

- As the age group increases, the percentage of male and female agricultural population decreases, specifically, starting in the age group 30-30 years old, in which there is a sudden decrease of the percentage of men and women in the agricultural households. This can be attributed to wars and sad experiences in the country during the Khmer Rouge and possibly due to more recent rural-urban migration in response to employment opportunities in factories, construction, etc

### **2.1.2 Household Size**

- The national average household size for agricultural households in Cambodia is 4.7 members, with male headed households having 4.9 members and female headed households 4.0 members. At the zone level, agricultural household size ranges between 4.4 (Coastal) and 5.0 (Plain) members for male headed households and between 3.8 (Plain) and 4.9 (Plateau/Mountain) members for female headed households.

### **2.1.3 Household Labour Force (Active Agricultural Population)**

- The economically active agricultural population in Cambodia refers to the population in agricultural households that are within the age group 15 to 64 years old.
- Cambodia has an active agricultural population<sup>1</sup> of 5,869,633 or 62 percent of the overall agricultural population. Of the active agricultural population, 47 percent are males and 53 percent are females. All Zones have higher percent of females in the active agricultural population; wherein the Coastal Zone recorded the highest percentage of active female population of 55 percent.
- Among agricultural households at national level, 61 percent of household members are of working age within male headed households and 66 percent within female headed households. The Coastal Zone has a lower percentage of active household members (54 percent) for female headed agricultural households and Tonle Sap has 60 percent for male headed households. On the other hand, the Plateau/Mountain Zone has reported highest proportion of 81 percent of active household members in the female-headed households and the Plain Zone has recorded 62 percent for the male headed households.

## **2.3 Marital Status**

- Nine out of ten female agricultural household heads are called “De Facto” or actual household heads in lieu of the permanent absence of their spouses/husbands or adult male members. The other remaining 11 percent are the “De Jure” female heads that are

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<sup>1</sup> Active agricultural population = population between 15 and 64 years old.

forced to take the responsibility of caring the household members in the temporary absence of their husbands/spouses.

- If related to the total agricultural household heads, more or less one in every five agricultural household heads is a female who are mostly widows or sometimes never married or separated/divorced. These are the de facto or real females heading the agricultural households. About 2.3 percent of the female household heads are married. These women take over the headship of the household in the absence of their husbands, who are, either working in other places in the country or abroad, are temporarily ill or are not the head for other valid reasons.

## **2.4 Highest Education Successfully Completed and Literacy**

- Of the 9.5 million agricultural population (or 71 percent), 6.8 million household members have attended and successfully completed any of the available educational level in the country. About 2 percent has no class completed.
- Around 2 percent of the agricultural household members did not attend or have never attended any school. The proportion of such members in the male-headed households is higher than the female-headed households. The three top most reasons of the female and male members not attending school are as follows: (1) must contribute to household income; (2) must help in the household chores; and, (3) did not want to go to school (self-withdrawal).
- Of the educated members in the agricultural households, the proportion of male members is higher by 10 percentage points; which means that female members have less access to education.
- The proportion of the members that successfully completed any educational level in the female-headed households is lower (by 5 percentage points) compared to those living in the male-headed households. The educated female members in the female and male headed households have lower percentage (62 percent and 67 percent, respectively) against their male siblings. Similarly, in all zones, the proportion of educated female members is lower than their male counterparts.
- In Cambodia, 72 percent of the total agricultural household heads can read and write a simple message. The proportion of literate male heads is higher than the female heads, even, higher than the national level literacy rate. There are more female heads that cannot read and write even a simple message than those considered to be literate female heads.

## **III Gender-based Access to Productive Resources**

### **3.1 Household Agricultural Labour Force**

- Labour force in Cambodian agricultural households are members belonging to age group 15 years old and over; however, for agricultural activities, this also includes 10 -14 years old that are helping in the household's own farm/agricultural activities. The total number of agricultural and fishery workers in Cambodia is 3,715,696, of which 1,755,581 (47.3%) are females and 1,960,115 (52.8%) are males. The number of female skilled agricultural and fishery workers

ranges from 122 thousand in Coastal Zone to 807 thousand in the Plain Zone. Male skilled agricultural labourers range from 160 thousand in Coastal Zone to 907 thousand in the Plain Zone.

- Higher proportion of female and male members that work as skilled agricultural and fishery worker is noted in the male headed agricultural households than in the female headed agricultural households. The proportion differs by around 10 percentage point for the female agricultural workers while 8 percent for the male ones. Across Zones, almost the same situation can be observed except for the Coastal Zone where there are higher proportion male members in the female headed agricultural that work primarily as skilled workers in agriculture and fishery.

## **3.2 Agricultural Land**

Agricultural land is the main component of producing crops, whether annual or perennial crops. A household may have operated or used a piece or pieces of lands in order to be able to produce such crops. In the case of 2008 CSES, operating a plot or several plots in the past twelve months was used instead of parcel or holding. The survey could not provide any information on the totality of the holdings operated by female or male headed agricultural households but it could give the gender profile of these households with regards to access on agricultural lands.

### **3.2.1 Access to Agricultural Lands**

- At national level, around 96 percent of the total agricultural households have access to agricultural lands. The proportion of male-headed agricultural households with access to agricultural lands is higher than the female-headed agricultural households by 3 percentage points. These two households differ in the number of plots of lands used in their agricultural activities. The proportion of the female-headed households having one plot is higher than their male counterparts. On the other hand, the percentage of male headed agricultural households operating more than one plot exceeds that of the female headed ones by 10 percentage points.

### **3.2.2 Land tenure**

- The 2008 CSES collected data on land tenure that distinguishes 4 types: owned, rented in, free use of land and other types. Of these types, around 40 percent of the agricultural households owned plots or agricultural lands. At national level, the difference between the proportion of male and female headed agricultural households that owned lands during the reference period is about 5 percentage points, with higher percentage of female headed households owning lands. At the zone level, differences in male and female headed agricultural households owning lands ranges between 2.0 (Coastal Zone) to 10 (Plateau/Mountain Zone) percentage points. In these two zones, higher proportion of male headed agricultural households owning agricultural plots over the female headed agricultural households is observed compared to the other two zones where the

situation is reversed. Specifically, in the Coastal Zone, only 3 percent of the female headed agricultural households owned lands during the reference period.

### **3.3.1 Irrigation**

- Higher proportion of plot areas of female (59 percent) and male (58 percent) headed households have not been irrigated in any season. The proportion of area not irrigated for both male and female headed households is 58 percent of the total area of plots used in agricultural activities.
- The trend of irrigated plots is slightly different in the zones. There are higher proportions of irrigated areas under the female-headed households in Plateau/Mountain (differed by 4 percentage points) during dry season; in Coastal Zone (differ by 10 percentage points) and Tonle Sap (differ by 3 percentage points) during the wet season. Even in irrigating the agricultural plots in both seasons, the proportion of female headed agricultural households is higher in the Plain and Coastal Zones while the male headed agricultural households are at advantaged in irrigation in Tonle Sap and Plateau/Mountain areas.

### **3.3.2 Farm Equipment**

- The 2008 CSES collected the number of households with access to farm equipment such as tractor, water pump, threshing machine, rice mill and other small implements such as plough, harrow, rake, hoe, spade, axe, etc. At the national level, access to big tractors is only reported to male-headed households while access to water pumps and hand tractors, the reported proportion of female-headed agricultural households is lower than the male-headed. There

## **3.4 Information and Communication**

Vital information such as modern technologies, etc., to improve farming and other agricultural activities are very important matters to be communicated to the agricultural households. Hence, this section relates the kind of communication technologies that are available within the female and male headed agricultural households that can be used to access such information.

### **3.4.1 Communication technologies**

- The survey collected the number and percentage of agricultural household on ownership of one or more of the following communication devices: radio, television, video/vcd/dvd/recorder, telephone, mobile phone, satellite disk and computer. At national and zone level, the most common owned communication device for both male and female headed agricultural households is television and radio. About 59 percent of the male headed agricultural households own a television compared to 44 percent of the female headed agricultural households. Next to owning television is having radio. Almost 2 in every 5 female-headed agricultural households have radio; correspondingly, one out two male-headed agricultural households use radio to hear news regarding agriculture and other subject matters. The percentage points difference in television ownership between the male and female headed households is largest in Tonle Sap (19%), Plain (18%), and Plateau/Mountain (13%).

### **3.5 Credit**

- The 2008 CSES collected data on loans such as the number of months of the debts, source and primary purpose of obtaining loans. At national level, around 37 percent of all agricultural households took a loan for agricultural production or business or other purposes. The ratio of the male headed agricultural households to the female headed agricultural households with regards to accessing loans is 5:1; which means that for every five male-headed agricultural households getting loans, only one female-headed agricultural household can obtain loan.
- The three most common sources of loans among agricultural households are the banks, moneylenders and the non-government organizations (NGOs), especially in the Plain and Tonle Sap Regions. Nine percent of the female headed agricultural households have obtained their loans from the moneylenders; whereas 9 percent of the male headed agricultural households have taken their loans from the bank or from NGOs.

## **IV - Livelihood Activities**

### **4.1 Income Sources**

- Like any other countries, Cambodia has several sources of income, in which the most common is the one derived from their economic activities. Seven out of ten members in agricultural households in the country are engaged primarily in agriculture, forestry and fisheries. Of these members, 40 percent work as self-employed or operate their own farms and/or around 54 percent work without pay in their farm/agricultural activities.
- The own account workers are being helped by around 2.3 million unpaid household working members or 54 percent of the household members engaged primarily in agriculture, forestry and fisheries. In addition to these, about 42 percent of those with secondary occupation in agriculture, forestry and fisheries are also helping in their household's own farm/holding as unpaid working members. Hence, the unpaid working members in own household farm/holding is about 2.8 million.

### **4.2 Crop Production**

- About 2.7 million plots are used in planting cereals during the wet season such as rice, which is the main staple food in Cambodia. These plots have a total physical area of 1.8 million hectares, giving an average of 0.68 hectare per plot. The area cultivated to cereals or rice is about 1.9 million hectares or 0.72 hectare per plot, which means that around 6 percent of the total area of the plots, is planted with rice or cereals twice a year. Around 98 percent of the total area cultivated with cereals or rice is harvested during the reference period.

### **4.3 Agricultural Practices**

- 92 percent of the total agricultural plots operated or cultivated by the female headed agricultural households have not been applied with any agricultural practices or no



investment made to improve these plots. These plots occupied about 417 thousand hectares or an average 0.6 hectare per plot. Likewise, the male headed agricultural households have not done any improvement or investment on most of their plots composing of 91 percent of the total plots used for agricultural activities. These plots measure around 2.4 million hectares or 0.7 hectare per plot.

#### **4.4 Livestock**

- All agricultural households have engaged in raising livestock during the survey reference period. More or less 5 in every ten female headed agricultural households and 6 out of ten male headed agricultural households have raised a total of 3.7 million cattle while 23 percent of the female headed households and 30 percent of the male headed households have tended 1.5 million pigs. In terms of poultry, majority of the female (70 percent) and male (74 percent) heads have their households engaged in chicken farming. The total headcount of chicken raised by both households is about 18 million. Raising cattle and chicken are mostly reported by the female and male headed agricultural households in all zones.

#### **4.5 Fishing**

- One of the sub-sections of the economic activities section in the CSES 2008 is about the fishing activity of the households. There are two kinds of fishing activity included in the survey, one is on raising fish/shrimp/crabs/oysters and the other one is on catching fish and other aquatic species. Raising fish/shrimp/crabs/other aquatic species deals more in aquaculture which is undertaken in controlled environment while catching fish and other aquatic species is an activity done in fresh or marine waters or deep seas.
- Of the total agricultural households in Cambodia, 3 percent have engaged in raising fish and 64 percent in catching fish, shrimp, crabs or oysters. In the female headed agricultural households, 5,796 households (1 percent) have raised fish/shrimps/crabs/oysters. However, not all of these households have owned or operated a pond for fish; more or less 85 percent of these fish raisers have established their own fish/shrimp culture ponds. Around half (51 percent) of the female headed agricultural households have also ventured into catching fish, shrimp, crabs and other aquatic species.

#### **4.6 Forestry**

- In every 10 agricultural households, four households (whether female headed or male headed) have engaged in forestry activities such as gathering firewood, logging, collecting palm juice or root crops, etc.
- The total amount received by the female headed agricultural households from undertaking the forestry activities is 60.4 billion riels (14.7 million dollars) or an average of 340 thousand riels per households. The male headed agricultural households have received the amount of 277.6 billion riels (67.7 million dollars) or an average of 403 thousand riels per household. This average amount received by the latter households is 0.18 percentage points higher than the former households.

## V Status of the Agricultural Households

### 5.1 Poverty Status

- Poverty is defined as the lack of basic amount in order to purchase the minimum requirement for food and other basic needs to be able to live a healthy life. Measurement of poverty is always based on income received or sometimes it is determined on the food and basic expenditures of the households. In the absence of income and expenditures, proxy indicators are used to indirectly measure the economic status of households. In this section, several proxy indicators are used to determine whether the status of the female and male headed agricultural households is poor or not.

#### 5.1.1 Housing Conditions

##### Wall Materials

- There are eight construction materials specified in the 2008 CSES that are used for the wall of the dwelling units of the agricultural households. Four of these materials are hard or permanent and the other four are temporary or unstable materials for the walls of dwelling units.
- About 62 percent of the agricultural households choose to use the strong wall materials, of which the most commonly use are the woods or logs (53 percent). About 6 percent have availed of the concrete, brick or stone walls. On the other hand, significant proportion of agricultural households uses bamboos/thatches/leaves/grasses (36 percent) though these are unsafe construction materials especially during calamities.

##### Roof Materials

- At the national level, there are four preferred types of construction materials for the roof of the dwelling units as indicated by higher proportion of female and male headed agricultural households. These materials are galvanized iron or aluminum (between 40 to 44 percent), tiles (between 27 to 25 percent), thatch/leaves/grass (between 18 to 24 percent) and fibrous cement (6 percent).
- The order of preferences of these four roof materials at the national level in the female headed agricultural households is the same as in the Plain Zone. Majority of the female headed agricultural households in the other three zones have different roofing materials: galvanized iron for Tonle Sap, tiles for Coastal and thatch/leaves/grass for Plateau/Mountain.

#### 5.1.2 Access to Safe Drinking Water

- Rainwater is reported to be the main source of drinking water of notable number/proportion of both types of agricultural households in the Coastal (between 60 to 70 percent) and Plateau/Mountain Zones (between 35-39 percent) during the wet season. For the other zones, as the water through the

tubed/piped well or borehole is being drunk by half of the female headed households and one third of the male headed households in the Plain Zone, their counterparts in Tonle Sap get their drinking water from the tanker truck/vendor or otherwise bought.

- In the dry season, higher proportion of female headed agricultural households than their male headed ones derives their drinking water through tubed/piped well or borehole. However, about one-fourth of the households headed by females use the pond, river or stream to draw water for drinking. This is another unsafe drinking source that is also availed of by the male headed agricultural households. Higher percentage of both types of households that sources out the pond, river or lake for their drinking water is residing in Tonle Sap, Coastal and Plateau/Mountain Zones.

### **5.1.3 Sources of Energy**

#### Used for Cooking

- One of the Millennium Development Goals (MDG) adopted by the Royal Government of Cambodia is to integrate the principles of sustainable development into the country policies and programs and reverse the loss of environmental resources. One of its sub-targets concerns the energy used for cooking.
- Almost all female headed agricultural households utilize firewood for cooking food while only few use charcoal and liquefied petroleum gas. Similarly in their male counterparts, about 95 percent have reported the use of firewood in cooking. However, very nil percentage of these households is using publicly-provided electricity/city power. The use of firewood has also been reported by approximately more than 90 percent of the agricultural households (whether female or male headed) in all zones.

#### Used for Lighting

- One in every ten agricultural households in Cambodia uses publicly-provided electricity/city power. More male headed households are using this compared to their female counterparts, recording a difference of 5 percentage points.
- Across Zones, more female headed households are kerosene lamp users while more male headed ones are battery users.

### **5.1.3 Sanitation**

- The type of toilet facilities used is a measure of the sanitary condition of the agricultural households. “Improved sanitation facility” includes three types of toilets: “pour flush/flush toilet connected to sewerage”, “pour flush/flush toilet connected to septic tank”, and “pit latrine with slab”.
- About 26 percent of the agricultural households in Cambodia have access to toilet facilities; however. 22 percent use improved ones and about 4 percent are still using the traditional type of toilets. The percentage of the female headed

agricultural households with improved sanitation is lower by 6 percentage points from the male headed agricultural households. Of the types of improved toilets, the most commonly owned and used by both households is pour flush (or flush) to septic tank or pit.

### **Acknowledgements**

- The National Institute of Statistics (NIS) is pleased to present this Gender Profile in Agriculture Sector in Cambodia which is the output of FAO-SIDA Partnership “the Strengthening national capacities for socially and sex-disaggregated data”.
- This report is the result of SDD analysis of the CSES 2008 undertaken by the NIS with collaboration of representatives of various departments of MAFF and MoWA under the technical assistance of the FAO Gender, Equity and Rural Employment Division (ESW). This collaborative was initiated in June 2009 following the SDD training workshop held at the NIS.
- The main objective of FAO-SIDA project in South-East Asia is to provide Capacity building in gender analysis, gender mainstreaming in questionnaire design and production of gender statistics of the NIS to derive Gender Profile in Agriculture Sector.
- Special thanks to the FAO personnel, namely, Mr. John Curry, Gender and Development Research Officer (ESW) for Supporting in gender analysis, producing gender profiles.
- Ms. Josie Perrez for Support to re-tabulation draft and final report.
- Ms. Easter Wieggers for SDD training in December 2009 and draft of report outline.
- Mr. Ajay Markanday (FAOR), Mr. Choup Paris, Assistant FAO Representative (Programme) in Cambodia and his colleague for their support from beginning until the end of project.